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HOW CAN AN ARCHITECT DESIGNING ON A COMPUTER SCREEN FEEL THE ARCHITECTURE HE IS CREATING?

WE ARE LIVING MORE AND MORE IN THE IMAGINARY WORLD OF THE SCREEN

THE SCREEN WORLD WE ALL LIVE IN IS DISTANCING US FROM THESENSORY WORLD

IMAGES HAVE NEVER BEFORE HAD SUCH POTENTIAL TO CONTAIN SO MUCH INFORMATION

BUT AT THE SAME TIME THEY HAVE NEVER HAD SUCH POTENTIAL TO CONTAINDISINFORMATION

THE LINE BETWEEN FACT AND FICTION IS DISAPPEARING

WE HAVE TO DISTINGUISH NOT ONLY BETWEEN FACT AND FICTION BUT ALSO BETWEEN COMMUNICATION AND DISCOURSE.

Introduction

I have identified three key issues that seriously constrain our ability to design and realise a better and more intelligent built environment.

1. The practice of 'design apartheid among professionals'

Within this part of my talk, I think there are two distinct design aspects that need to be recognised, discussed and reassessed in the light of the convergence agenda of this conference.

First, there are schools of architecture that promote and focus upon a vocational-technical curriculum - and those that promote, almost exclusively, the value of the art of architecture. I will return to this matter later.

Second, architects, engineers and contractors may have diferent agendas, but far too often they relate to one another as if they come from different planets.

If we can accept as a premise that in order to achieve more intelligent and better environmental solutions, we must work more collaboratively with people with other skills and knowledge, then we have to find languages that enable us to communicate much better, and methodologies that allow that communication to work. I suggest that this is one of the key responsibilities of those in education.

We should enjoy these differences but not to the point where each approach diminishes an appreciation of the incredibly rich and broad subject that is architecture and the joys in realising it.

Eight years ago, in (well) Connected Architecture I wrote that '…This fragmentation at the intellectual and theoretical level - and we would include educational institutions - cannot be sustained if we are to achieve real improvements. The objectives must be to raise the quality of understanding and the quality of the environmental fabric.'
There is a moral as well as a physical responsibility implicit in all design actions, and I think that separating ourselves from each other behind outdated institutions and brass name plaques embarrasses our intelligence.
The moral responsibility begins with making both sides our brains fully active!
I would like to pose an initial question.
What, if any, should differentiate the education of an architect and an engineer - given that both aim to be involved in creating the built environment?

2. The lack of understanding of construction among design professionals

This may sound disingenuous, and aimed at architects, but it is a comment upon most professionals - including engineers. Regrettably, it would seem that the more talented the designer the less s/he understands of production and construction.

3. The complex problems of tomorrow.
Understanding the long-term implications of construction on the environment while being obliged to work within short-term political and economic conditions.

This raises major questions about the present economic model by which our society functions; and our ability to profoundly understand the consequences of our actions.

4. Britain's Europhobia

This fourth issue is a nauseating characteristic of the British, or perhaps I should say the English.
Britain is proud of its achievements in the arts, advanced science and intellectual enquiry. However, none of these has been or is that dependent upon 'free market forces'. Among the 'free market' activities, it could be argued that Britain continues to accept second-rate solutions.

In my talk, I hope to address each of these issues, but not strictly in isolation or sequence.

I would like to begin with a synopsis of my own European experiences in order that you will be better able to put into perspective my later observations and suggestions.

Experiencing Europe

In 1987, while a member of the editorial board of a pan-European architectural journal called Pignon-sur-Rue, I was asked to write a short essay on what I understood Europe to be and perhaps what it may become. This essay was written in the context of architecture, rather than some more philosophical perspective.

When I received Constantin Spiridonidis' invitation to give this talk, I chose to re-read this essay - 14 years later - in the context of both the evolution of Europe, the Bologna Declaration and the fact that I find myself more often, rather than less often, being invited to talk in a European context.

I began the essay with the words: Yes, there is a European heritage.

At the risk of being over simplistic, democracy, fraternity and equality lie at the heart of the European moral base. This enables all Europeans, both East and West, to share and develop a common cultural history. This culture acts as our discreet bonding agent. Equally, since late mediaeval times, there has been a European cultural belief in the Individual (Luther). The antithesis of this is found in Asia.

European nations have, on historical evidence, a tradition of 'making new nations'. In this respect, it is not surprising that the idea of Europe should take shape. Europe has been, and still is in one sense, a community by fate or accident rather than design (East and West Germany, Alsace, Basque etc.). Running through this European tradition has been a reticence to establish strong intellectual (scientific and artistic) links. Of course there have been exceptions (Milton travelled to meet Galileo: Erasmus came to England etc.) and today the 'European nation' creates joint-venture projects (ESA, Airbus etc.). However, these links remain tenuous despite European student rail cards, cultural tours, package holidays etc. and 'publishing' which, more than any other mechanism, helped to create Europe and which, with intelligent telecommunications, gives all Europeans the opportunity of recognising their individual and national identity within Europe and the world.

It is in this context that we can all play a small part in the continued evolution of Europe, without diluting or neutralising the individual or regional qualities in favour of a Europeanisation of art and architecture. Through identifying and disseminating the differences as well as the similarities, we are able to highlight, inform and strengthen the European tradition in all its diversity.

It is only by participating in a European context that one can experience a 'sense of Europe'. This is the same for both individual and group and provided the journal and this conference with its raison d'être.
Participating is often assumed as taking place, but in reality, not enough people, architects and teachers manage to experience a European context.

From my own architectural participation in Europe, I feel it is possible to put forward some observations. However, first of all, it is perhaps relevant to place these experiences in the context of a British heritage and values, which essentially have inclined to support the inventor or craft skills of the individual.

When I lived in Japan in 1970, I became conscious, almost immediately, of the Japanese willingness to place more importance on the group as a more valid model for social development.
Implicit, for me, in the British approach is cosiness and insularity and this has, in general, led to a resistance to change and a reluctance to share ideas or communicate with the 'rest of Europe' and, significantly, generated a conservative attitude to new ideas and the inability to foster and develop them at home.

This brings me to the recent past and the re-emergence of a neo-engineering aesthetic in architecture. In Britain, critics coined the term 'high tech', and translated it as representing a rekindling of the Victorian period.

The confidence expressed during the Victorian period in British history was built on the 'successful creation' of new nations (Empire) and was best manifested in architecture and design in Britain through its engineers (Mark and Isambard Brunel, Stephenson, Telford, Paxton and others).
New energies, new materials, new approaches were the hallmark of this period and in the spirit of this industrialisation wonderful built expressions became abundant, not only in Britain but also in other parts of Europe. There was optimism towards the future. The Victorians called it 'progress'. The industrial revolution created an age of maintenance! Maintenance is a design issue that is still not fully integrated in architectural education.

Today, 'high tech' has become a style, an image. In architecture, although most critics see it as a British product, it was largely inspired by the work of certain west-coast American architects, such as Eames using industrial components and assembling them in a straightforward manner, and the Californian Schools' Building System. The experimental architects in England began with the fascination, enjoyment and ultimately the combination of science fact (space programmes) with science fiction architecture (Archigram) and a desire to build cleanly and more precisely with mass-produced products (corrugated metal, steel sections etc.). In the UK, a new generation of enlightened engineers surfaced such as Samuely, Newby, Hunt, Happold and Rice, alongside already internationally renowned figures such as Frei Otto and Buckminster Fuller and their respective work with cable net and tensegrity structures.

These individuals enjoyed working alongside architects such as Cedric Price, Stirling, Rogers, Piano, Foster, and the next generation of architects including myself. These engineers were all capable of understanding the aspirations expressed by architects and were allowed to have an exceptional influence upon this type of architecture. In contrast, the degree to which these individual architects understood the engineering varied greatly.

Techniques and technologies started to be transferred from other design disciplines ('technology transfer') that were readily accessible - notably sailing boats, gliders, and planes.

At La Villette, together with Peter Rice and Martin Francis, we sensed a desire on the part of those representing the French Government to innovate and to make this innovation relevant to the Cité des Sciences and its didactic role, as well as enhance France's image as a world technological leader.

In 1981, we did not set out to produce a 'high tech' image but to explore, both sensually and intellectually, the opportunities created by this project. This approach was fundamentally about whether we could make manifest Mitterand's new socialist politic of openness - 'la transparence', and from a design and engineering point of view, about predicting the extended physical performance of certain materials and the way the environments we were creating could have a genuine didactic role for the visitor.

This experience highlighted two major differences between Britain and France. Firstly, the French believe in their own cultural heritage and the need to continually invest in it; and secondly the awareness and openness of French industries to explore with us beyond their own industrial preconceptions. This created a triangle of confidence: Client/Designer/Industry - an indispensable structure for the production of architecture. The ability to be receptive to other cultural inputs is the prerequisite for exchange and does not imply absorption or fundamental change to one's own cultural perspective or cultural statements.

For me, these attitudes reinforce the need to understand the value of cultural differences and in this sense I support the central ideas behind the Bologna Declaration.

Equally, the objective of understanding and recognising the value of differences should, and to some extent has been taking place in the Schools of Architecture throughout Europe. Certainly, most UK schools of architecture have enjoyed a multi-cultural student body for the last twenty years, and far from limiting design development, has surely enhanced it.
I have looked at my practice's staff profile over the last twenty years: Twenty years ago, when I started both Ian Ritchie Architects and Rice Francis Ritchie, within a year we employed 5 different nationalities. 13 different nationalities are currently represented in my office in London, 75% from Europe - English, Scottish, Irish, French, German, Spanish, and Slovak, and the remainder from the rest of the world - China, Japan, USA, Canada, and Saudi Arabia. Interestingly, there are only 7 who are British, but only one who has not undertaken at least part of his or her studies in Europe.

So, I can make a case that there is already a convergence of qualities coming through European schools of architecture if the selection of graduates, as mirrored by my office, is representative. Over the last ten years, my office receives, each year, more than a thousand unsolicited applications from graduates. Although most are from Europe, and in particular from the German speaking countries, an increasing number are from South America, South Africa, the USA and the Far East. Diversity exists within a common design framework of making architecture.

Clearly the UK policy with regard to obtaining work permits mitigates against those students who have completed all their studies outside of Europe, while those in the middle of their architectural studies, e.g. an American student who has completed three years and seeks a one-year work experience placement in the UK would have little difficulty obtaining a work permit. In contrast, from our experience, obtaining a work permit in the US is far more difficult. Those non-Europeans, who have completed their diploma studies in the UK, can make a legitimate case for at least two years post-graduate work experience in the UK prior to taking the professional examination - known as Part III.

The mechanics of delivering education have been challenged by the capacity and speed of communication.
In a tribal settlement where everyone is within hearing distance, acoustic or pedestrian speeds provide the principal rules to establishing the location of education. Today, acoustic transmission is no longer limited by airborne waves, information can be communicated in femtoseconds and people do not have to travel to obtain the information.

However, people still want to travel to the other side of the planet to obtain the right sort of education. The education being sought is no longer simply the information contained within the curriculum and the method through which it is communicated. It is also associated with 'lifestyle'. Being a student of architecture in London will provide, inevitably, a very different experience than that in Brauschweig or Bratislava.

It is the potential for a broader and richer cultural context overlapping with the formal education that is enticing to the younger student. In what way can architects and teachers of architecture help achieve this in such towns and cities that are such an integral part of Europe's finest asset -its diversity?

Towards An Open Methodology

To enjoy the company of engineers, economists and those in the construction industry is a privilege, but for me they must be more than just concerned with their own world. They must be sensitive human beings, who have a personal philosophy about life in general. This is often too rare, or rarely apparent, but I have been fortunate to have met and worked with a few. What these people have in common is confidence and an intuitive sense of sharing an experience, where the job is the goal, not their job.

"After all, we all agree on that (collaboration) … but talking about it doesn't seem to have had much effect. One must somehow create the conditions which will allow such collaboration to take place, and one must educate members of the building team to see their own contribution not as an end in itself, but as part of a common endeavour to create comprehensive, total architecture."
[Ove Arup October 1972]

All of our work has a public content. We rarely, if ever, construct with our own money for ourselves. We act as the group mediating between the public and the client and together we have an obligation to both. When we collaborate, some degree of friction always arises, whether it is over the money, the design or the morals, and has to be resolved in the end by the project itself. It is recognising the project as mediator that helps to solve it.

The collective idea that emerges is the first and most important thing. It is vital that all who are to collaborate on the design of a project come together at the beginning. All design work is political in the ultimate sense in that we are trying to produce a world that is better to live in, where people understand more, where people are less oppressed and where people live less dreary lives, where they have more control over their environment: this is the glue that brings us together.

Some of the best concepts have come from people who are not 'recognised designers', yet who are as concerned about our future environment as architects, engineers and landscape designers. These include geographers, urban planners, archaeologists, anthropologists, artists, philosophers and poets. These people understand how environments work as well as architects.

For me, open collaboration, where individual egos work together in the interest of the project and beyond, is the most enjoyable method and approach.
Too often, architects seem preoccupied with ensuring their ownership of a design to the exclusion of others who have made seminal or crucial contributions, or allowing the media to promote such ownership.

Here are Ten Commandments for Collaboration:

1) There has to be a moral commitment.
2) There should be no preconceived idea and collaborators should be open to almost anything.
3) Learn to really listen and to interrupt, and be ready to be interrupted.
4) Ideas are shared - no one can claim them afterwards.
5) Be altruistic, not competitive.
6) Respect the minds of your collaborators; their individual skills will become valuable later.
7) There is time together - synthetic time, and time alone - reflective time.
8) All participants are equal; there are no bosses.
9) You have to respect the common concept as being more important than one you could have conceived by yourself.
10) Be prepared to improvise.

I have tried to briefly outline an open methodology, a way of working, which can engage different kinds of people, for I think the world of tomorrow will have problems that are much more complex.
Architects, engineers, designers and artists will have to find new ways of solving them with their clients. We will all have to learn new kinds of methodologies to solve problems. We need to approach each project with fresh eyes and minds to seek, with the client, the best way to achieve the desired end result. We will have to constantly question traditional forms of engagement, of construction contract, and of collaboration.

Barriers represent the nature of the old Europe and of an outdated way of working professionally as an architect.
This conference is essentially exploring ways of dismantling those barriers that have no further purpose and promoting collaboration in the sense of convergence - this in order to help create a better future for Europe and a better future for architecture and the built environment.

Psychological barriers only occur in the minds of individuals, and like any theory constructed by man these barriers can be deconstructed and replaced. 'Barrier absence' requires a way of thinking and attitude which is no longer territorial since respect and trust exist, qualities which in turn encourage confidence with humility between people. Professionals should be as capable of realising this as anyone else, and in terms of their influence on society and the physical environment have a moral obligation to do so.
I know from my own collaborative experience and the way our office in London functions with individual engineers and economists, that territories do not have boundaries, they are simply different landscapes which require different skills to negotiate well, but also through which, with one's collaborators, one can be supported and supportive.

I have recently accepted a professorship at Leeds University School of Civil Engineering, where I hope to help develop a Masters course, one that is currently recognised by the Institutes of Civil and Structural Engineers, into one that will also be approved by the Royal Institute of British Architects.

If we are successful it will be the first in the UK and hopefully encourage a new direction of high quality collaborative learning.

Architectural Education - Art and Technique

Is education becoming a leisure activity in the sense that people are choosing to 'fill' their time consuming knowledge and information rather than material things? Thirty years ago shopping was a necessity. That necessity has been extended and much of it transformed into a leisure activity. Are we witnessing the birth of a new enlightenment, or simply an ongoing tendency to follow fashion?

As individuals begin to have more respect for the environment, could they be developing a more philanthropic attitude generally? And in cultivating this new attitude, are we seeing a paradigm shift where more and more individuals are appreciating the arts - where to be able to appreciate them one must be capable of being generous emotionally and intellectually.
And, in order to develop these characteristics, more people, especially those from the 'troisième age', are seeking further education experiences, particularly in the arts.

This brings me to back to the central issue of formal architectural education - artistic education or vocational training, or balancing the two.

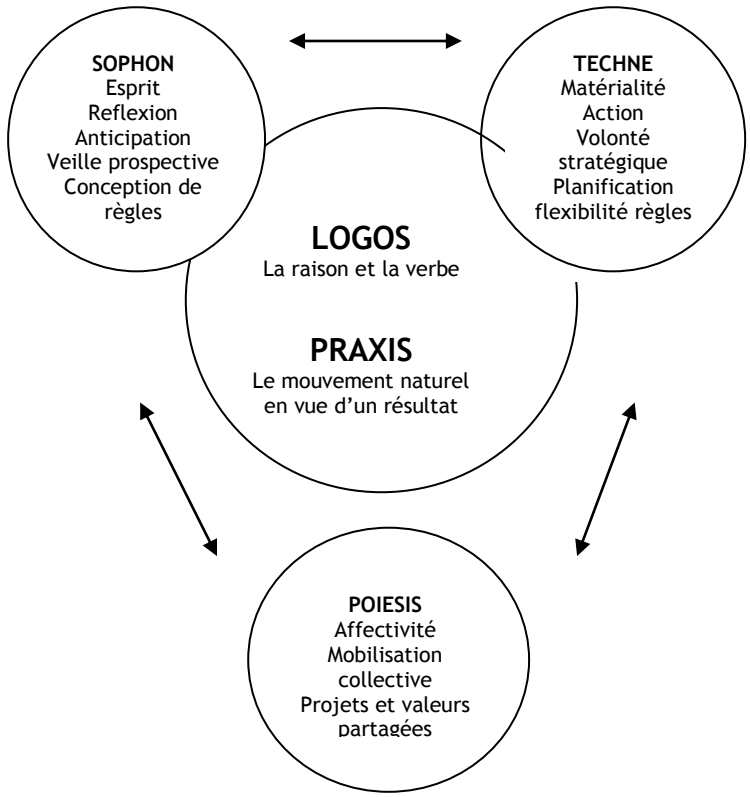
"In most cultures prior to that of industrial capitalism, artists have had a well-defined and clearly understood relation to some part of their society, some group of consumers. In a primitive tribe or collective, art is the expression of the whole tribe - later, some people may be specially good at it, or hereditarily trained to it, and take on the production of artefacts as their work, but they work surrounded by the community, and work for the community's immediate and obvious benefit. In other periods of history, the artist has produced for a court, for a personal patron, for a religious sect or for a political party. It is only with the dominance of the capitalist system that the artist has been put in the position of producing for a market, for strangers far away, whose life styles and beliefs and needs are completely unknown to him, and who will either buy his works or ignore them for reasons that are equally inscrutable and out of his control."
[Meredith Tax]

"In the present society the quantitative and qualitative criteria for judging design can be summed up as: does it attract the consumer?
Designers have always had more noble standards of appreciating their creations, but in practice the question of functionality, as in doing the job set out for it, of originality of design, of cultural sensitivity or of environmental impact are in this society predicated on the ultimate determining factors - does it in a direct or indirect manner generate financial wealth and/or serve to perpetuate the political and economic status quo?"
[Pippo Lionni 1993]

Regrettably, architecture is now assessed more often than not on its image alone. It is well inside Warhol’s canned soup!

Art is an essential ingredient of all good design, although that art has been, and still is, so often buried beneath an avalanche of the architectural taste of the day.
It was Buckminster Fuller who once said that most architects are simply good (or bad) taste purchasing agents (i.e. they are experienced at selecting from catalogues).

This dilemma (poiesis/techne) has existed for years, and we can all recognise that there are institutional structures in different European countries that still exist and which prescribe such boundaries.



Again I risk over simplifying, but historically, in the classical tradition of European architecture, there was a pattern book of architectural elements that the trained artist would select and compose into a building. The Gothic age challenged this and it can be argued that architects during the twentieth century enjoyed an unprecedented level of design freedom. As a result, architecture schools developed design identities - the obvious example being the Bauhaus.

I know that the Architectural Association in London began to move away from formal vocational training towards an experimental design approach in the late 1950's, and this shift subsequently occurred in some other schools, including 30 years later Columbia University in New York. At the AA there was no strict design/style culture and when I taught there at the end of the 1970's and early 1980's at the same time as Price, Tschumi, Koolhaas, Hadid, Coates, Alsop, Hawley, and the key members of Archigram - Cook, Herron, Greene - there was a sense that the school, under Alvin Boyarsky, sought, through these very different personalities, to offer opportunities for students to explore very different design approaches and teaching methods.

Today, I would suggest that the main strengths of British architectural education, particularly in Diploma schools are a university style maturity of letting the student get on with it, thus the need for high levels of self motivation in the student. This is in contrast to the general American style of 'teaching' the student with secondary level style homework exercises, rigid timetables and a frosty boundary between staff and students. American tutors seem very keen to instruct their students, the British way is more one of guidance and encouragement.
I have seen enormous changes in the last 10 years at the Bartlett School (London University) in my capacity as External Examiner.
I would suggest that it places investigative art at the centre of its raison d'être. Few students in the Diploma year are consciously producing work that would be recognised in mainstream architectural practice. When and where does the vocational content come from?

I believe it is through the parallel theoretical and technical studies that continue until the final year, but importantly afterwards, at the graduate's next experience - working with an architect.
The essential education that takes place combining the vocational and the artistic is the development of the methodology of enquiry - investigative art. However, the Bartlett Diploma work fails in its lack of humanity and social content - it is far too mechanistic.

It is evident that the principal inspiration for students at the Bartlett is other students. As for motivation, students at the Bartlett find themselves in a very competitive arena. The senior staff and the unit system that mixes students of different years within degree and within diploma promote this. I experienced this unit approach when teaching at the AA, although students were all from the same year.

However, in parallel with this competitiveness I have noticed a degree of altruism by the same students, demonstrated, for example, in their support of each other with new computer software and the making of electro-mechanical models.
London's architectural cultural richness is manifest through the busy network of tutors, lecturers, visiting lecturers, exhibition openings and book launches in London with much cross fertilisation between the schools - The AA, The Bartlett, Westminster and North London for example.
The role of humour, and occasionally being not too serious, is a technique that is employed at the Bartlett School as part of the experience of design. This is in contrast to most other schools and is an example that, on the surface, perhaps identifies the artistic/experimental from the pragmatic and serious vocational approach.

UK schools exist in an extremely competitive environment, and although I can speak only from limited experience, I am aware that individual UK schools do strive for a certain identity - but not in the same sense as, say, the Bauhaus approach.
This identity finds its communication through the Degree and Diploma End of Year shows with en suite parties and glossy brochures. This mediatisation does represent a very real dissemination of information and is a recognised part of the architecture culture of the city but it is also a competitive 'one-upmanship', making schools (or a city or nation) appear better than one another.

The Complex Problems of Tomorrow

I wrote the following about architecture, ecology and global economics in Well Connected Architecture in 1994:

"A new, wider and more appreciative Europe will not, hopefully, be just the creation in the coming years of the largest, most powerful single economic market that the world has ever seen, with its consequent energy growth demands, but also a staging post symbolic of the desire to achieve a more integrated, intelligent and compassionate society living together in the world."
To establish Europe simply to compete economically with the USA would be very shortsighted. (Europe is but 40 years old).

“Monetary economics has so far failed to find a way of dealing with social costs or with renewable resources. The present Western mania (indeed more and more global) for development based on a mechanistic and materialistic viewpoint, supported by the present inadequate economic methodology, has led to increased pollution on a global and local scale.

Yet to most economists it appears that the social and environmental costs still remain intangible.

One may think that the point of economics is to help us manage the world better.

I suspect, however, that few economists see it this way. It seems inevitable that there must be a change in the current economic way of thinking. Man developed the present model, and our actions still maintain it. A sustainable economy means a more compassionate one, in the way we relate to each other and to the planet.
We all know that the earth owes man nothing. The global spread of the free market economy (so far leaving aside the polar regions) sucking up the earth's wealth will probably lead our present concept of progress into oblivion."

The balance between individual well-being and the future direction of society depends upon recognising that today's electronic communication has created such an awareness of global interdependence that all actions and reactions should have a moral base. It will become increasingly difficult to ignore cause and effect consequences of individual and corporate actions which, hopefully, will increase social accountability. We should be looking towards an Age of Intelligence, both human and cybernetic, whose morality, informed by cultural and environmental awareness, is concerned with both global and local welfare.

There can be no revolution in the industrialised regions of the world with regard to the way we extract, process, manufacture, distribute, design and consume materials - only a long campaign will eventually change our habits, of which this conference will be seen to be a small but important part.

"Exchange through discussion and openness of information is essential for understanding and when this engages cultural exchange, a major prerequisite for creativity is put in place. This in turn makes creativity more accessible and maybe more democratic in a less competitive environment. Competition has been and remains the conceptual trigger of our present economy and society. I do not believe that this is inevitable as is often argued. Collaboration, cooperation and indeed altruism are as common a natural inheritance as 'survival of the fittest'. This is a clue to redefining economic ethics, where the economy is seen not only to serve people in a material sense but in a wider, more holistic context, where non-material issues are as important as material ones. We need more enlightened economists and others who can genuinely think long term."

"Quantum physics has shown that we are not observers but participants in the world around us and yet through our limited human perceptions, we continue to describe and prescribe as if our minds were still outside our own bodies and environment. The study of ecology has brought this into focus for us. Science (quantum theory) has also shown us that "the only certainty about certainty is uncertainty." 'Uncertainty' from which the original purpose of science was to escape in its aim to understand the created universe. So science has brought us full circle."

To desire the goal of security is to forget the wisdom of insecurity that uncertainty gives us.

"These observations, which have undermined science's own imperious position, ought to be making us more tolerant and more ready to participate together in many more aspects of life."

"It is important to participate as an individual to express concerns about the wider issues that affect architecture. Like holography, in each part is the whole, but unlike the hologram, each part is important to the whole.

Ideas popularised in the 1960's, dematerialism (conceptual art), ecological awareness, spaceship earth - world citizen and the revolution in lifestyles (challenging sexual and religious taboos) have been slowly and discreetly absorbed and transformed by Western society into more practical and vociferous views on how to begin solving world issues such as hunger, pollution, shelter and intercultural communications. (Some would argue that this is potentially another form of colonialism.) Yet the economic model remains largely impervious to such ideas."

"In our urban environments, also spreading globally and now 'home' to a larger and larger percentage of the earth's inhabitants, there is a danger that we are establishing an exaggerated and cocooned sense of our own self-sufficiency, which in turn will further alienate us from the essence of life on earth. Urban sprawl, now a major world environmental issue was not even on the agenda of the world's first environmental conference in Rio de Janeiro in 1992."

"The architecture we produce and how we make our buildings, is a reflection of our worldview. Yet, in a society dominated by the culture of science and technology, this still remains difficult for architects to assess in real terms within the present economic model. It is very difficult to access and realistically compare hard facts on energy, labour, social impact and the renewability of materials used in construction."

"Graphs depicting the 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 as well as economic cost, etc."

"Those who have knowledge and those who are creating it are both continuing to expand and it will surely follow that thought and action will increase in complexity, diversity and speed and most of it will be communicated 'screen to screen' (neuron to neuron) rather than eyeball-to-eyeball."
What has been the effect of electronic speed on architecture?"

Paul Virilio stated "we are not dealing anymore with the technology of construction, but with the construction of technology".

I do not believe this is true. We have been dealing with both, certainly for the last two hundred years, if not longer. I would suggest that those who consider architecture principally as a means to make comment upon contemporary society, i.e. art, rather than being concerned with the quality of the environment and human habitat are operating selfishly, even gratuitously.

TOUCHING SOMETHING CONVINCES US OF ITS EXISTENCE

ARCHITECTURE ONLY COMES ALIVE WHEN YOU ARE ACTUALLY THERE

AND

YOU FEEL IT THROUGH YOUR EYES, YOUR NOSE

YOUR FEET.....

Synthetic Thinking in a More Complex World

Vilém Flusser, the Czech-born philosopher, made a convincing argument in his short essay The Factory, that it is through 'the factory', by which he means the place of manufacture, that we can understand the science, politics, art and religion of the society of the time and identify the human being. His sense of humour suggested that homo faber (maker) was perhaps a better description of the common characteristic of human beings than homo sapiens sapiens.

Architecture is inextricably linked to homo faber and as such the materiality and physicality that our thinking ultimately has to engage with is crucial in this context. Architecture is tied to our bodies' senses and although one version of virtual reality anticipates all of our neural activity being triggered by virtual environments, it is illusory to suppose we shall live like this.

While our designs have often explored the structural and energy performance of certain materials to help create spatial environments, one of our current concerns is to create a less expensive architecture using material which is less and less processed by industry, while maintaining the pleasure of dynamic light in architecture.

At the same time, we remain aware of research and developments in what I refer to as high technology, such as nano-technology and molecular 'replicating' spiders' webs.

This has led me to explore the role of material and innovation as a condition of an architect's existence through the world of practice and education.

The second half of the 20th century concluded with the fact that we have to fundamentally re-investigate design to enable us, hopefully, to be more intelligent in the way in which we negate the status quo.

By this I mean that our very existence, as individuals and as a society dealing with our need to survive, changes the balance of nature.
Understanding this is the foundation of a future architecture and I would argue, that of architect education.

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 complex inquiry.

A 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.

"Civilisation 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."
[Stanley Diamond]

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.

Conclusions

Art is an essential ingredient of all good design. It is the expression of the essential - whether in architecture, engineering or music. If for some people, the only art that remains or is relevant is that of 'being unfamiliar', shocking, then my commentary is that they are victims of that superficial aspect of our contemporary society - the media and their need of the individual.

I do not accept that they are providing some sort of necessary antidote to 'the boredom of suburbia' that is sometimes suggested. There is a need to identify more profound answers to society's condition.

As my own 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 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.

All design work should be aimed at producing a world that is a better place to live in for all.
Humanity and intelligence have as much to do with the process of decision-making as with the tangible artefacts that result from our application of science, technology and economics.

I believe that there is a genuine need for architectural students to undertake philosophical investigations in order to understand better what is going on; and architectural studies have an advantage - most architectural studies run for at least 5 years. The big disadvantage, certainly in the UK, is that few students have sufficient grounding in philosophy at school.

As we reassess our ideas of progress, I would suggest that real progress for mankind and a real sustainable future for the earth are becoming essentially the same. Architectural and engineering design and construction must therefore be genuinely concerned with this, and not treat 'green' issues in the superficial way that the media does. For example, too many north European architects are still 'badging' their designs by covering up their lack of profound research with inappropriate solar collectors.

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. Europe, along with the USA, 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 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 continue to work towards a change in these attitudes and believe 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.

Looking ahead, I can see much cause for optimism.
One need only investigate a tree.

Trees capture light, make energy, grow by processing C02 and water, support and are a home to other life forms.

They don't make any humanly audible sound until they shake themselves in the wind, when they make wonderful sounds. They don't appear to waste heat or energy or waste anything else for that matter and are natural pollutant processors. They provide shade and they look great in themselves while making and defining space.

If there are appropriate architectural forms, they are to be found in nature, but we need to understand their composition and mechanisms at the molecular level, and not simply use their forms mimetically for visual delight.

The need for 'evident intelligence and humanity' in what we are doing and designing is indisputable and I believe it is a beautiful idea.

In the words of Benjamin De Casseres:

"Progress is nothing but the victory of laughter over dogma".

Further reading:

(Well) connected Architecture, Ian Ritchie. Published 1994 by Academy Editions/Ernst & Sohn
ISBN: 1 85490 292 X (Paperback) ISBN: 1 85490 294 6 (Hardback)

(Architektur (mit) guten Verbindungen, Ian Ritchie. Published 1994 by Academy Editions/Ernst & Sohn
ISBN: 3 433 02478 2 (Paperback)

The Biggest Glass Palace in the World, Ian Ritchie & Ingerid Helsing Almaas. Published 1997 by Ellipsis
ISBN: 1 899858 210 (Paperback)

Interdisciplinary Design in Practice, ed. Robin Spence, Sebastian Macmillan & Paul Kirby. Published 2001 by Thomas Telford
ISBN: 0 7277 3008 8 (Hardback)