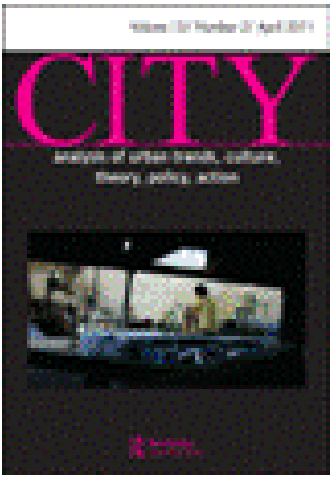

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Architecture and global responsibilities: The case of Renzo Piano

An interview with Peter Buchanan, architectural writer and critic

Kansai International Airport is a very sophisticated example of late twentieth century architecture. But it also seems to be an example of gigantic projects that totally distort the surrounding local economies. This contradiction, real or apparent, was the starting point for a discussion with Peter Buchanan about the global responsibilities of architects and, in particular, the work of Renzo Piano.

PB: It's Japan's ambition to be a highly dynamic economy. The airport is intended to have a big impact in revitalizing the economy of the Kansai region, which has been falling progressively further behind that of the Tokyo region, while at the same time having limited environmental impact. Tokyo's Narita airport, was a big lesson. Built on prime agricultural land, it resulted in various pitched battles with local farmers, ecologists, and activists of all sorts. Kansai was an attempt to limit such environmental impacts, the flight paths of planes landing and taking off being entirely over the sea. Also, building an island rather than using land reclamation you do less ecological damage to the crucial sea-land interface.

All around Japan, including the bay of Osaka, there are huge amounts of reclamation. In relation to those, Kansai's a tiny project with tiny impact. Land reclamation not only destroys fishing grounds, but also the sea-land interface which produces a lot of the sea's nutrients, shelters spawning grounds, and so on. In fact, because the island was surrounded with stepped shelves of earth under the sea, fishing catches have increased.

There are always more people flying, and the decision to build an island was taken long before Piano was involved. But it seems not a bad solution, especially when connected to a very efficient transport infrastructure. I'm not sure that the Kansai Airport is a particularly pernicious social thing at all.

Q: I wasn't saying it was pernicious. I was saying that one's got to grasp the scale of it socially as well as architecturally. And I felt that, even although Karl Sabbagh's very interesting three-part documentary, *A 21st Century Airport'*,[1] actually included information on the social dimension, people were not thinking about it.

So I'm not saying we shouldn't have Kansai Airport. I'm just saying we should think more about the contradictoriness, and whether there's any way of resolving it in the long term, between these great works of sophisticated human achievement, and the economic and social qualities that are lost.

PB: There is a problem about being able to give adequate representation to the Airport as an architectural project. My first book on Renzo Piano, from which you included a passage on the architectural and structural engineering aspects, addressed the importance of the airport only within the narrow framework of architecture.[2] It is a trailer for Volume 3 where more than half the book is given over to the airport. Even then, a building like Kansai is so complex that any coverage can only be very partial, and selected for the readership of that publication.

Q: How important is the structural engineering/architecture interface?

Structures

PB: Immensely important. All of Piano's buildings are shaped largely, but far from exclusively, by engineering, especially structural, which for several reasons plays a very prominent role. A problem with a gigantic modern building like the Kansai airport is how to give it a more human scale. Traditionally, say a classical building would have used columns to do this which might have been structural, or only decorative. Piano exposes structure internally to give scale and make the building comprehensible visually. You can see the structure that's close by, and then judge the size of the huge spaces by noting the number of trusses, say, and the size of the most distant.

In such architecture, structure mediates in several ways between you and the building. The structure has (a phrase I sometimes use) 'companionable presence', inasmuch as it's usually shaped to elicit an empathetic relationship. You can see the structure work, feel it flex. In Kansai it has a rather obvious zoomorphic shape: not that Piano wanted a zoomorphic shape, it just wound up that way. Not that he minds it being zoomorphic either. But more important is that the structure elicits some relationship as intermediary beings, if you like, between you and this huge volume that you're in.

Another very important thing about engineering and technology for Piano – and this was true for Peter Rice (the Ove Arup & Partners' engineer he usually collaborated with) as well – is that to be creative means to be extending present possibilities. Piano's work could be seen as predicated on the notion of participating with the world. How do you act with rather than on the world? Participating with the world is to be in the present, which means to help the future to be born. And so in several areas always Piano's buildings expand the bounds of the possible. Engineering, novel structural solutions, new materials or new ways of using old ones, are part of that.

Gothic buildings pushed stone construction to the limit, and lay people who don't fully understand the achievement nevertheless sense the thrill of it. When an artist – a writer, a painter, or whatever – is making discoveries for him/herself – that thrill comes through to the perceivers, even if they don't understand it. Peter Rice stressed this, and it is an article of faith for Piano too.

One of the worst things of our time is this notion of technological inevitability or the 'technological imperative' – that technology has its own momentum that you simply must go with.

Technological imperatives?

Q: Peter Rice was also saying something quite radical socially.[3] And that is that to him the structural engineer is important because he understands most of these materials and structures and their potential. But he was also worried about where this technological civilization was going. He feared that there would have to be some catastrophe before people could reorder their priorities.

PB: That's probably true. One of the worst things of our time is this notion of technological inevitability or the 'technological imperative' – that technology has its own momentum that you simply must go with. This is the problem with the British high tech architects for whom a central notion is, or used to be, the necessity of using the most up-to-date technology. That is not a future-oriented approach, but a way of not thinking about the future. It's very closely allied to the Thatcherite notion of putting your faith in the market. If you don't have a vision of the future: let the market decide, or blindly use the latest technology. That is what is so quintessentially British about high-tech.

Piano's quite different. He is puzzled by people who make buildings with only up-to-date technology. For him the key thing is to find the appropriate balance between traditional, locally available technologies and imported leading-edge technologies. That balance is different in each place and at each moment. He always says try and think, not

like an architect, but unprejudiced by the dogma of architecture. If you were an intelligent layman what balance would you choose? The example he gives is of the Stradivarius and CD. Obviously, a musician would not use a new carbon fibre fiddle, he would use his rich-toned Stradivarius. But he would also want the latest, most precise digital technology to record with. For Piano, the architect must find this 'natural' balance.

Some of Piano's buildings have very few advanced technological components, like the workshop in Vesima where he now works most of the time. And he's done other schemes that are quite modest technically. Even much of Kansai's steel structure, which might look very impressive, is actually in engineering terms quite conventional. They're just huge trusses of ordinary grade steel. The ribs of the boarding ring are more advanced conceptually, in that they work synergistically as a lattice shell. The rest is conventional, because, when building at that scale on an unstable and typhoon-tossed island, with the problems of coordinating elements coming from all round the world, it would have been too much to innovate in every possible way. The most innovative and sophisticated bit of Kansai is the geometry, and what that has achieved in terms of efficiencies in structure and services, economies of manufacture of components, and the incredibly tight integration of space, skin, structure and services.

Kansai Airport and the computer

The real significance of Kansai Airport is that it shows a true understanding of the computer's potential and uses it more appropriately than other architects, for whom the computer is merely a labour-saving device. It allows you to make and easily revise complex sets of drawings. But these architects also see it as facilitating all kinds of whimsies, because the computer can churn out the drawings and control the manufacture of the special case components. In contrast, in Piano's work, the computer is used to enter a new world of form that is not one of whimsy, but is utterly disciplined. What he seeks always is something with the integrity of an organism. But an organism's parts – the leaves of a tree, the scales of fish – grow from the same genetic template, each is different in size.

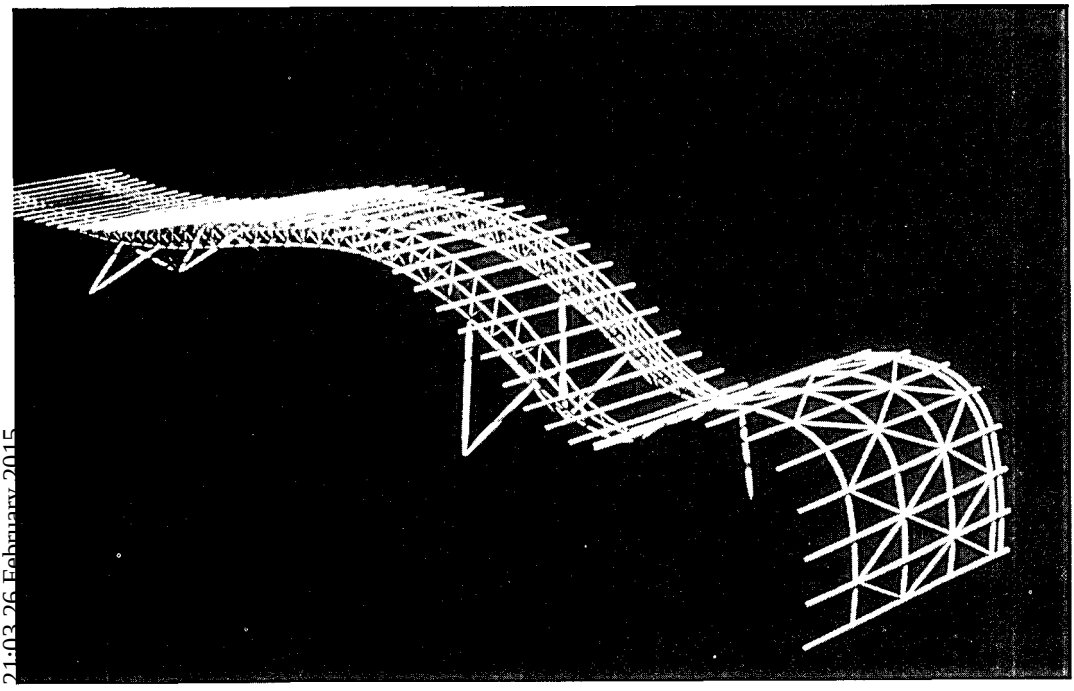
A vast building like this is made by industrial processes. The geometry adopted allows the complex two-dimensional curves to be made with components – the equivalent to the scales, or the leaves – all absolutely identical. There are no special cases, all the cladding panels and structural elements are identical.

The roof shape comes from the air that's blown in: it curves with the decelerating jet of air, so that the air is conducted around the building without ducts. These curves also mean that people passing through the building can see where they are all the time without any signposts, because the curve from front to back is asymmetric, and the wings taper. So the building is shaped by the movement of people and air, and the discipline of structure.

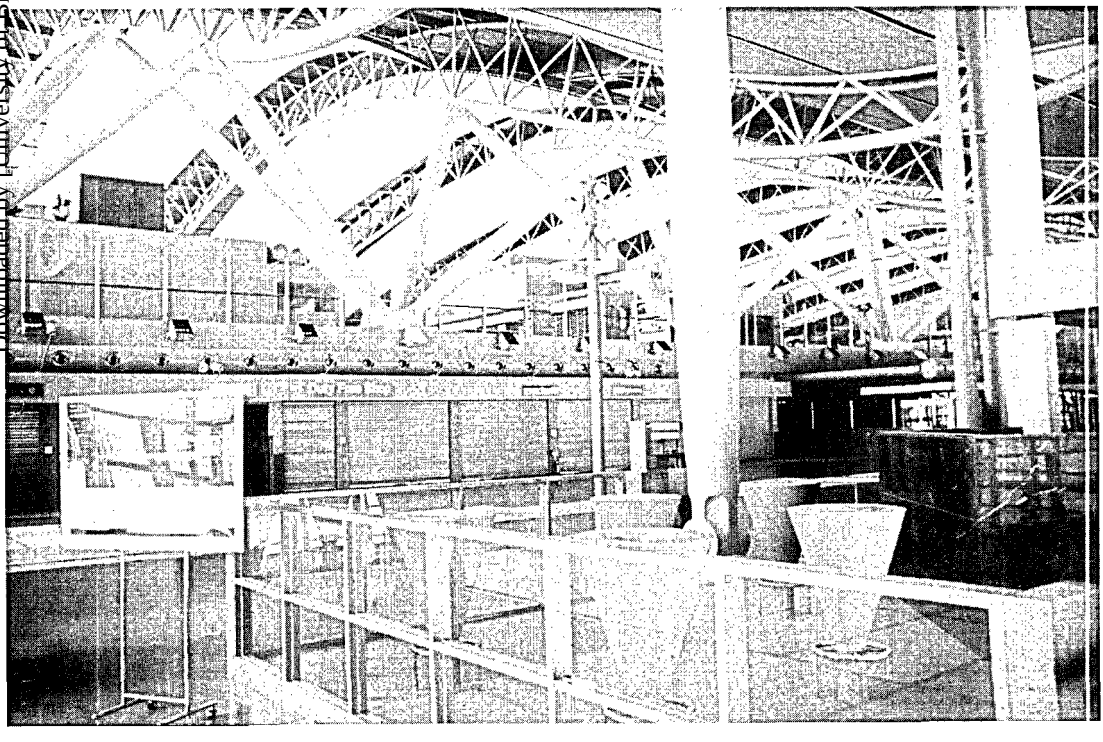
Using the computer, the architects and engineers were able to calculate those shapes and marry all the different systems in a very very tight fit. A building today is normally a structural frame in which air conditioning hangs loosely, and onto which cladding is clipped. There's a very loose match between the components. But at Kansai all these things are very, very tightly integrated: structure, space, skin, services are one and the same. It really is like an organism in that sense. Together with the fact that each component is shaped by the rigorous disciplines of structure and manufacture, equivalents to those found in organisms, gives the sense that the building is both a very efficient machine, yet also an organism. Most very big buildings are just extrusions, you could slice off any length. Kansai is not like that. It has a completely finite shape, which gives a vast building the poise found in a Greek temple with its curved stylobate.

We're going through an immense shift in the sciences, largely due to the computer. Until now a science like biology has been largely about the taxonomy of different species. But the computer has allowed us to simulate how things grow, how a species transforms from one to the next, either by slowing down processes, or by actually building up analogues, using mathematical models. So most sciences have moved on from classification to studying how forms and processes emerge and develop.

Though the computer's been used to study such things in biology, this is the first time such thinking has shaped a human artifact, by reversing the process. That's why Kansai is so immensely significant. Obviously it's a very particular kind of



Computer model of a section of the structure of Kansai Airport.



Internal view of Kansai Airport.

building, immensely big and highly specific in function. So it's not a design process to widely emulate yet. But it does herald the kind of thinking that not only architects but designers in all sorts of fields will use in the twenty-first century. It is a crucial landmark for our culture, because it's the first building to reflect what's happening in the new sciences, not by using a specific technology, but in its way of thinking, a discipline only possible with the computer. Moreover, the computer is not used to facilitate contrivance, but something that, when you get to understand it, seems utterly uncontrived. Kansai has this sense of total inevitability that any great artwork should have: extreme economy of form and means. In a great art you sense that the artist's ego is absent, that the work has evolved from its own laws.

Kansai International Airport is a crucial landmark for our culture, because it's the first building to reflect what's happening in the new sciences, not by using a specific technology, but in its way of thinking, a discipline only possible with the computer.

Some things though make you wince in Kansai: when, for one reason or another, the internal logic of the design has not been followed and Piano has fished out a solution from his past. Wherever he's used a detail he had already used before, it's always out of place.

Q: Can you give an example?

PB: One is the air-conditioning ducts on the top of the check-in counters. I think Piano felt that the building was so vast it needed a bit of jollying up to catch the eye and break down the scale, so he'd do a bit of Pompidou jollying-up. It just doesn't work.

It's interesting to compare Pompidou and Kansai: the two great big buildings of Piano's career (the first with Richard Rogers). They belong to different worlds. The Pompidou climaxes the age of the machine: it is building as gadget, or framework for gadgets, and a building as unfinished process. Kansai is a totally different world, a building that's opening into a future age in which, for better or worse, the biological is engineered and technology approximates ever closer the organic.

Something less than grand projects

Q: I'll buy that. For one level of the civilization. I'm not opposed to the idea, and I do accept that a civilization has to have its grand projects. And from your account this is a very remarkable grand project. But a civilization also has to have something less than grand projects.

PB: Definitely, and Piano has worked on a lot of those too. After Pompidou, Piano wanted a period to take stock and experiment. He retreated back to Italy, and formed a partnership with Peter Rice, the engineer, who though still at Arups also became his partner. They did a series of intensely experimental projects, designing experimental cars, rudimentary vehicles for North Africa, and making educational television programmes, and so on. One of the most interesting was for UNESCO, who wanted Piano to devise an approach to conserving historic towns. Mechanisms exist for dealing with specific monuments, a famous church or palace – for which there's funding and agreed procedures. But a town's quite a different problem. Because the individual buildings are not works of art, the Ministry of Culture has no allocated funds to save them.

Another problem is that restoring historic buildings normally means decanting inhabitants. Surveying and restoring a building typically takes years, a process that would destroy the community if applied to an urban area. But Piano was concerned with regenerating the town. He didn't decamp the community, but empowered it. This process was first applied in Otranto in southern Italy in the late '70s, and has been applied elsewhere since.

A poster goes up in the town announcing a town meeting. Then, as a big event like the circus coming to town, a truck comes with a box on it, which is dumped down in the central piazza. The box opens up revealing four sides, packed with tools, and a big

tent is put over it. Then there are public meetings under the tent or in the square around.

Each side of the box put down in the piazza, and called the Neighbourhood Workshop, dealt with a different component of the regeneration process. One was concerned with the surveys, and had all the things necessary to undertake them to establish the real situation. The next one was documentation, or local history. Old people reminisced on video to record local history and help people get back in touch with their town and its past. They could then debate there, 'What do we do?' Then there was a side of the box concerned with implementation, with tools and so on.

The box is a tool containing a collection of other tools. And those other tools are either very sophisticated or very simple. Some of the tools happen to be experts like sociologists, or specialist surveyors. But everything and everyone is at the disposal of the local community. The local community are asked: What are the problems of the town? What are your hopes for it? How can we help you? Using very sophisticated electronic tools, some of which are actually easy to use, surveys were made to assess the stability of the physical structure, the problems of water penetration, and all these kinds of things. And then other simple tools would allow local craftsmen, not experts, to fix up the houses at a low cost.

The industrial process was inverted. A problem with industrial processes for an old city is that their products are standard sizes. So Piano and Rice designed machines which made everything unique – tailored to size. Simple tools made trusses shaped to a particular span to stabilize openings, floors, roof, etc. Track was clipped on to buildings so that cradles could hang from it avoiding blocking streets with scaffolding (fig. 1). Electrically driven tractors with balloon tyres carried cement inside old buildings and up their staircases (fig. 2). Aerial photography was done simply with a motor-driven Nikon on a helium balloon walked around the town (fig. 3).

It was an extremely cunning approach, typical of Piano, combining leading edge and simple technology. Both of these could be used by ordinary craftsmen, who were mobilized along with other citizens to fix up their houses and town. Issues we talk about now, about community empowerment etc., are all realized there.

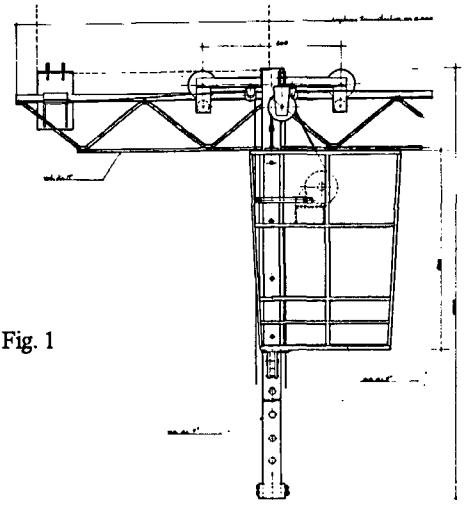


Fig. 1

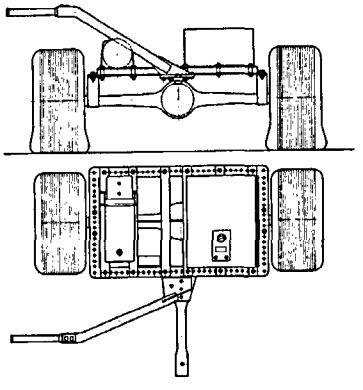


Fig.2

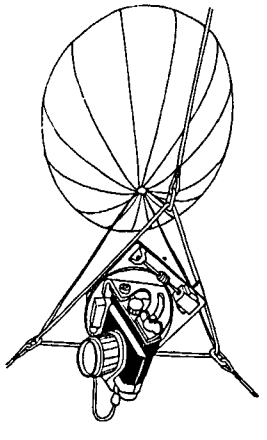


Fig.3

Though apparently neither Piano nor Rice were aware of Ivan Illich, the parallels are close. Illich talks about the difference between a tool and a product. A product he calls heteronomous. It is disempowering because you can only consume a product. A tool is a autonomous and allows you to take control of your life. What is necessary is to find and create and then distribute the right tools. That's what this project was concerned with.

What's happened in a lot of cities is that they have become zoos for various species of architecture, where architects have just made their usual ego statements, and the city has become more fragmented. The whole model on which such architecture is based – actually all the arts at the moment – is completely wrong. There's too much stress put on the individual genius creator.

It's one of Piano's the best projects, one with immense significance. It's a pity the process has not been more widely applied. Piano himself applied it in the island of Burano on the Venetian lagoon. Then he was called to other towns in the south of Italy. Surveys were done, but not much was implemented. Piano was also going to work in Senegal along this basis. Some projects didn't get as far as they should have. The problem is that a lot of people want the big high-tech, high-investment solution. Otherwise they think they're being fobbed off with something second-rate – the sort of thing which intellectuals would like, community empowerment and so on.

Bilbao to Barcelona

Q: Is that what you feel has happened in Bilbao?

PB: Bilbao I don't know very well. I've only seen the drawings and models. But Bilbao seems pretty much what's happened in a lot of cities; it's a zoo for various species of architecture, where architects have just made their usual ego statements, and the city has become more fragmented. The whole model on which such architecture is based – actually all the arts at the moment – is completely wrong. There's too much stress put on the individual genius creator. And what we get then is what may or may not be gems (in my view they're usually not gems) surrounded by a sea of ugliness.

What makes Barcelona so interesting is that it followed a different model. It's the only twentieth-century example I know of where the consequence of the urban design interventions is that the totality is greater than the sum of the parts. Some new parks and buildings in Barcelona are of very high quality. But much is not really great. It's the total transformation, the way it has all come together, that is much more significant. It's the antithesis of the Bilbao model. Some international stars have built in Barcelona. But mostly they were dumped up in the Olympics precinct (as part of the strategy for generating international interest), where they couldn't do too much damage to the city itself. The important work in terms of healing the town was done by local architects, by Spanish architects, who respect their context.

Barcelona's authorities and architects were concerned with how to reintegrate the city. Though the central city had been neglected and so not much damaged during the Franco period, the periphery built up during this period was pretty horrible. And the central city was very dense, lacking in all kinds of facilities, open space, schools, and so on. So they opened up the centre with networks of new plazas and parks. These provide soft green ways of moving through the city, as opposed to walking on the street, thus contributing another dimension. And then those chains of open space continue into the new areas where, by making a park or plaza, and building fences, or kiosks and shops around it, areas that had been too open were given a sense of enclosure. Chains of connections were made and the new parts of the city started to feel a little bit more urban and closed up, and started to integrate with the old.

That's the great thing about Barcelona: the sense of it now being much better integrated. And the most successful thing of all probably is the Cinturon – the motorway which goes round the city. Unlike other motorways it does not cut the city off from its setting but has been so carefully handled that it has actually reintegrated the city with the sea. By splitting the lanes and putting them at different levels, or moving them apart with landscaping in between the lanes, and other tricks, this big motorway actually doesn't make a big barrier. Along the mountain edges, similar tricks were used, sometimes burying the road, sometimes lifting the landscaping using Japanese 'borrowed landscape' techniques to obscure eyesores and bring other views close. The mountain now is closer to the city than it was, despite the fact there's a huge motorway.

The city is no longer a unified continuous thing, but a series of bits, makes it alienating. Ultimately the architect and the urban designer should help us feel at home in the world, and that is not what they are doing.

How do you achieve this integration? A key thing about Barcelona was the cooperation between the different professions, between individual professionals and their bodies. In Britain the environment is split up between architects, planners, road engineers, and maintenance people: everybody is a separate fiefdom, and there's no kind of cooperation. And that applies in most parts of the world. In Barcelona, taking over from Oriol Bohigas' initiative, Mayor Pasqual Maragall recognized that there had to be collaboration between these various bodies. And he apparently insisted that the chief road engineer, the chief landscape architect, and the Director of Architecture and Urban Design would meet together with him every day, or if that wasn't possible they would talk to each other on the telephone. So there was an extraordinary level of cooperation between these professions. That in the end was perhaps the most important thing in Barcelona's achievement.

Q: So in a way is there a parallel between Kansai Airport and Barcelona? That in one case on a grand project you've got this very high level of integration of disciplines, and in the other case, remarkably, in a whole city, not to the same degree, you've got a remarkably high degree of integration?

PB: Yes. A major problem with the city environment is that the various professions that shape it work independently. It's all a very, very loose fit. The consequences of both contemporary urbanism and such architecture are profoundly alienating. That the city is no longer a unified continuous thing, but a series of bits, makes it alienating. Ultimately the architect and the urban designer should help us feel at home in the world, and that is not what they are doing. Consider the modern building. You come in and don't know where you are. You're just in this serviced framework and each interior is different. As you go from one office suite or apartment to the next, it's just like flipping TV channels.

It all comes together in Los Angeles?

Q: It all comes together in Los Angeles! I don't know whether you know Ed Soja's essay about this?[4]

PB: No.

Q: He's not really saying that it all comes together, in the sense in which you've been talking about Barcelona. But he's saying everything that we're saying about the postmodern city is exhibited in Los Angeles. And is this what you're talking about when you're talking about the lack of fit of things?

PB: Yes, Los Angeles is the totally atomized city. Whether that is the future, it's certainly what's happening at the moment. That doesn't necessarily mean it's the future.

Too many people are confident about their views of the future. Yet too much is in flux: the period we're in is one in which our culture is

melting and falling apart; but the new culture has yet to become clear, it is much too early for any confidence about what it is going to be like.

Globalization means cities will have to compete to attract new businesses, people, skills and so on. And they will compete not by homogenization, which has been the process in our current period, but by each city redefining its distinctness.

Nevertheless there are certain things I would predict. For instance, globalization means cities will have to compete to attract new businesses, people, skills and so on. And they will compete not by homogenization, which has been the process in our current period, but by each city redefining its distinctness. So Amsterdam will attract people because of Amsterdamness, Paris because of Parisness, and so on. Barcelona understood that – the need to intensify its identity. But you cannot freeze a city in time, it must change. The trick is to keep aspects of its unique and particular character, while adding new dimensions to this. That's one of the few things you can say in confidence about the future. Perhaps Los Angeles will become more Los Angeles. But that's not what we're looking for as a universal model.

Also, because so many modern businesses are not dependent on transport of raw materials and goods – it's information flows that are crucial – all the things which defined city cohesion and growth before are less important. business can locate anywhere now, and cities and other forms of settlement can be shaped for other reasons that access to resources, transport, etc.

Yet one prognostication for the future which I find enticing, and I can see might be true, is that, once we're all connected with the Internet, and can work where we like, then people working at home are going to want the facilities of a local neighbourhood again. The American expression for this is the 'return of Main Street'. There will be a local bank, butcher, library, café, people are going to want that kind of world again, with everything close at hand, and many opportunities to meet and interact with neighbours and local community. They will not be commuting to the city and meeting work colleagues there. Not only might the neighbourhood return, but also social institutions might come back, places where people meet, and which dignify these meetings too. We might rediscover community of one sort on the Internet, that of people of specific common interest, but also perhaps we will have local communities of more varied make-up. On the Internet we meet like-minded souls. But perhaps we will meet again a wider range of people in a wider range of roles, something twentieth-century urbanism has pathologically avoided. Richard Sennett's point is that we now only deal with people who are similar, so never engage with difference.

Maybe with the return of Main Street, people will gain a complementary form of community to that offered electronically. Whether this is going to be the future or not I don't know. But there is quite a strong movement in this direction, for example, the pedestrian pocket towns in California, where everything is very tightly integrated around the station of a high speed transit system. That's the antithesis of Los Angeles, yet in California. And there is momentum behind these towns. Some might be being built. Certainly a number are being investigated.

Q: You take, then, a reasonably optimistic view of urban futures?

PB: No, I think if we weren't in serious trouble we wouldn't take radical corrective action. That's a position Bucky Fuller posited decades ago. No, I believe things are dire.

Q: But sufficiently dire for people to begin going back to what Peter Rice was saying: waiting for the small catastrophes which will actually begin to redirect people?

The gorilla's analogy

PB: The catastrophes are there, but people are not being redirected, they just ignore it all, which

is dismaying. I read some Socratic dialogues with a gorilla recently — *Ishmael*,[5] a cult book in the United States, but unknown here. The gorilla tells the author: Look, you think that your culture's flying, that it's all OK with this high tech society. The gorilla's analogy is that we're in a pedal-driven aeroplane that we've pushed off the edge of a cliff. But we haven't noticed yet that the ground is coming up to us faster and faster, or we think all we've got to do is to pedal faster.

There's truth in this analogy. The tragedy is we are in deep trouble, and people are still not acting. Look at government responses: global warming, insecticide poisoning, BSE, they're not conclusively proved. The inertia is terrifying. We should be responding long before things are conclusively proved, as soon as we are alert to the terrifying possibilities. By the time we have conclusive proof it's far too late. Even insurance companies that are going down the pan because of environmental catastrophes have yet to protest, which is truly amazing.

What architecture and planning suffer from is a desperate lack of imagination. We need to think of more alternatives and of where we might be going, and of new paradigms of what architecture could be about. We have all sorts of possibilities open to us, and we don't have the imagination to conceive of and use them. What we need to do now is brainstorm and dream: to stop us trashing the world we need a culture that is much more deeply satisfying. We trash the world because our culture and architecture don't make us feel truly ourselves and at home in the world. The major project for creative people now must be to focus on the design of a better, more deeply satisfying culture. That's what architects should be doing. But of course at the moment they're just interested in ego games of their own.

Drugs are a catastrophe that is going to force us in the next decade to recover many of the qualities of the city (though maybe not its traditional form). Allied with the fact that modern weaponry is very small and transportable, drugs are going to make the modern city – its centre particularly – increasingly uninhabitable, as we are seeing in parts of British cities. We have to confront this in various ways. How can we make a self-policing city? That means returning to a city in which there is defensible space, more interrelationships between buildings and the street, and all these kinds of things. Conviviality as a design goal is going to be forced upon as designers.

The major project for creative people now must be to focus on the design of a better, more deeply satisfying culture. That's what architects should be doing. But of course at the moment they're just interested in ego games of their own.

How do you build a culture which alienates people less, in which kids feel that they belong to the world, that they can have a sense of adventure, exploration, self-knowledge and self-esteem? All that is going to be a major concern. Because if kids don't have these things they're going to get into drugs. The prevalence of drugs is a criticism of our culture, and the environment we've designed. That's one of the tragedies, one of the catastrophes we face.

It's not only eco-catastrophes, but other catastrophes that are going to force the design professions to get much much sharper and more relevant, applying vastly more imagination to confronting a wide spectrum of urgent issues than architects are doing at the moment.

If a leading-edge business today was as creative as most architects, it would go bust. Business (not British business though) is a far, far more creative field. And, interestingly, leading-edge businesses, to keep up to date, innovative and competitive, have nearly all had to transform the environments they work in, to allow them to interface and work in much more effective ways. Creativity today is not in art and architecture, but in contemporary ideas of management. And maybe those ideas will one day infect architecture, and planning, and design professionals will start to think in a more imaginative way. There's a terrible dearth of real

imagination in thinking about the environment. Most of the ideas are so unexciting. And we're not going to get people to stop trashing the world unless they're excited about the alternative. That's the problem. People are not dreaming up sufficiently exciting alternatives. Most architectural things you see at the moment are just shapes. They're meaningless kind of egotistical games, that have nothing to do with how people live and so on.

A new civilization

Q: You argue in your Pacific Cultures article[6] that we should be on the edge of a new civilization, a new Pacific civilization.

PB: This new culture is certainly taking form, but we need the impetus of impending catastrophe to make the next kind of evolutionary jump, or for it to fulfil all its potentials. Scientists say that 80 per cent of the species on earth are going to be destroyed by man before we get this crisis under control. There have been in evolution four or five other catastrophes, the last one being when the dinosaurs were wiped out, when as much as 90 per cent of living species were wiped. -

Q: Some of the territory that Charles Jencks covers in *The Architecture of the Jumping Universe*?[6]

PB: Yes. I studied physics first at university, so I've been reading the same people that Charles Jencks has for decades.

Things are definitely very bad. Yet I sometimes wonder, did evolution perhaps build in this enormous slack, so that we could wipe out those species, this intricate ordered web, making the next jump, which must be to a much higher level of order, with an electronic global nervous system, etc. But that's a horrible thought that shouldn't be propagated at all.

Q: In the last issue of *Regenerating Cities*, we published an article by a Chinese scholar, Jian Fei Zhu, on Kurokawa.[8] And Zhu was arguing very strongly, as does Kurokawa, that Buddhism is reasserting itself, and that it's a new Buddhist civilization that we're seeing on one side of the Pacific. But you weren't particularly concentrating on religion. You were concentrating on the Thompson theory of four great cycles of civilization.

PB: Yes, but I'm sure the next cycle we move into will definitely have a spiritual dimension again. The appeal of ecology to many is that it is a semi-spiritual vision, giving man a place in the cosmic web, an ethics to guide us in our actions and interactions. What was particular to the last cycle was its mechanistic world view, the cosmos as a machine. That's over. The vision that we are moving into is of an evolutionary telos – a notion that the earth is actually going somewhere. Some physicists say that if there's more sun-energy coming into the earth than is being dissipated (radiated away), the only way to lock in that energy and deal with it is by creating higher levels of order. Energy transformed into information drives evolution and saves the earth from overheating. There is then an inevitability about increasing levels of order.

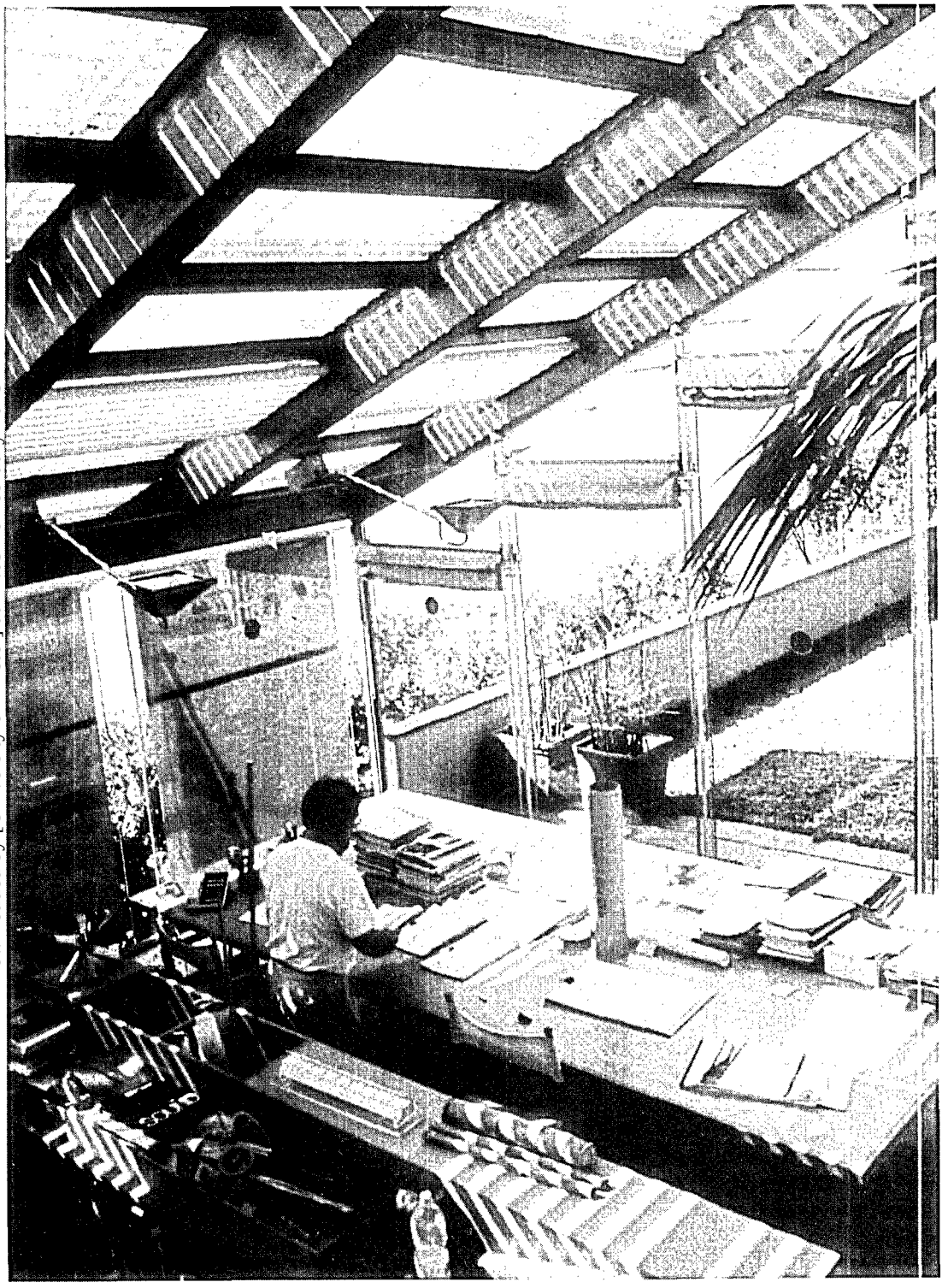
The model which is coming increasingly to the fore is the notion of creative action as participating in the world's evolution.

Piano's contribution

Piano is the one architect who exemplifies this approach. For him it is not an intellectual position, because he's not an intellectual – he operates by instinct. But always his work is a process of trying to feel what should be happening here: how do you work with the world rather than act on it? Most architects act in order to make their mark. He is not like that. For instance his entry in the Bankside Tate competition was largely misunderstood: people said it's very boring. But for him, you should do what's obvious in any situation. If you're in a highly symmetrical building, you follow the rules of the building. And there is no need to make any fuss or ego-statement on the outside. Read the signs, act on those, and be gentle in your impact.

Q: Can you give examples of that, from Volume 2[9] of your series on Piano?

PB: His own office-laboratory-workshop at Vesima, near Genova, is a good example. Originally the idea of both Peter Rice and Piano was to set up a laboratory which would do research into uses of plants and natural materials in building. For instance, various plant fibres are very high in performance, even in comparison to steel. Piano



Renzo Piano Building Workshop, Vesima, near Genova.

had this land which he wanted to put to use. So he set up this research base. He works there, and they have seminars for the office there.

There was the existing farmhouse in the local tradition of pink stucco. And round about are greenhouses coming down the slopes. Piano has kept the old building, and the old terracing of the landscape is there, but he has straightened these up with pink stucco walls. Over this is a glazed roof of ordinary laminated timber, with an automatic louvre system outside. So it's clearly a relative of the agricultural greenhouse, but made habitable and updated a bit.

Piano is always concerned with how to bring technology and nature into some accord – a technology that's gentle to nature, and that in many ways emulates nature.

There are several points I want to make about this. First, it nestles into nature – rather than imposing on it. The terracing and the plants just run through the building. The plants outside and inside are for research (itself a mode of engaging or participating with nature) and the various professionals work amongst them. There's also the sense that you are part of the traditional culture of the area. Pink stucco! For most architects the response would be: My god! Hell no!. And field stone. A slightly rustic quality and the warmth of the woodwork prevail. He's taken the traditions of both the farmhouse and the agricultural greenhouse and just given them a push forward. The building is lit through the roof, the movements of the automatic louvres drawing attention to those of the sun, so that you're hyperconscious of nature. Piano is always concerned with how to bring technology and nature into some accord – a technology that's gentle to nature, and that in many ways emulates nature. Here it's almost like being under a pergola, you feel out in the open almost, that you're on these terraces, working amongst the plants, with the mechanical leaves of the louvres adjusting to the sun. So you're hyperconscious of the seasons, the cycles of the day, and so on. This is another aspect of this notion of participation, that you're part of nature, the world.

I have a very strong feeling that our whole relationship to the world is changing. I created a little story when writing about Piano.

As lonely conscious primordial beings, on the savannah, we're aware of our vulnerability. We have to be alert. Our energies all focused outward. But by making ourselves safe, in a walled secure place, we could turn inward and think about other things. Architecture comes out of a compulsion to make manageable the continuity of experience and consciousness of our vulnerability – to partition experience up into manageable chunks that we can focus on without distraction. That's the wellspring of architecture – why is a house split up into so many rooms, dining separate from living, kitchen from dining? Any purely functional explanation is completely ridiculous. There is obviously a psychic compulsion behind this need to partition.

My myth is that the world gave us time to sort ourselves out by putting us into boxes and allowing ourselves to focus on our own things. By focusing on what we choose in the security of our rooms, we could dream of the cosmos or concentrate on the atom. But there's been a tremendous cost. We have tamed the world which has almost been trashed as a consequence. Now we have to turn our focus outwards and start to be much more aware of the earth and the pain we have inflicted on it.

In a Piano building it's not like being in a historic building. You are aware of what's around you, nature, its moods and cycles especially, in a different way. That's also a mark of participation.

During the '80s there was a lot of very good scholarship about what the traditional city and traditional architecture meant, about, in fact, the world that we've now destroyed, and is disappearing. There are various ways of looking at this. One is as a tragedy – that we've destroyed that traditional world that offered us so many psychic comforts, which modern architecture simply doesn't. But you could also say, from the McLuhan point of view of going into the future

looking in the rear view mirror, that it's only because this is no longer our world, no longer relevant to us, that we can actually see and study it.

Q: So how many volumes are you producing on Piano?

PB: I'm doing the third now. Then there'll be a wait, and there'll probably be a fourth.

Q: The first one covered – ?

PB: It covered work right from the beginning of Piano's career, quite briefly, and then focused in more detail on the work that he'd done since forming the Renzo Piano Building Workshop in 1981, up to buildings which more or less have just been completed.

Volume 2 covers buildings which had also just been completed, because there were too many to go into Volume 1, plus a number of projects, some of which are shown in sufficient detail that you can see how Piano thinks, how projects evolve.

A problem with many architects today is that the final building is only a built version of the initial design drawings. But the design of a good building keeps advancing: in thinking about how to construct it, and dealing with all sorts of other things, it changes tremendously. It matures, as study of the particular detail affects the general. Also, Piano's a great believer in not rushing design. If you do, you're just going to overlook something important. A design must marinade slowly in the unconscious, which makes Piano sometimes very frustrating to work with; just when you think you're getting somewhere, he says: 'Enough!' because things must take their time. He does not want to freeze things prematurely. Designs should just slowly be built up by ideas almost like a sandbank in a river, slowly being deposited. The building must be part of the flow of life, rather than like a dam, or a rock blocking the flow of a stream, which a quickly-made decision might be. No matter how desperately brilliant the design is, it might not be part of that flow.

Q: From that point of view, I'm not certain that Karl Sabbagh's documentary on Kansai really did Renzo Piano justice, did it?

PB: It didn't, because it exaggerated those moments when the cameraman was there. It didn't show the evolution of the project but started once the building was under construction. The conceptual thinking was over, though there were still decisions to be made. A really revealing documentary of that sort would have to be made over a very long period unfortunately. And it's difficult to know, at the competition stage, that you're going to be backing the winner. Television seems to be so real, yet because it's so edited it's highly distorting.

Q: What would you select in Volume 2 as giving a good feel for the process of Piano feeling his way, thinking his way?

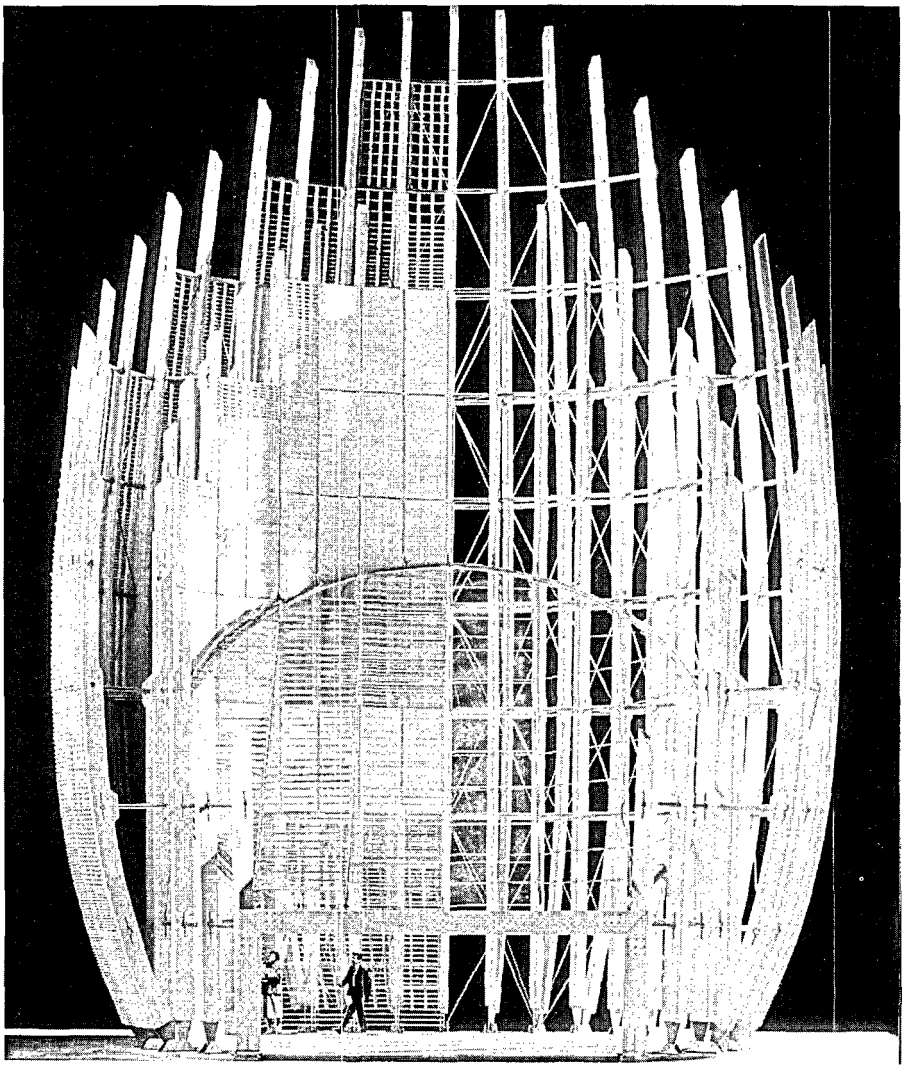
PB: There's a discussion of a very strange building now being built by the French government on the Pacific island of New Caledonia as an act of reparation for the Kanaks murdered by colonists. It is a centre for Kanak culture made up of structures which are updated versions of traditional Kanak huts and hamlets.

It's a very romantic vision. Once Piano had won the competition with this funny combination between high tech and South Seas romance, he realized that it was a little crazy, and has tried to rationalize the whole thing much more. Yet he was constrained because, once the Kanaks saw the design, they loved it, and didn't want him to change it too much. They didn't want the romance to go. So Piano's walked a very difficult tightrope, and I am sure he's himself quite nervous about this.

The book shows all the stages the design went through. Construction has now started in pretty much the shape of the last drawings. The layout in the book shows how a design develops through stages, and how its ideas are tested. There was an

Along the crest of the promontory, a covered promenade curved like a stalk connecting the fruit-like clusters of the various departments, the major spaces of which were circular in plan. Around each such kernel of fully enclosed and technologically serviced space was wrapped a tall husk-like cage of curved laminated-timber elements, braced by steel rods and clad with thin timber slats. The Building Workshop came to all each of these elements a 'case'. They persist in much-altered form in the design that will be built.

The cases mediated between the building and its setting in various ways. Visually they were the dominant elements of the design, yet they were akin to, and so would blend with, the trees, particularly the indigenous columnar pines. They also echoed the forms of the traditional Kanak huts so that the clustered cases of each department in turn recalled a traditional hamlet.



J. M. Tjibaou Cultural Centre, New Caledonia, 1991–

idea that these hut-like structures would form thermal chimneys for convection currents when the wind is in one direction, and would also act like wind-scoops. Wind tunnel testing showed that they didn't work as wind-scoops. But they did work as thermal chimneys. So ideas changed, just as structural investigation changed the shapes of other things.

Once the competition is won, then work starts in earnest. Piano does lots of simulation, model making and prototyping. All his buildings go through lots of testing. They are sent to university laboratories around the world to do tests to study how air flows through them, how the acoustics work – all that kind of thing.

If it's a concert hall, they make models and then lasers are flashed round to see how the acoustic reflectance works. And then they make bigger models in which sounds are made and measured and tested. More than almost any other architect – there's an awful lot of mocking up and testing. Hence the name Workshop. For him design is something which is about making – it's actual physical engagement with material. He believes only the hand balances the head and the heart; that it's only through physical engagement, testing and making, that something evolves that's not either hopelessly romantic or aridly intellectual.

Praxis

Q: Do you think there's something symbolic in that? About how intellectual work should be integrated with practical work. People tend to comment on Piano as though it's some defect that he's not a great intellectual!

PB: Firstly, Piano is a very intelligent man. One reason he chooses not to be an intellectual (and people exaggerate that, because it makes him sound like 'a peasant' or something; he's a sophisticated man) is partly a reaction to the Italian scene, where intellectual dogma has reduced most architects to idiocy. I imagine that any sensitive, intelligent, commonsensical person within the Italian context of architecture very rapidly becomes anti-intellectual. Because intellectual dogma has just narrowed their minds. With Italian architects, you can have a wonderful discussions about the cinema, or food, or literature. By the time you get onto architecture, forget it, it's dogma of the narrowest and most mindless sort. That's why Piano has an aversion to the intellect. Also I think he feels the intellect makes decisions too quickly. Things must come slowly, only shallow certainties come quickly.

Q: You could almost generalize a philosophy of praxis – rather than treat it as a kind of intellectual defect.

PB: It's not an intellectual defect. Piano's close friends are Italy's intellectuals: Luciano Berio the composer, and Umberto Eco, he's friendly with people like these. As for the British architects who comment about him as an non-intellectual, he's far more intelligent than most of them. But the intellect is something he treats with care, with caution. It's dangerous as well as useful.

> Invention is easy, and wilful and takes you away from engaging with real problems. Insight is putting aside the self and going into and engaging something unknown, making discoveries about something real.

Q: That would be quite a good moral for our times.

PB: But not everybody can be guided by their instincts. Many people who think they're being sensitive and responding instinctually to things as Piano might are actually projecting parts of themselves. Some people's intuitions are spectacularly in touch with the world, and others are just warped by their own kind of problems.

Such problems are compounded because nobody knows where the world is going, so there's no consensus as to what is good architecture. So architects are only interested in fame and fortune. Compare them with the first generation of modernists – Aalto, Frank Lloyd Wright, and

Corbusier – who all wanted to be great in the long perspective of history. Most architects don't want to be great, but they want fame and fortune. And that is really pernicious.

An architect must be able to put his ego aside, as Piano's very skilful at doing. Piano's a very good listener. And one of his ideals is that everybody must be able to contribute to work that's going on: that in the end, he says, it shouldn't be possible to say who contributed what to a project. Yet the paradox is that, while he's more open to other people's input, Piano shapes the Building Workshop's work. With many autocratic architects it's nearly always somebody else doing the design. With Piano, while everybody's contributing, he is also guiding and shaping and is much more in touch with his practice's work than any other big name architect I can think of, and certainly any architect with a remotely comparable volume of work. Yet, strangely, because he's in touch, and he's got these good instincts (and though his works reveal a common signature or spirit), his work is not constrained by some very obvious personal idiom, but is more heterogeneous than other architects. It's much much more varied, because it's much more shaped by the place, and by the problem and the moment. Piano's able to seemingly put his ego aside.

Another model that's completely wrong in architecture at the moment, and this goes right back to the schools, is not just this ego thing of fame and fortune, but also that schools are publishing student work, exhibiting it, putting it out to the public. All that is a drive to short-termism, not to the long-term maturation that makes a great architect.

Also in our time too much emphasis is given to invention. And creativity is seen as being invention. With Piano's Bankside, as I said, people sneered at it because there weren't wacky ideas. We undervalue a much more important component of creativity, which is insight. Invention is easy, and wilful and takes you away from engaging with real problems. Insight is putting aside the self and going into and engaging something unknown, making discoveries about something real. And that is a Piano skill. I think that these things need to be revalued, resurrected, put back into the creative process, which at the moment is much too concerned with self-expression, with wilful invention.

I despair at the way architecture's written about in most of the journals – they want things to be much more obviously 'imaginative' with many more contrived ideas, and so on. but that's the easy stuff. It's much more difficult, and much better, to get a feeling for what's going on, to have real insight and feeling and sympathy, and work with that without imposing too much. Working gently, that is the Piano strategy.

Notes

1 Karl Sabbagh's '21st Century Airport'; extracts from the third part were included in 'Architectural Dreams, Social Realizations and Social Costs' in *Regenerating Cities*, Issue 7, pp 9-11.

2 Peter Buchanan is author ofof *Renzo Piano Building Workshop*. Phaidon Press; vol I, 1993; vol II, 1995; each £39.95. Two further volumes are in preparation.

3 See his chapter, 'The Dilemma of Technology', in Alexander Tzonis and Liane Lefaivre (eds.), *Architecture in Europe: Memory and Invention since 1968*, 1992. For contrasting evaluations of Peter Rice's position, see Bob Catterall's discussion in 'Urban Studies, Urban Crisis', in *Regenerating Cities*, Issue 6, particularly p62, and Bill Riseboro, 'The Imaginative Engineer', in *Regenerating Cities*, Issue 7.

4 'It All Comes Together in Los Angeles'., in Ed Soja, *Post modern Geographics: The Reconstruction of Space in Critical Social Theory*, Verso, 1989, pp. 190-221.

5 *Ishmael* by Daniel Quinn, Bantam, New York, 1992, paperback 1995 – available from Compendium Bookshop, London.

6 Charles Jencks, *The Architecture of the Jumping Universe*, Academy, 1995; reviewed elsewhere in this issue.

7 Peter Buchanan, 'Pacific Rim and Planetary Culture', *Architectural Review*, August 1991.

8 Jian Fei Zhu, 'Between Post-Modernism and Buddhism: Kisho Kurokawa's Theory of Symbiosis', *Regenerating Cities*, Issue 7, pp. 44-49.

9 Peter Buchanan, *Renzo Piano Building Workshop: Complete Works, Volume Two*, Phaidon, 1995.