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# THE BIG RETHINK

## TOWARDS A COMPLETE ARCHITECTURE

These are critical times. Throughout history, change has been the background to our lives. But now the nature of change has changed. We are in the grip of widespread and systemic ecological and economic meltdown. This necessitates that we rethink everything, including architecture and the design of the larger environment. For architects the most immediately challenging issue has been the environmental crisis to which buildings and our dispersed cities are the major contributors.

But global warming, no matter how threatening, is also the symptomatic fever heralding this larger breakdown. Some architects are now designing brilliantly sophisticated and effective 'green' buildings. But these are still not sufficiently broadly conceived to deliver sustainability. They will merely reduce the degree of unsustainability, but are not conceived of in terms of the profound cultural changes necessary to inspire the urgent

and radical transformations we must undertake to reach true sustainability. A thorough rethink is required to arrive at more imaginatively exciting yet pragmatically achievable approaches.

The AR sees this is as a timely moment to reconsider all aspects of architecture, because it is so obviously required and architects now have the time and motivation to engage in such an exercise. The Big Rethink will be a year-long campaign. Each issue will feature an essay on the topic. We begin with a major overview of the state of current architecture. Further contributions will elaborate on issues from a theoretical perspective. From these foundations, wide-ranging essays illuminating various topics of critical concern will follow. Over the year, this will give coherence to the campaign, broaden the scope of debate and build up into a body of reference, inspiration and provocation. Critical thinking for critical times.



**1. Designed by Renzo Piano, London Bridge Tower, nicknamed the Shard, was part of a mayoral drive to give London a 'world-class' city skyline. But though it extols its mixed-use credentials and will improve the public realm, it is an incontrovertibly overbearing presence in the London streetscape**

# THE BIG RETHINK PART I: TAKING STOCK

The world is entering times of major transition. The inherent ecological and economic impacts are re-shaping the larger environment of which architecture and design forms a vital constituent. This calls for substantive reflection from the architectural profession. Setting the scene for the AR's Big Rethink and paving the way for future contributions, this first essay examines the current state of the global architectural scene

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Constant change has been the backdrop to our lives. But now the nature of change has changed. Instead of, or besides, being subject to the forward propulsion of 'progress', we are in the throes of comprehensive systemic collapse. Along with other potent forces for change, this suggests these are times of major transition – times in which to rethink almost everything, including architecture and the design of the larger environment it is part of.

The initial unambiguous signs of this systemic collapse were, and continue to be, the many dimensions of the environmental crisis afflicting the seriously overstretched systems of our earth. These include the many forms of pollution (of air, water and soil), the degradation and loss of topsoil, and the diminishment of biodiversity to the point where the sixth great mass extinction of species appears unavoidable. And, most urgently challenging of all, particularly for architects whose designs contribute so much to it, is global warming with all its many consequences in changed weather patterns, more extreme weather, climate-induced migration of humans, as well as other species and so on. But, no matter how direly threatening are the consequences of global warming, no real progress is being made in effective global agreements to curb it. Yet it is also now apparent that global warming could be seen as the symptomatic fever, the raised temperature of an ailing patient, heralding an even more widespread breakdown that requires even broader and more difficult-to-achieve measures and transformation.

Now a more immediate challenge to architects, to their individual professional survival at least rather than that of mankind, is the economic downturn. So far, as those economists who predicted it also forecast, it has not been resolved (nor will it be) by politicians' attempts to save banks and vested interests rather than undertake radical restructuring, particularly of the financial sector. So we are sliding into what promises to be the prolonged second phase of a double-dip recession, if not outright and lengthy depression. In the US, political process is now so gridlocked as to seem impotent in the face of the urgent action required to fix the world's largest individual economy; and the problems of the Eurozone, collectively an even larger economy, appear similarly intractable. Already, with the knock-on effects of this impasse only in their early stages, Britain has seen social stability rocked by rioting of the economically and educationally disadvantaged.

These are just some of the interlinked forms of systemic breakdown, of which many of the causal links are not yet widely acknowledged. For instance, the role our dependency on fossil fuels plays not only in the environmental crisis but also the economic meltdown is insufficiently acknowledged – despite the original crash of 2008 starting within 60 days of oil reaching an unprecedented US\$147 (£95) per barrel. Without a radical restructuring of our energy and distribution systems, our having passed global Peak Oil (after which supplies decline as demand continues to rise) will inevitably wreak havoc with any economic recovery. To assert that in the present economic circumstances we cannot afford to invest in green measures is to seriously misread our predicament and to delay the transition to what has

been called the Third Industrial Revolution, the most promising road to economic recovery. But as well as these immediate 'sticks' that should be provoking a radical rethink and restructuring, only a few of which have been mentioned here, there are more positive 'carrots' (such as the advent of the Third Industrial Revolution) that should also be drawing us forward. These will be elaborated in a future essay.

In the past, major downturns in architects' workload, and the free time and incentives to reassess things that this afforded, resulted in major rethinking and reorientation in architecture. Hence abstractly Functionalist Modern architecture emerged after what was seen, in part, as the purging effects of the First World War. But the abstract forms were not universally popular and weathered badly; so after the Second World War the palette of materials and forms used by architects became considerably enriched to enhance the appeal of Functionalist buildings. Now again, architecture will be compelled for many reasons to undergo major changes in the near future.

#### **Reconceptualising architecture in uncertain times**

*The Architectural Review* does not subscribe to the apocalyptic predictions for 2012 that are currently so prevalent – the end of the Mayan calendar and so on. But this widespread discussion about the meaning of 2012 reinforces the notion that this is a timely moment to rethink architecture, both to better meet the challenges ahead and to progress beyond current confusions, and also because so many now have the time and incentive to engage in such an exercise. The AR will thus commit a part of each of this year's issues to a cumulative and comprehensive rethinking of many aspects of architecture and urbanism, an exercise we encourage readers and others to participate in and that, where possible, will be connected with other features in each issue. Among other things, this rethink will draw on emerging areas of thought and theory that, although powerfully appropriate to architecture, have barely been applied to it. This will also set the discussion of sustainability, a defining concern of our times, in a larger context than heretofore.

But first it is useful to briefly take stock of the current architectural scene, which in many ways is lively, diverse and exciting. Yet, whereas until less than a century ago we seemed to have no problem in creating buildings people liked and that aggregated into satisfactory urban fabric, any candid assessment must accept that much, if not most, of what is being built today is pretty dismal and does little to heal the fragmentation of our cities wrought over the last century. Architects repeat the same excuses for these failings: it is what the client insisted upon; it is all that the budget permitted; and in any case the horrors constitute that majority of buildings not by architects. None of this will wash: many of the worst buildings are by architects and good buildings have been delivered on tiny budgets to difficult clients. Besides, most of what we now see as exceptionally stupid design concepts – such as the ubiquitous, a-contextual, energy guzzling, air-conditioned glass box – were initiated by architects and once hailed as exemplifying Modernist ideals.

Generally, architects seem to have become incapable of producing the cheap, plain buildings with a quiet, unobtrusive dignity that were once commonplace, in part perhaps because we no longer build with local materials and local craftsmen. Instead – partly because of the materials used and the extruded nature of modern construction and facade treatments – no amount of the desperate fad for jazzing up facades in syncopated ‘barcode’ patterns and other jittery rhythms, and jollying up with strong colours can conceal the tawdry, mean-spiritedness of the design and the flimsy thinness of much construction. (Even inoffensive seems beyond us.) These faults are largely the inevitable consequence of the rhetoric of cheap and ‘efficient’ utilitarianism promised by modern architecture.

Nevertheless, some fine architecture is also being built, respectful of history, decorum and context, functioning well and socially vibrant, and designed and built with extraordinary technical expertise so as to last. These buildings have been made possible by a whole range of technical advances that include computer-assisted modes of analysis and calculation, component manufacture and the coordination of construction. But also architects have taken seriously the legitimate comments of conservation groups and Postmodern critics. With these buildings, modern architecture could be said to have at last reached full maturity. Yet it must also be acknowledged that, for all their technical expertise and formal finesse, even the best of these buildings lack the compelling depths of the technically cruder works of those of a few masters of early modern architecture, for reasons that will become apparent in a later essay.

#### **An exploratory perambulation around London**

For examples of these mature works, let us limit ourselves, from what would otherwise be an overwhelmingly large field to draw on, to London-based architects. Some of those whose work represents this complex maturity are Hopkins Architects, Edward Cullinan Architects and MacCormac Jamieson Pritchard. Their buildings display an admirable breadth of design



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2. The west elevation of MacCormac Jamieson Pritchard's New Court extension to Fitzwilliam College, Cambridge, using the same dark grey brick as the original college buildings  
3. The Betty and Gordon Moor Library at the Centre for Mathematical Sciences, Cambridge. Edward Cullinan Architects were ahead of their time in designing in a centrally controlled natural ventilation and cooling system, which regulates the internal environment for 24-hour use

concerns, responding to history and context, and are aptly inventive (without being contrived) formally and technically, as well as in social organisation and environmental strategies. (Hopkins and Cullinan are among the world leaders in green design.) Their buildings are also well-detailed and constructed in a broad palette of materials, many ‘natural’, that help the buildings blend into their settings and weather gracefully. Importantly too, they are generally popular with users and public.

Many of today's most accomplished buildings are designed by highly professional mainstream practices, perhaps partly because of the resources that they can command, such as collaborating with the best consultants. These architects, not the avant-garde, constitute the leading edge of practice that other architects study and emulate. Yet, in academe and the media, they tend not to get the recognition that they deserve – or at least, not all of their works do. Four buildings by Foster + Partners, very different from each other, illustrate the range of what mature modern architecture can deliver. The first two are well-known and, though they perform brilliantly, their exteriors do not relate particularly well to their contexts, nor can people relate to them – the usual problems with ‘blobs’ of which these are two of the few convincing examples. But they are the products of great technical expertise and have fine interiors, the potential of one of which is not properly realised, while the other is used with an intensity and flair that far surpasses expectations. The other two, both of which merge with and enhance their contexts, are very little known and hardly published, perhaps in part because they are more restrained and recessive. Indeed, only an alert architect might notice them when passing by, and then only on studying them become aware of just how successful they are.

In London, 50 St Mary Axe is a widely recognised icon that – as an a-contextual, standalone, glacially inscrutable building – still displays typical faults of modern architecture. Nor is it used as intended, as a naturally ventilated building with the air-conditioning off, as would be indicated by triangular glass panels projecting open from the spiralling bands of dark glass. But that potential





**4. Although it is a masterpiece of computer modelling and highly specialised environmental design, Foster + Partner's 50 St Mary Axe does little to engage with its surrounding context**  
**5. The innovative diagrid efficiently uses 20 per cent less steel than a conventional rectilinear block**

is there in a building that is in many ways a highly synthesised technical *tour de force*, an efficient machine that realises also that other modern dream of resembling an organism in its form and metabolism. The diagrid structure is both very rigid and uses 20 per cent less steel than a conventional structure while the slippery, double-curved form of the external envelope avoids turbulence and downdrafts. It also encloses maximum internal volume for a set area of curtain wall; and it avoids the extremes of differential air pressure found at the corners of rectangular towers so this curtain wall can be more lightly engineered. Yet it is the variations in air pressure around the building that drives the movement of air up or down the spiralling 'atria', so sucking air in through the floors of the petal-like, roughly rectangular areas of office space.

None of this could be achieved without the computer, used for structural calculation and modelling the various aspects of internal and external environmental conditions, as well as the parametric modelling to resolve the many complexities of the external envelope, including the twisting geometry of the planar sleeves cladding the sloping circular columns. Updating drawings and coordinating those prepared by all the different disciplines involved – architects, engineers of various sorts, contractors and sub-contractor/manufacturers – could easily have introduced errors that would have undone such precision construction; so the same electronic models were shared and passed continuously between all these parties. The computer also coordinated all aspects of construction and now constantly monitors and adjusts the building's various systems for energy efficiency, security and so on. The result is a building of a technical sophistication that was inconceivable only a couple of decades ago.

Although the curving carapace of The Sage Gateshead, a concert hall and a music education complex, sets up fortuitous formal echoes with the curves of the bridges across the Tyne, the building sits somewhat uncomfortably in context when seen from directly across the river. This is partly because the original concept of the concourse-foyer being part of a forcefully expressed route extending through the building and sloping down to meet the riverside by the Baltic Exchange got lost during all the complexities of design development. But once inside, the building is a triumph, both because of its clever organisation and the brilliant way in which its managers and users make the most of all its designed-in potential. It is another technically sophisticated building, particularly in its adjustable acoustic arrangements. But more remarkable here is the vibrancy of the life within the building, which changes in mood and in the range of ongoing activities, and the interactions between these, throughout the day from early morning to late at night.

Right from the start, the building was conceived of as bringing together a range of differing kinds of music, their performers and audiences, together with serious music students who use the rehearsal rooms and recording studios on the lower ground level, and amateur performers and enthusiasts of all ages who make use of all parts of the buildings, in a way that provokes lively intermingling and

mutual appreciation between all of them. Much of this happens in the concourse-foyer, a sort of indoor street that extends across the riverside front of the building between the entrances on the two side ends and swells into a piazza-like café at its midpoint. This concourse is overlooked by galleries and bars serving the various levels of the halls whose stalls are a level up above its floor, the audience-spectators on the galleries thus on show to further animate the space. The educational facilities below the concourse connect to it aurally via a gap along to riverside glazing, so at times the singing of choir rehearsals fills the volume above.

The concourse is an example of a recurrent theme in some of Foster's work, the 'urban room'. This encapsulates the identity and spirit of the institution the building houses, and is where the public meet as participating equals with the specialist users of the building, so taking possession of it as their own. Here this is all played out against the backdrop of the Tyne below and Newcastle rising on its other bank. Any architect suffering doubts about architecture's capacity to enhance life and create the most flexibly functional yet intensely convivial of settings should spend a day in the building. Watching and experiencing both the great diversity of activities that happen during the day and the interplay between them can only inspire a renewed faith. Yet the Sage was built to a tight budget; to achieve the highest standards possible in the halls, money was not scrimped there; but elsewhere detailing is minimal and surfaces cheap while the whole is enveloped in a shrink-wrapped steel roof – the most frugal of solutions.

#### Synthesising technology and society

The Gerling Ring in Cologne is a large speculative, mixed-use development, understatedly designed for long-term flexibility in a future of unpredictable demand. The same structural section is deployed throughout the complex for both offices and housing, so allowing for future switches of use. Yet the complex fits surprisingly unobtrusively into its setting while also intensifying urban life around it. This being Germany, it is also a naturally ventilated, low-energy building with thermal inertia provided by the exposed pre-cast concrete structure, particularly the wavy ceiling soffit. The standard section is extruded as a pair of mid-rise slabs along the long sides of the site, between which are three towers in which hidden parts of the structural section are modified slightly to permit clear spans across the central court. Using a standard kit of parts, each facade is then glazed and fitted with sun-control louvres according to function, solar orientation and external noise levels.

The elevations facing a busy street to the west and an existing small square that was enlarged to the south, with outdoor tables for a new café below one of the towers, have an extra layer of glass outside the conventional windows. Fresh air is admitted into the cavity between the layers of glazing, and exhausted from it, via a band of louvres and noise-attenuating devices at each floor slab level. In the west-facing cavity are vertical pivoting louvres while those in the south-facing cavity pivot horizontally. Black on one side and white on the other, all louvres can be set not only

to block direct sun but also to reflect or absorb heat. Adjusted and readjusted by those working behind them, louvres set at differing angles and with contrasting tones facing outwards impart to the elevations a liveliness missing in most fully glazed facades. Elevations shaded by overlooking the quiet central courts have conventional opening windows with Venetian blinds. The housing along the quiet street to the east has a more complex elevational treatment that includes inward opening French windows, sliding shade screens of wood louvres and fixed grilles of steel tubes in front of windows that can be safely left open for night-time ventilation and heat purging. A few glazed bays project forward to mark the entrances to the housing and mirror very similar bays across the street.

Similarly well-handled is the street level where the glazing to shops and entrances to offices and housing is set back to expose the precast columns that rhythmically punctuate the pavement. Projecting from the columns – and together with them providing sheltering, pedestrian-friendly scale – is a canopy that steps up to mark the office entrances. For a big building, it is exceptionally hospitable to the passer-by while the



**6, The semi-public indoor street of the much-admired Sage Gateshead is overlooked by balconies, bars and cafés from above. Foster + Partners have successfully created a flexible and vibrant building that confidently looks over the Tyne River to Newcastle's city centre**  
**7. The undulating shell of the Sage Gateshead pays suitable homage to the historic Tyne bridges' covered iron trusses**



**8. The gaudy glazed ceramic facades of Renzo Piano's Central St Giles mixed-use complex have created a clumsy conflict between new and old in London**

**‘Many of today’s most accomplished buildings are designed by highly professional mainstream practices. These architects, not the avant-garde, constitute the leading edge of practice that other architects study and emulate’**

shops and cafés at this level – together with the increased density of workers and residents, and the people on the generous balconies at the ends of the mid-rise slabs – all enliven the neighbourhood.

Of course, not all Foster buildings achieve these standards. But other big name architects are inconsistent too, as evidenced by a clutch of awful buildings recently inflicted on London by ‘starchitects’, so offering further immediate concrete evidence of the need to rethink architecture. For instance, Renzo Piano is a fine architect whose buildings in America are mostly very good. But the same cannot be said for the trio under construction or recently completed in London; these are contextually insensitive, not least in being vastly over-scaled and conceptually lazy. Whatever the real reasons for the contrasts in quality between the buildings in the US and London, it is difficult not to get the impression that American clients had approached a good architect in the expectation of ‘doing the right thing’. And, by contrast, cynical British developers had said: ‘You are a star: prove it by getting away with something outrageous.’ The result is buildings that speak of greed more than civic values, although two of them make significant contributions to the public realm.

The Central St Giles mixed-use complex appears too big for its setting, but conforms to the intention of planners to increase the density of the area. What offends many people are the garishly coloured facades in what looks like plastic (actually glazed ceramic) that read as a patronising gesture to jolly up the excessive bulk. But what is more dismaying to those who know Piano’s work is how devices used with better-considered purpose elsewhere have here been reduced to a seemingly unthinking repertoire as he recycles and debases these devices. Here the coloured facades that extend beyond what they enclose are the pointless vestige of the independent outer glass skin that on earlier buildings extended outwards and upwards in a poetic gesture that asserted the (semi-) independence of this layer and suggested a relationship with sky and wind and other aspects of context. Similarly, other Piano schemes create a new piazza that is positively shaped to expand and convey

the essential spirit of the scheme; here it is mere residual space between perimeter blocks. This sort of conceptual laziness extends through the St Giles and the other London buildings by Piano.

London Bridge Tower, commonly called the Shard (of Glass), is in part a consequence of ex-mayor Ken Livingstone's notion that London needs a 'skyline' to be a credible world city, a preposterous idea urged upon him by architects anticipating the resultant commissions. Although the scheme will result in considerable improvements to the public realm, such as an enlarged bus station at its base, and will include publically accessible facilities high up within it, it is much too tall and big for its setting – and ugly also. It and all the people who will work and reside in it threaten to overwhelm the small scale and variety of the surrounding historic areas, one of the most characterful in London. Now UNESCO threatens to repeal World Heritage status of the Tower of London because of the Shard's looming presence across the Thames. These problems will be brutally compounded by London Bridge House, another behemoth (though less tall) that will overpower Borough High Street and Southwark Cathedral, to which it shows no deference at all.

Across the street from the east end of St Paul's Cathedral, and contrasting with the curved apse and sculpted detail, all in Portland stone, is One New Change. It is a new shopping complex by Jean Nouvel, its faceted forms in brown glass detailed with an insouciance that suggests the architect could not care less about the rigours of construction. The architect aptly describes it as a 'stealth' building, its forms the mute product of the various constraints of light and viewing angles that apply to the site. Its slimy, slippery shapelessness has also led to it being called, equally aptly, the Turd, its form squeezed by the rectum of these same constraints. But the negative presence of a stealth building is utterly inappropriate to a site of such civic importance. Here the role of architecture should be not to skulk away but to stand up, assert its presence and take its place in the world and enter into dignified dialogue with its neighbours.

**'The negative presence of a stealth building is inappropriate to a site of civic importance. Here the role of architecture should be not to skulk away but to stand up, assert its presence and take its place in the world and enter into dignified dialogue with its neighbours'**

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**9. Jean Nouvel's 'Stealth Building' at One New Change, an unpleasant glazed brown shopping palace without coherent form or civic dignity**

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A similar but less extreme problem with presence is found with One Hyde Park by Rogers Stirk Harbour + Partners: it is simultaneously overbearing yet lacking in appropriate presence. This seems to be the most reviled new building in London, and not only because its mind-bogglingly expensive apartments, mostly owned for tax-evasion purposes by offshore trusts, symbolise the pathologies of the current world with its obscene polarisations of wealth and poverty. It is a building that only takes from its setting and gives nothing back, not forming a proper edge to the park or addressing it in a suitably civic manner, but instead sucking views of it deep into itself. It too is a negative presence, completely lacking in the architectural good manners that should be displayed on such a key site; again the lack of awareness of such niceties in even a high-profile architect accentuates the urgency of our rethink. Also swaggeringly insensitive is NEO Bankside, new housing blocks by the same practice next to Tate Modern.

Richard Rogers, as do some other architects, dismisses criticisms of his work as fuelled by nostalgia. But few architects' work is as nostalgic as his, in his case nostalgic for a future – one that fetishises an old industrial technology – that nobody else believes in anymore. Besides, modern architects missed something important in rejecting unease about their buildings as nostalgia. The word derives from the Greek, *nostos* (a return home), and there are ample reasons why people do not feel at home in modern architecture. These need to be addressed to achieve sustainability, which will only be possible when we cease to be alienated from the world and feel at home in it again.

#### **In praise of critical thinking**

Of the stars who have built in London recently it is, perhaps surprisingly, only Rem Koolhaas/OMA who emerges with any credit. The new headquarters for Rothschild Bank might be somewhat quirky but at least it is reticent and refined. So how did we get into this situation where even big names fail to produce decent architecture? In London, part (but only a small part) of the problem must lie with Britain's reactive rather than proactive planning system. With the exception of such things as protecting specific views, planners usually offer little or no initial guidance to the architect but instead respond to design proposals and negotiate changes to them. And even then, after weeks of this, there is no guarantee how members of the planning committee will respond. It is a stupid and wasteful system that leads to arbitrary judgements of approval or non-approval (how did some of these schemes, for instance, get approved?) and favours the legal profession and the rich who can employ it to make appeals against these judgements.

But at least in London these buildings (except the Rem Koolhaas/OMA one) are generally acknowledged by architects to be, at best, hugely problematic. Besides, these buildings have their equivalents around the globe where much other current architecture may be less nasty but more nonsensical. An obvious extreme are all those museums and galleries that seem to try and defy exhibiting in them because the walls slope



**10 NEO Bankside apartments by Rogers Stirk Harbour + Partners; luxury living by the Tate Modern, but cut off from its surroundings**  
**11. The most expensive apartments in the world at Hyde Park One. Here, Rogers Stirk Harbour + Partners redefine the London mansion block for stealth wealth**



(typical of Daniel Libeskind's museums) and/or are curved, the spaces are too big and/or wrongly proportioned, the lighting systems are overwhelmingly assertive and it is impossible to create a coherent curatorial sequence. A mistake here is that the curators and their architects want to create compelling artworks rather than mere architecture; but artworks compete with the art and cities cannot be made up of individual artworks each clamouring for attention – the core problem of the architecture of Herzog & de Meuron. Another prevalent extreme is in part art-influenced, minimalism, which comes in various sorts, ranging from that which emphasises the forceful presence of materials to that which seeks an evanescent dematerialisation. But much, if not nearly all, of it highlights a characteristic of modern and contemporary architecture that increasing numbers of writers and architects are troubled by, a creepy deadness as found in some of the works of David Chipperfield or SANAA.

Another extreme are the 'Parametricist' blobs, once boded together but now increasingly well made, that cannot define urban space nor relate to other buildings, and to which we cannot relate. And these are only the problems with the exteriors. There is also the ridiculous fashion for icons, again mostly blobs realised with parametric software, which are sculpturally assertive but signify nothing but the vanities of self-expression and the vacuous pursuit of novelty. And then there are the preposterously pretentious works illustrating some spurious theoretical position, most egregious and perniciously influential of all being the works of Peter Eisenman. How does he continue to get away with it? Are people really that gullible, devoid of common sense and visually indiscriminating?

Common to all these architectural approaches is that the buildings fail miserably in urban terms. Yet surely one of the most fundamental requirements of architecture is that it aggregate into satisfactory urban fabric? But these buildings relate neither to their neighbours, nor articulate public space. Nor can they create a sense of place. Conceived of as isolated object-buildings oblivious of all around them, they exacerbate one of the most pathological aspects of modern architecture – ‘sunset effects’, all of them, and irrelevant to the future. And yet behind most problematic current trends, of which only extremes have been mentioned, is the collapse of the simple certainties of modern architecture, with its reductive concerns and criteria, and the advent of Postmodernity, the relativist mode of thought rather than the architectural style.

Postmodernity offered a useful critique of modernity and has melted the hegemony of simplistic Modernist thinking. But it has its own serious inadequacies and particularly in academe has become a major obstacle to the embrace of useful new modes of thought, including those arising from science (‘just another narrative’) and the inclusive big picture visions arising from cosmology, evolution, ecology and so on – all of them Grand Narratives rejected by Postmodern thinkers. In architecture, Postmodernism’s essential relativism (one person’s view is as interesting and as valuable as another’s), and so its aversion to discriminatory judgement, has helped spawn and legitimate the pluralism so evident in the current architectural scene.

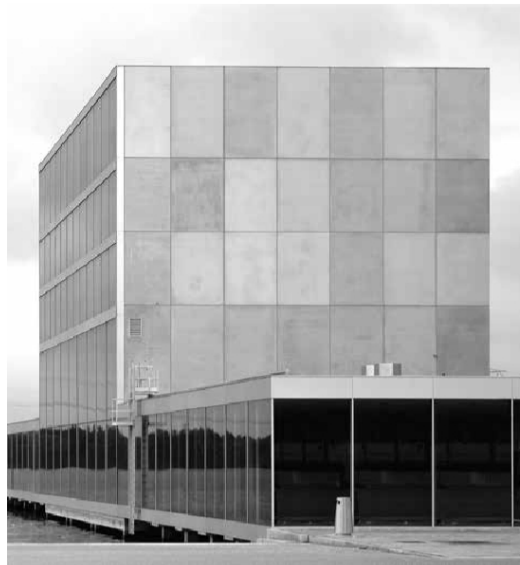
‘With the widespread lack of clarity about what is an architectural approach relevant to the future, it is little wonder that many architects decide to engage in the frivolities of form and theory and pursue momentary fame and fortune’



**12. Daniel Libeskind's clumsy cauterisation of old and new at the Military History Museum in Dresden**

**13. The swooping, gestural interior of the MAXXI Museum by Zaha Hadid, a trophy museum for Rome's art scene. Its opening in 2010 symbolised the end of an era of architectural excess and largesse**

14



15



**14. SANAA's arts centre in the Dutch satellite town of Almere fetishises a much imitated glacial imperviousness that has become curiously emblematic of many Japanese architects**  
**15. The no-holds barred cityscape of Dubai transplants inappropriate and unsustainable Western models into the desert sands**  
**16. Adventures in Brobdinagian geometry with Santiago Calatrava and the Palau de les Arts Reina Sofia in Valencia. A sculpture bloated into a building**

16



Photographs

- 1 Andy Stagg
- 2 David Borland
- 3 Peter MacKinven
- 4-7 Foster + Partners
- 8 Hufton & Crow
- 9 Riddle Stagg
- 10 Edmund Sumner
- 11 James Winspear
- 12 Hufton & Crow
- 13 Paul Raftery
- 14 Edmund Sumner
- 15 Jochen Helle
- 16 Inigo Bujedo Aguirre

Modern architecture was always more pluralist than the caricature of it some Postmodernists paint and subsumed a wide variety of approaches and personal styles. Yet pluralism now is also a mask of confusion and chaos, the inability to discriminate and prioritise (which smacks of hierarchy, another Postmodern taboo), recognising one approach as more relevant than another. Compounding this is the spreading influence of academic Postmodern theory that has crippled, if not largely killed, criticism: theory tends to weave a web of obfuscatory verbiage spinning away from a subject while criticism is concerned with a penetrating engagement and discernment.

Making matters yet worse is the pursuit by academe and the media of the new and up-and-coming. This inflames the pursuit of spurious novelty, the too quick adoption of a stylistic brand and so the inability to slowly develop and mature. Combined with the widespread lack of clarity about what is an architectural approach relevant to the future, or even on the criteria of quality and lasting value, it is little wonder that many architects decide instead to engage in the frivolities of form and theory and pursue momentary fame and fortune. Yet the advent of the computer might be bringing matters to a head. Now that it is possible to conceive of and make buildings and components of any form, we are provoked to ask the question as to which forms are pertinent to architecture and the many ways people relate to it – a fundamental question the Parametricists, among others, still ignore.

**In pursuit of an ecological architecture**

Thoughtful architects tend to be dismayed by the confused state, pretentious posturing and irrelevance of much of the current architectural scene and education. They recognise that many of the problems seem to have started with the arrival of Postmodernism and may have something to do with it. They are also aware that we face urgent and near-overwhelming problems ranging from the environmental crisis to housing the masses flooding into the cities of the developing world – issues Postmodern thinking is unsuited to dealing with. Many of these architects have welcomed the quest for sustainability as a way of returning dignity and serious purpose to architecture – as the end of Postmodernity and a return to modernity. But the quest for sustainability must bring an end to modernity as well as to Postmodernity.

Much very good architecture is being produced in the pursuit of the green agenda. But the common flaw in this work is that it focuses on objective issues such as ecology and technology; it does not yet give due emphasis to the subjective dimensions of psychology and culture. The conceptual thinking still conforms to the paradigm of modernity. But as Einstein pointed out, a problem cannot be solved with the same level of thinking as created it. Unsustainability is utterly endemic to modernity. Today's green architecture, the accomplishments of which are immensely admirable and hugely valuable as research, is only making things less unsustainable. To approach true sustainability, the subject of the next few essays, will involve the embrace of very different modes of thought, and even of notions of reality.



RORY HYDE

**Author's note**

Although the Big Rethink is concerned with expanding our understanding of sustainability, there will be little discussion of the details of green design, not least because this can be found in abundance elsewhere.

The many critical comments about current architectural 'theory' do not define theory per se as problematic. Rather the problem is the sort of 'theory' taught in academe and published in turgid tomes, which compounds the problems that we face, displacing and even blocking the exploration and embrace of far more relevant and topical fields of study and modes of thought.

Finally, some will assert that the views

expressed here are only opinions, and moreover those of a single individual; cognisant of such criticism, next month's essay will introduce a conceptual framework that ensures inclusivity and rigour.

Yet there is another way of assessing the value of ideas, and that is to ask: will acting on these ideas, as if they were true, result in better architecture – more richly conceived and relevant, more resonant and inspiring – and enhance the capacity to conceive of and create it? After all, why did certain famous architects, such as Le Corbusier, adopt new names? Not because they were true, but because living up to them inspired great architecture.

# THE BIG RETHINK PART 2: FAREWELL TO MODERNISM

This second essay in the series decries Modernism for its betrayal of our essential humanity, and puts the case for why this must be regained to achieve true sustainability. Starting with Modernism's un-sustainability – not least in its reliance on fossil fuels – it examines the forces bringing modernity to an end. In an emerging epoch based on a vision of a 'living, organic universe', architecture must start again to mediate our relations between nature, place and community.

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Last month's essay concluded by asserting that the urgent quest for sustainability spelt the end not only for Postmodernism, but also the termination of, rather than a return to, Modernism. If the former is not disposed to effective action (for reasons to be explored next month), the latter is unsustainable to its core. This month we start our investigation of the latter claim by exploring some key aspects of the unsustainability of modern architecture, recognising this belongs to the final, climactic phase of modernity – the era that started with the Renaissance and emergence of science. (The fundamental unsustainability of modernity, which further compounds that of modern architecture, will be explored in a later essay.)

First, a caveat: although the downsides of modernity and postmodernity are a major topic of the Big Rethink, both cultural paradigms have also brought great and lasting gifts. Not least of these are the vast amount of knowledge and potent technology modernity bequeaths us to use more wisely than it did. Indeed, both phases were very necessary and unavoidable parts of our socio-historic evolution. Despite now having to heal the fragmentation of our cities wrought by modern architecture, it too has brought its share of masterpieces and conceptual breakthroughs to be selectively carried forward; even Postmodernism has important lessons that should inform a future architecture. But both modernity and postmodernity are now played out, their benefits overshadowed by their negative aspects.

#### **Comparing and contrasting Le Corbusier's villas**

To begin this investigation of modernity's inherent unsustainability, let's start by comparing a pre-modern work of architecture with a modern one. To add spice, let's select houses by the same architect in different phases of his career: the Arts and Crafts (some would say proto-modern) Villa Fallet (1906-07) by Charles-Édouard Jeanneret, and the heroic, high modern and Purist (some would say, International Style) Villa Savoye (1928-31) by Le Corbusier, as he by then styled himself. The contrast is not as extreme as between, say, Heidegger's Hut and Mies' Farnsworth House, but is enough to make some key points.

Probably the most obvious contrast between the villas is in their forms: Villa Fallet is traditional and highly ornamented whereas Villa Savoye is abstract and stripped of decoration. But the next most striking difference is between the range and nature of materials. Typical of its time, Villa Fallet displays a broad palette of materials outside and in, many of them 'natural', and these have aged gracefully. Approaching and entering the house, these are encountered sequentially, according to contemporary notions of decorum. By communicating how close you may come to them, they convey a hierarchy of public and intimate space, and also help articulate the character and relative importance of each room. The rough stone base outside forbids people getting too near; the smooth plaster in the entrance porch welcomes the body.

Villa Savoye, by contrast, displays a limited range of materials, the same or very similar used inside and out, emphasising continuities of space and behaviour. Imitating the smooth surfaces and forms of ocean liners,

which similarly float free from context, these materials conceal the true nature of construction. With its plain surfaces and generous spaces, the house 'hangs back' from its inhabitants in a way that is liberating yet defies intimate engagement with its materiality. Attempting to stand outside time, the house neither aged nor weathered: it merely cracked and deteriorated.

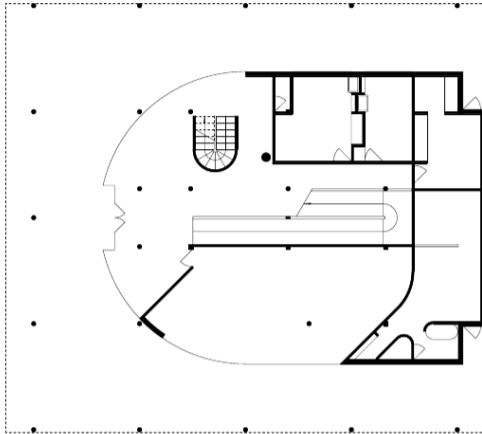
Villa Fallet's materials and forms act to differentiate. Together with an interior compartmentalised into rooms cluttered with furniture and decoration, they articulate the space through disjunction to constrain behaviour in accord with contemporary custom. But Villa Savoye's sparsely-furnished, generously-scaled spaces emphasise continuities of material and spatial flow, and a concomitant exhilarating, fluid flexibility and freedom to the activities housed. Disencumbered of the clutter of heavy furniture and ornament, behaviour could be spontaneous and take on an epic quality, resonating as if played out against a blank cinema screen. Yet even here decorum is subtly indicated, for instance through private areas reached by turning clockwise against the anti-clockwise flow of the communal spaces, as well as the cruise-ship casual chic conveyed by the nautical associations, including ramp as gangway and so on.

Yet Villa Fallet's interior discontinuities are reintegrated under the embrace of the roof, as its exterior forms, materials and ornaments suggestively imply multiple relationships with its setting. The heavy stone base draws up the earth and, with the transition to light, incised plaster above, speaks of gravity. So too does the steep overhanging roof that reaches up to the sky, its form suggesting the shedding of rain and snow as it snuggles against cold winds, while also opening up to the sun and views. And the decorative motifs of glazing bars, balustrades and incised plaster echo the surrounding conifers. The house thus weds earth and sky while also establishing harmonious relationships with neighbouring homes and nature. Architecture was still conceived of as embedded in a rich and complex web of relationships – social, cultural, ecological and so on – and the materials and their use played a crucial role in communicating this concept. Time, too, was considered in the way the materials weathered and stained.

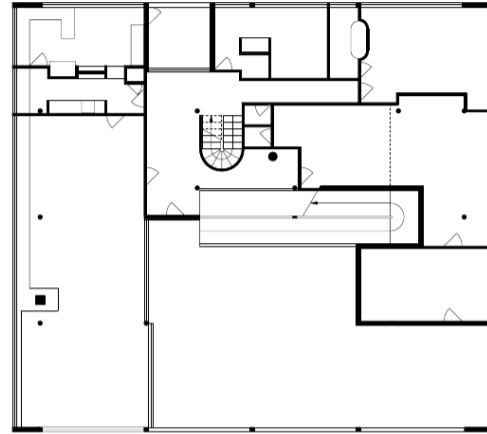
Villa Savoye is an antithesis, self-contained and selfish, a singular object hovering above but not engaging with its setting, its pristine forms denying and so vulnerable to weathering and time. It opens up only to the sun and sky while the horizontal slot, partly glazed and partly unglazed, both distances and intensifies the view of the horizon. The fluid interior-exterior space is bounded within the box-like perimeter that floats free above the ground to emphasise the disconnection from context and nature. Indeed, the building appears to stand on tiptoe, recoiling from nature, like those old cartoons of women on chairs shrieking 'Eeek!' on seeing a mouse.

On entering, the first thing encountered is a wash-hand basin at which to quickly remove any of nature's contaminating dirt. This was, of course, only a brief phase in Le Corbusier's oeuvre, and the post-Second World War houses, such as Maisons Jaoul, are earthy and earth-bound. The attitude displayed to contamination is

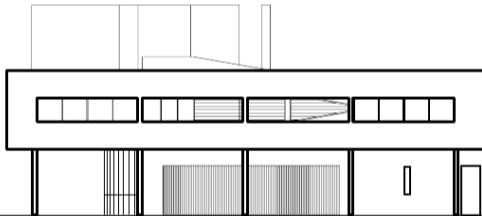
**I. A singular, hovering object in the landscape, disinclined to engage with its setting and ultimately vulnerable to the vicissitudes of time, Le Corbusier's Villa Savoye perfectly epitomises the inherent physical and psychological unsustainability of Modernism**



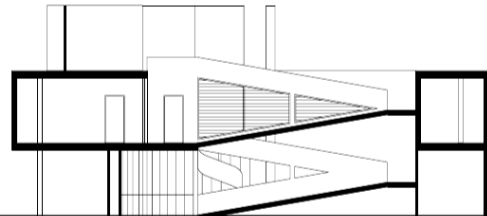
ground floor plan



first floor plan



elevation



long section

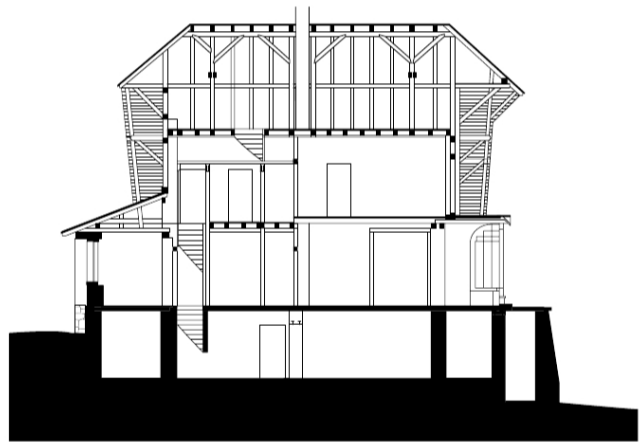


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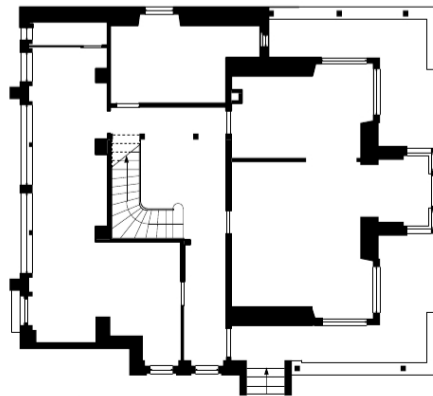
**2. The fluid space of Villa Savoye (1931) is bounded by a box-like enclosure that emphasises the dwelling's sundering from nature and place. Like many key modern houses, it is an isolated holiday home on a rural site, dependent on fossil fuels to make its materially insubstantial architecture habitable, and also to make possible the regular weekend commutes of its occupants. This egotistical sense of hubristic disconnection, of humans prevailing over nature, has consistently underscored the modern era**



elevation



long section



ground floor plan

**3. Designed in a gentler, more traditional Arts and Crafts idiom, Villa Fallet (1907) employs a broad palette of materials which have weathered gracefully over time. A robust stone base roots the house to its site, while establishing a considerate relationship with its surroundings. Rooms are encountered sequentially, according to notions of decorum, and convey a legible hierarchy of public and more intimate domestic spaces. Architecture is conceived of as embedded in a rich and complex web of relationships**

nothing like as extreme as with the sterile and joyless paranoia of Alison and Peter Smithson's 1956 House of the Future, as described in last month's review of the Canadian Centre for Architecture's exhibition *Imperfect Health: the Medicalization of Architecture* (AR January 2012). The naval forms emphasise this floating disconnect – although, this being a Corbusian masterpiece, there are also allusions to Palladio's Villa Rotunda, its dome fragmented into a Cubist collage of curved walls, and the statues of gods on the entablature replaced by a live frieze of humans, of elevated status of course, framed by the near continuous horizontal slot.

#### **Taking the long view of 'the oil interval'**

So what accounts for the differences between these villas? Specifically, what new material facilitated the profound shift in forms and sensibility? What do the history books say? Reinforced concrete? Plate glass? The answer is neither of these, nor any of the other usual explanations, but abundant and cheap fossil fuels. These powered the weekend commute to the house and kept warm in winter the large, flowing spaces enclosed in thin un-insulated concrete walls and slabs, with vast expanses of single glazing. It was also a related material – and later, oil derivatives – which waterproofed Villa Savoye's and all other flat roofs and terraces. Later too, petrochemicals provided the neoprene gaskets, epoxies, mastics and sealants, as well as the synthetic carpets and fabrics. And it was fossil fuel-derived electricity that lit and air-conditioned modern buildings, which often spurned natural light and ventilation.

Modern architecture is thus an energy-profligate, petrochemical architecture, only possible when fossil fuels are abundant and affordable. Like the sprawling cities it spawned, it belongs to that waning era historians are already calling 'the oil interval'. Although histories of modern architecture still overlook this critical fact – failing to note what is, literally, blindingly obvious – any future history must surely begin by noting this relationship, which is axiomatically unsustainable.

With its disconnect from nature and neighbours, its material fragility and the frieze of people partying or doing calisthenics displacing the statues of gods on the classical entablature, Villa Savoye emphasises a related flaw at the core of modern architecture and modernity in general: the hubris, turbocharged by fossil-fuelled technological power, and a corresponding lack of acknowledgement, even denial, of our ultimate dependency on nature, its cycles and regenerative capacities. Archetypal modern man and woman preferred – and still prefer – not to be rooted in place or community nor to be concerned with the longer cycles of time and the obligations they inevitably incur.

The modern and contemporary built environment, and their corresponding lifestyles, are only possible because we do not live within the capacities of the Earth's ambient energies and nature's annual bounty but instead each year burn up a legacy accumulated over millions of years. As the title of Thom Hartmann's famous book so poetically puts it, we are living on 'The Last Hours of Ancient Sunlight'. Yet already as a student in the 1960s,

'Modern architecture is an energy-profligate, petrochemical architecture, only possible when fossil fuels are abundant and affordable. Like the sprawling cities it spawned, it belongs to that waning era historians are already calling "the oil interval".'

I was aware of Buckminster Fuller's injunction that we recognise fossil fuels as a 'one-time evolutionary gift', the only legitimate use for which was to create the means to harvest what we now call renewable energies. Even the food we eat is the product of oil rather than nature. Very many times more oil-derived calories are used to produce and distribute it – in artificial fertilisers, pesticides and herbicides, tractor and transport fuel, plastic packaging and refrigeration – than it yields nutritionally, only one of many ways modern agriculture is utterly unsustainable. Adapting food provision to escalating oil prices will lead to immense challenges – and inevitably to profound changes in how we live on and with the land.

#### **Getting to the root of the problem: mobility**

The hubristic disconnect and denial of dependencies is clearly summarised by Villa Savoye. Modern mankind has been said to be merely picnicking or camping upon the Earth, thereby escaping what were seen to be the constraints of custom, culture and community – neither properly settling, nor even taking away the rubbish – most of it created unnecessarily (all that packaging and so on) and all of it treated as an 'externality' for others to deal with. It is little coincidence that many famous modern houses were isolated holiday homes – Villa Savoye, Fallingwater, Farnsworth House – and many of the buildings in FRS Yorke's canonical 'The Modern House' (AR December 1936) are also holiday homes. Like their more famous counterparts, many of these perch on stilts or cantilever over their sites.

Inside the modern house, the light, mobile modern furniture derives from that used on holidays – deck chairs and other folding equipment. These in turn were derived from the furniture used by the military and later by colonial administrators on safari. Military conquest through technological superiority and colonialism were further hubris-inducing enterprises that inspired aspects of modern architecture and design, largely initiated by colonial powers – France, Britain, Germany, the Netherlands. And from the colonised came many aspects of modern life, such as lighter and less constrictive

clothing befitting the more spontaneous and relaxed lifestyle seen as concomitant with modern architecture.

Recognising modern architecture's antecedents in colonialism and conquest raises questions about how benign or psychologically healthy is the tendency to merely camp without establishing deep roots. Mobility and modernity are virtually synonymous. Particularly in the UK and US, a house is not a home but an investment and stepping stone until something better can be afforded. But can we achieve sustainability without being settled? Without treating our setting, the surrounding bioregion and its climate, customs and agricultural produce, and even the planet and its biosphere as home? Without being rooted in place and responsible for the stewardship of that place? These are pressing questions to ponder when rethinking architecture and the city, our lifestyles and cultures. An equally important and related question is: can we be fully mature humans without being settled? A modern ideal was to be 'a man or woman of the world', always on the move and at home everywhere. But now we see universality, the unfolding into full humanity, as being achieved through depth, which comes in part from being rooted in and concerned for place and community.

Partly inspired by Villa Savoye and other holiday houses, as well as holiday pursuits such as camping and yachting, there still persists a long-enduring and now pernicious myth in architecture – found at its most pathological in High-Tech, to which a few architects cling nostalgically – that a light, and preferably hovering, building is more gentle in its impacts on nature and its setting. This was excusable in the days when Buckminster Fuller, who defined his mission as using minimal material to bring maximum benefit to the majority, famously asked: 'Madam, how much does your house weigh?' But to ask the same question today about a Norman Foster building, as in the title of a recent documentary film, is simply silly.

#### **Integrating 'externalities' into architectural thinking**

Total life-cycle costing, a key discipline in sustainable design, requires that we understand efficiency and ecological impacts in a very different way to modernity. This dismissed much of its negative impacts (particularly those of industry and corporations) as mere externalities or collateral damage. Now we understand that what is critical is not the efficiency, lightness and strength of a material or component when in place: it is the total amount of material extracted from the Earth and the disruption caused by this, as well as the energy and pollution from transport and manufacture, and then the costs and impacts of eventual recycling or return to the Earth. Thus what were once seen as highly efficient high-tech materials or components are now seen to be very inefficient – indeed, with building, it is almost the rule that the more efficient the product when in place, the less efficient it is in process terms. For real efficiency, as the concept is now understood, nothing can beat mud and thatch, although Walter Segal's timber self-build system scores highly as do traditional tropical construction techniques in materials, such as bamboo and palm-frond matting – which might be lightweight but are natural, local and renewable.

Design for sustainability will thus inevitably be centred on the shaping of processes, such as flows of material and energy, as much as on the eventual products. This requires vastly expanding the temporal and spatial range of the designers' concerns to include the total life-cycle costs mentioned above, which would typically span decades, and the global impacts of, say, using a material in short supply, which might have profound consequences on the other side of the planet. What are now dismissed as mere externalities for others, usually the taxpayers, to deal with, must now all be factored into the design process. Miniaturisation and ephemerality can be very destructive, as evidenced by the horrendous and too little publicised consequences of mining for rare earth metals used in computers, cell phones (of which Americans discard 130 million a year) and other electronic equipment, such as that used in monitoring and adjusting conditions within buildings.

All this will profoundly influence the design and making of architecture. And just as green design has already elevated the status of the services engineer as a key creative member of the design team, so too will it lead to the inclusion, as another key creative discipline, of production engineers, who are devising more efficient and benign ways of manufacturing materials and components. Particularly important is to devise less energy-intensive and toxically-polluting methods of manufacture – hence the importance of biomimicry's study of how nature creates high-performance materials, such as spider webs, at low temperatures with no pollution. It is a tragic paradox that modern architecture – which originated in buildings like Villa Savoye that promised a new, more healthy life of sun and fresh air in conditions of near-sterile cleanliness – should lead to buildings whose interiors are so poisonously unhealthy, with highly toxic off-gassing and abraded chemicals, as well as tinted glass and artificial light that inhibit the synthesis of Vitamin D and consequently cause a rise in its deficiency-related diseases.

#### **Connecting with the larger realities of an essential humanity**

The indigenous peoples of North America, when confronted with major decisions, would ask: what will be the impact of the action under consideration on the next seven generations, as well as on the legacy of the seven previous generations? Like many pre-modern peoples they viewed their lives and actions within a vastly greater time span than the short-termism that dominates today's business and political electoral cycles, and were acutely sensitive to the consequences of these for ancestors, descendants and Mother Earth. This is the true role of culture, to shape and keep alive the narratives and rituals that connect us to our place and peoples, to the planet and the long march of history and time, so giving meaning to and guiding our lives.

But modernity suppressed this dimension of culture, while modern architecture attempted to break with history and its outworn rhetorical forms and motifs. Stripped of obvious historic associations, Villa Savoye's allusions to a classical past were only there for a select few, those whom Le Corbusier referred to as having

'eyes that see'. Otherwise, the villa is a 'machine for living in', a compliant gadget in service to a hedonistic, live-for-the-moment lifestyle. In utter contrast, a pre-modern building is a cultural artefact, repeating and reworking forms loaded with historic significance so as to connect us with history while also addressing the future. Such architecture is not merely subservient, but mediates between us and both culture and nature, and so roots us within these contexts.

We cannot achieve sustainability without re-establishing this multi-dimensional sense of connection to and relationship with larger realities, and the meanings and deep psychic satisfactions that this brings. In this light, it is significant that two forms of psychotherapy with rapidly expanding followings are ecopsychology, which attributes much mental malaise to our culture's pervasive and increasing disconnect from nature, and Bert Hellinger's Family Constellations, a type of group therapy that powerfully revivifies, by bringing into consciousness, our profound and too often unacknowledged connections to our ancestors. The rebirth of culture is among the greatest and most exciting projects of our age, a collaborative enterprise that will take time and the contributions of many. But contrary to what many say – particularly Postmodernists – the great, inspiring, and even spiritual, narratives are already there to be used as a foundation. They are to be found in, among other things, the cosmological unfolding that relates us back to the original fire ball of the Big Bang, in evolution and ecology that connects us with all other living things, to anthropology and depth psychology that tell us about the cultural and community connections that help us unfold into full humanity.

#### **Regaining the humanity betrayed by modernity**

These narratives and the deep scientifically-based understandings underpinning them are among the greatest legacies of modernity. Yet they are also among the most potent agents undermining the reductionist assumptions on which modernity is founded. More than that, the knowledge and wisdom they bring, as well as the psycho-physiological techniques (from various forms of therapy, Neuro Linguistic Programming and so on) that have emerged to reconnect us with others and the larger world while healing what is pathological in those connections, face us with a challenging responsibility. That is nothing less than to apply the gifts bequeathed by modernity to, for the first time, consciously participate – not by imposing our will, but by working in harmony with what these narratives reveal – in shaping our destiny to bring about a sustainable society and environment. And these will be sustainable not least because the concomitant cultures and lifestyles will offer the deep psychic satisfactions of a meaningful life – rich in connections to nature, place and community, and the responsibilities that go with those – in which we can each mature into and express our full humanity.

Ultimately this series is concerned with returning the human subject – and his or her unfolding into the fullness of humanity in line with emerging understandings of what that means – to its correct and central role in architecture

after being displaced from there by reductionist ideas like Functionalism. This was concerned only with activities as viewed detachedly from outside, and ignored our rich internal worlds of experience, psychic connections and meanings. Put in these terms, modern architecture was a huge betrayal of our essential humanity – an extreme statement that is not without much truth.

But before exploring such matters further and discussing what they mean for the future of architecture, we need to understand where we are historically and the deep, seldom-discussed, forces that brought us here (next month's subject), as well as those now impelling us to move forward by bringing modernity to an end. We shall touch on the latter first and briefly summarise a few of the most potent of these forces that are also opening a new era in which ideas such as regenerating culture will be recognised as relevant and realisable. These are mostly, or could be usefully seen as, the 'carrots' that complement last month's 'sticks', although some of them are exactly the same forces.

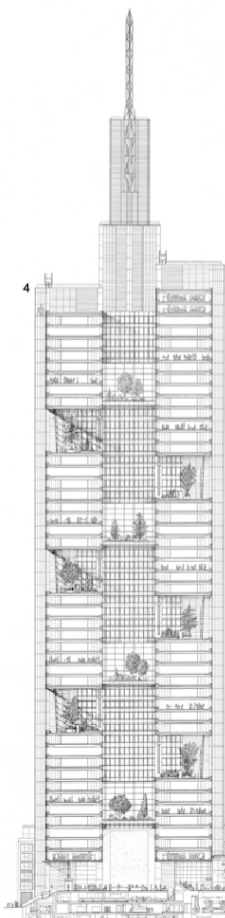
#### **Focusing on 'quality of life', not 'standard of living'**

The environmental crisis, for instance, is most definitely a 'stick' that should be, but is not, impelling urgent action. In part that is because the crisis has not been understood to also be a 'carrot'; or if it has, environmental activists mainly focus on the 'stick' aspect – for good, if counter-productive, reasons. But within the threat of catastrophe also lies opportunity, not least because people become more open-minded when they realise that radical thinking and action are required urgently. As the study of biological evolution, history and psychology makes clear, major crises (what biology and systems thinking call bifurcation points) lead to either breakdown or break through. We are currently poised between these options, frozen like rabbits in car headlamps when confronted by the enormity of the environmental problems we face and the seeming intractability of mobilising effective action – and some still even deny there is a problem. The challenge we face is to make a huge evolutionary step forward to a very different cultural paradigm (or cultural ecology, as some prefer) beyond modernity.

The best answer to climate change deniers and sceptics is that if the threat it poses proved unfounded it would be both a relief and a disappointment. We would be losing the impetus to make a huge evolutionary leap.

**'Society and environment  
will be sustainable not  
least because concomitant  
cultures and lifestyles will  
offer the psychic satisfactions  
of a meaningful life – rich  
in connections to nature,  
place and community'**

**4. Section through the Commerzbank Tower in Frankfurt by Foster + Partners showing the sky gardens dispersed throughout the structure. These allow more natural light to penetrate the interior, reducing the need for artificial sources and cultivating a general sense of well being. Despite its scale, Commerzbank was one of the first genuinely 'ecological' skyscrapers**



Here the rhetoric and actions of many environmentalists are counter-productive, for two reasons in particular. Many tend to be preoccupied by single issues, often seeing these as related to one cause, and propose single solutions. Such thinking is profoundly un-ecological: ecology is concerned with complex, interacting webs of relationships, not straight-line cause and effect. Maybe even more problematic, environmentalists have a habit of articulating only the problems, real and pressing as they are, and advocate constraints, such as limiting energy-consumption and emissions. Although these constraints are necessary, to focus exclusively on them and the problems they ameliorate is disempowering and dispiriting. Instead, or as well as, we need to be inspired by a vision of what is possible, of what might go along with cuts in consumption and emissions: the leap to a saner and more satisfying culture based on the switch from a focus on standard of living to quality of life. (Seeing the latter two as synonymous was a major flaw of modernity.) Quality of life is a product not of isolation and disconnect but of enjoying the beauty and grace, the satisfactions and meanings of living in deeply aware connection with place and community, nature and planet.

Many studies show that a higher standard of living (above a baseline necessary for dignified life) has not brought happiness, and also that quality of life is not dependent on excessive consumption. Among the great problems of our time, especially in relation to environmental and economic problems, is a desperate lack of creative imagination in conceiving of and articulating a pragmatic yet inspiring alternative vision as to what the good life would be. As well as a certain standard of living and long-term security, this would bring deep happiness and satisfactions through connection and communion with all aspects and forms of life, and a deep sense of purpose. Meeting this exciting challenge is fundamental to achieving sustainability and why we need to see the environmental crisis as a carrot as well as a stick.

Green buildings alone improve the quality of life. People prefer working in naturally lit and ventilated buildings, as evidenced in lower staff turnover and less absenteeism, the latter in part because green buildings are healthier. People also prefer controlling their own comfort conditions, as operable windows allow. Researchers have found many workers happy with conditions considered outside normal comfort zones – if they chose and control these conditions. Also, many features introduced for energy-efficiency, such as naturally lit and ventilated atria, become lively social spaces and give a building a pleasing and recognisable identity. Moreover, green buildings do not exhale hot air from chillers and other mechanical equipment, and especially if they also have planted roofs, contribute markedly less to the urban heat-island effect. But these are only small steps in what must become a broader, city- and culture-wide transformation in which architects should play a leading role.

Closely related to the environmental crisis is the economic one that can also be seen as a carrot. Like modernity, many aspects of the current economic system are played out and need more than mere reform. They are the prime drivers of the destruction of the planet and

their benefits are unequally distributed, grotesquely enriching a tiny elite and leaving a large minority in conditions of relative deprivation. Now the economic underpinnings of modernity are under threat and even collapsing, for reasons we shall explore shortly.

At the moment, in the developing world we are in a transitional phase that has had its architectural consequences. In *A Whole New Mind*, Daniel Pink argues that in Europe and America we are leaving the Industrial and Information Ages to enter the Conceptual Age. Our Industrial Age ended as factories moved to exploit the cheap yet skilled labour of the developing world, leaving empty industrial areas to be redeveloped as housing and business parks – and some old factories, power stations and other industrial works converted into galleries, theatres, concert halls and so on.

But if moving manual factory labour to the developing world helped bring the Information Age, the equally rote and nearly as drudge-like aspects of this are now also moving to the developing world: call centres, accounts, archives, records and simple software development – even legal advice and medical diagnostics. All these require linear, left-brain skills. This leaves the developed world to concentrate, until the developing world catches up again, on the right-brain, high empathy skills and pursuits of the Conceptual Age, notably those involving creativity, culture and caring. A well-educated, long-lived post-retirement population appreciates the stimulus of culture, yet also requires caring for – often by recruits from the developing world. In the globalised, Conceptual Age, cities rather than countries compete to attract the creative and highly skilled people on which their economies depend. Contributing to success here is quality of life, to which the socio-cultural and physical character of a city and its hinterland are also crucial factors.

#### **The 'Conceptual Age' and the 'Third Industrial Revolution'**

The advent of the Conceptual Age, with its emphasis on empathy and creativity, could be seen as a step towards a much more important transformation, what Jeremy Rifkin, in his book of the same name (see book review on page 97), calls the Third Industrial Revolution (TIR). Each industrial revolution is characterised by the confluence of a new energy system with a new mode of communication, these being analogous to the body's blood and nervous systems. The First Industrial Revolution used steam power for manufacturing and transport (the railways), and for mass-printing rotary presses. The Second Industrial Revolution (SIR) used oil to power transport (roads and motorways) and electricity – from coal- and oil-fired power stations (later some nuclear) – for industry and communications, from telegraph and telephone through to cinema and newsreels to television and faxes.

The blue- and then white-collar jobs of the First and Second Industrial Revolutions involved largely rote, drudgework and huge inequalities between boardrooms, managers and ordinary workers in pay, education, healthcare and so on. Both revolutions required massive investment in machinery and infrastructure. Financing this led to centralisation and the consolidation of power in a limited number of mighty corporations and financial

institutions. This investment was also heavily subsidised in various ways, from tax breaks to publicly-funded infrastructure, by the government and taxpayer. This is now all too often dishonestly denied by corporations and politicians decrying big government, over which business and banks nevertheless retain huge influence through lobbying and political donations. Indeed, the current economic crisis was largely caused by pushing this now deregulated (part of the denial of the government's role) SIR beyond any sensible limit and simultaneously obstructing the transition to TIR through lobbying and funding various spoiling actions. (Climate change deniers, opponents of renewable energy and so on are funded by the oil and nuclear lobbies.)

TIR – which the European Union was strongly committed to bringing about, before being distracted by the need to rescue some of its individual, debt-ridden economies – is very different. Energy is from distributed, ubiquitous renewable sources, with every building a micro power station, and the communication system is the internet. These will come together, using available and tested technologies, in what has been called the Smart Grid, which moves energy and information in both directions. Instead of centralisation it leads to a dispersal of power and instead of competition between a few, often near-monopolistic, corporations it leads to collaboration between a myriad of small businesses and individuals. And rather than living on the hubris-inducing powers of fossil fuels and wantonly extractive industrial processes, we will be living in harmony with the biosphere and its ambient energies. This must lead to greater awareness of them, their capacities and limits, and so to a more meaningful and improved quality of life.

The implications of all this for the built environment are enormous – as they are for all aspects of our culture, requiring the radical thinking of economics and education, for starters. Perhaps surprisingly, particularly to advocates of the Compact City, TIR may yet rescue the environmental legacy of the Second Industrial Revolution. To fly over the US, to take an extreme example, is to wonder how its lifestyle, with multi-lane highways filled with cars of single occupancy, commuting through sprawling 'cities' between air-conditioned buildings, could ever survive rapidly escalating oil prices once the global economy starts to recover. But maybe, with every building a micro power station storing energy with hydrogen fuel-cell technology that also powers cars, the future for such places is not as bleak as it once seemed. Maybe. Even so, there will be a painful transition period, protracted by the resistance of SIR corporations and the politicians they lobby and fund.

TIR will inevitably temper one of modernity's most destructive features, the unchecked and irresponsibly exercised power of giant multi-national corporations: many see the curbing of the corporate system as a fundamental necessity if we are to progress to sustainability. This had its initial origins at the birth of modernity, with the issuance of royal charters in the early 15th century when the Portuguese king licensed the exploration of Africa. It took a further step towards

| <b>Newtonian Mechanical Universe</b>  | <b>Living Organic Universe</b>                               |
|---|--|
| <i>Static and deterministic</i>   | <i>Dynamic and evolving</i>                                  |
| <i>Space and time both absolute and separates</i>                                       | <i>Space and time are inseparable</i>                        |
| <i>Universe is the same for all observers wherever they are in space or time</i>        | <i>Dependent on the observer</i>                             |
| <i>Consists of inert objects with simple locations. Organisms within space and time</i> | <i>Consists of de-localised and mutually entangled space</i> |
| <i>Space and time linear and homogeneous</i>  | <i>Multi-dimensional space-time</i>                          |
| <i>Primary truth</i>  | <i>Linear and heterogeneous</i>                              |
| <i>Local causation</i>  | <i>Non-local causation</i>                                   |
| <i>Non-participatory, excluded and impotent entanglement of observer</i>                | <i>Creative and participatory</i>                            |
| <i>Observer</i>   | <i>Observer and observed</i>                                 |



**5. Comparative characteristics of the Newtonian and Organic Universes, derived from a table by evolutionary biologist Mae Won-Ho. In a radical conceptual shift, that has profound repercussions beyond the world of science, the familiar clockwork universe of Newton is giving way to notions of the universe as a complex, multivalent and perpetually evolving organism. The fixed certainties of modernity are now challenged by a new and more fluid cultural paradigm**

their contemporary form considerably later when England and the Netherlands licensed their respective East India companies around the beginning of the 17th century. Besides initiating what we now know as globalisation, this issuance of charters was how the nobility retained power and profited from the rising mercantile class, and eventually led to the modern corporation as we know it.

A key feature of the chartered companies and today's corporations is they distance shareholders from the source of their wealth, and even awareness of how it is created. Thus seemingly honourable people once lived in good conscience off colonialism and slavery, and now off the most rapacious of extractive industries destroying the planet. Hence discussion in some of the Greater London Authority's documents about making London a sustainable city remains fatuous when the engine of its economy is the City of London (the banking and financial services sector). Yet the corporate system and the big banks that are part of it are attracting calls for radical reform – among the less threatening of which is to factor in and pay for resolving externalities.

#### **The computer's place in the 'Organic Universe'**

Far and away the most potent current agent of change is the computer. Initially this has supercharged the destructive impacts of the Second Industrial Revolution, not least by making it possible for vast sums of money to slosh instantly around the world with reckless disregard for local impacts or long-term consequences. At a more mundane level, the computer allows many of us to work from home. This has consequences for the design of the home, as a live-work unit in contemporary parlance, and for the life of the neighbourhood, leading to the burgeoning number of coffee shops and other local meeting and socialising places for home-workers wanting company. It is the computer that will also bring about the TIR, seemingly our best chance for achieving sustainability and living in harmony with the regenerative cycles and capacities of the biosphere. So although the computer has already had an enormous impact on almost every aspect of our lives, it has still to affect us in many more ways. Its advent is of pivotal importance comparable with the birth of the industrial revolution, and some say of even greater significance.

Every change discussed here has been powerfully influenced and even precipitated by the computer and the web of instantaneous communications it has facilitated. With internet access penetrating every corner of the globe, the web has provided Gaia with a nervous system so that each of us can be in touch with and informed about what is happening anywhere. Without the computer's awesome number-crunching and simulation capacities we could not grasp the complexities of climate change nor design the built environment to ameliorate it. Indeed, every aspect of the design, engineering and construction of architecture has been radically affected by the computer. This has brought great benefits but also challenges to our understandings of the very purposes of architecture and how we relate to it. These will be explored in a later essay.

Science, and the technologies it spawns too, has also been radically transformed by the computer. Many natural

processes were either much too slow or far too speedy to be accurately perceived, analysed and understood. These are now easily modelled on the computer, adjusting different variables until a model is created that behaves just like the natural system under study. Thus fields concerned with taxonomy now also study complex dynamic processes of emergence. Moreover, the computer is not limited to studying the simple, linear chains of cause and effect that characterise Newtonian science but can model complex, simultaneous and multi-directional interactions between many ongoing processes.

Although the shift had been going on since long before, the advent of the computer gave further impetus to one of the most profound paradigm shifts in science: Newton's dead and mechanistic, clockwork universe is giving way to what is referred to as the Organic or Living Universe, which is understood to be alive, self-organising (autopoiesis), ever-evolving and constantly creative. (Some differences between the old Newtonian and the new Organic Universe are summarised in the table derived from one by evolution biologist Mae Won-Ho.) Science no longer only involves reductive analysis of isolated objects linked in simple causal chains but deals with multiple simultaneous interactions, with complex systems and the inter-relationships within and between them.

Moreover, we humans are no longer detached observers but, as implied in quantum mechanics, are to some degree integral participants in these systems and processes. This huge shift is a major reason for 400 years of modernity being replaced by a new cultural paradigm underpinned by a radically different science. Youngsters educated in this new science will not only understand the world intellectually in another way to most people today but will also have a viscerally different experience of it, as participants rather than mere observers. This will in turn profoundly impact on how we want to live. We defended ourselves against a meaningless, dead universe by walling ourselves off with consumerist goodies and addictive distractions. But once we understand and sense the cosmos is alive we will want to disencumber to better embrace and engage with this ever-evolving being.

#### **Finding real meaning in human values**

Already before this change in our subjective experience of the world, another major agent of change is also subjective: this lies in human values, or perhaps not so much in changes in them but in an expectation of living in accord with one's personal values. We increasingly recognise that real happiness and peace of mind cannot be achieved by betrayal or compromise of these values. A key step in many forms of psychotherapy and business consultation today is the elicitation of values, whether personal or corporate, and devising ways of living and acting in accord with them. Throughout the course of history, until a generation or so ago, people tended to accept their station in life and only a privileged elite could live entirely as they wished. Now ever more people feel that they have a particular talent or purpose to realise. In some this manifests as an unrealistic sense of entitlement, but in the better adjusted and more mature this comes as an urge to contribute, to help others and the

world, and thereby give their lives meaning and facilitate their realisation of their full potential.

This again has profound consequences for architecture and urban design, and the pursuit of sustainability. Ask probing questions of people about how ideally they believe we should live: What should be our relationship with neighbours and community? How should we travel to work and get our children to school (driving the latter every day, or walking along leafy, safe routes, say)? What should we eat and how should it be produced and sold? The more you probe, the more evident it becomes that people are often not living in accord with their values, and moreover that would be impossible in the contemporary city. How, for instance, might we achieve and combine no commuting, growing our own vegetables, recycling all waste locally, living in a diverse and mutually supportive community, and letting children run wild in safety while also bringing them up to be familiar with how we make our living?

The impossibility of living in accord with our deep values and beliefs leads to an underlying, usually unacknowledged, malaise, from which we distract ourselves through excessive consumption and other forms of essentially addictive behaviour. All this has to be addressed in designing for sustainability. To radically revise our lifestyles, we must radically revise our human settlements, at the levels of the layout and functional mix of urban areas, as well as of the organisation and functional mix of individual buildings. We certainly cannot keep devouring the countryside with a sprawl of housing estates, which are wasteful in land and the time and energy spent commuting, nor constructing soulless urban areas conceived as mere aggregations of individual buildings rather than contiguous social fabric.

Other manifestations of changes in values are the many dimensions of the return of the feminine (after millennia of a dominating patriarchy), the rejection of racism and the advocacy of multiculturalism. Although these are forces for change, for moving beyond modernity, they are also consequences of it and postmodernity, some of their final and finest gifts.

#### **Assessing the scale of the change**

In many periods of past and recent history, people were convinced that they were on the threshold of profound epochal change. This was certainly true of the 1960s, but also of other periods before and, for some people, since. Yet the case then for people thinking themselves on such a brink was far less compelling than it is now, particularly because of the huge and accumulating impacts of the computer. The relevant questions seem to be less about whether we are undergoing epochal change, than in how major this change will be. And which epoch is drawing to a close? Or should that be epochs? And what will be the characteristics of the new era?

That the age of heavily oil-dependent modern architecture will soon be over appears obvious. It seems similarly certain that while we will continue to use and preserve the infrastructure from the Second Industrial Revolution (which roughly correlates with the period now known as Modernism) and aspects of it will continue, making the transition to the Third Industrial Revolution

will bring huge benefits and perhaps our best chance of collective survival. That modernity, the longer 400- to 500-year-old epoch, is passing also seems relatively uncontroversial. But with that and the quest for sustainability, are we not also seeing the end of the quest, which was already underway with the founding of the first cities some 8,000 years ago, to conquer nature? Now, instead of subduing it we must seek to live in symbiosis with nature, not least by applying the ecological understandings bequeathed by modernity.

Will we then reverse our progressively acquired sense of separateness – from nature and cosmos, from other people and community – a prime characteristic of Western consciousness that contemporary science considers fallacious? This seems to have started with the first Mesopotamian cities, partly as the consequence of the invention of scripts and linear, left-brained modes of thinking these induced (which repressed the feminine); and in Europe it began as warrior nomads swept in from the steppes to displace the worship of a fertile Mother Earth with vengeful sky gods. This sense of separation gained impetus as Greek philosophers stressed reason and dualism, to be intensified again through the rediscovery of reason in the Renaissance, the dualism of Descartes and the ideas of the Enlightenment. For decades now, theories and discoveries in science have been telling us this sense of separateness is a delusion, as is the sense of reality that goes with it. This will eventually sink in, though many wonder why it is taking so long, so closing another long phase in our development.

Probably all these phases of differing longevity in human, or at least Western, history are coming to an end more or less simultaneously. This powerfully highlights how momentous the transition is we are undergoing. But to focus our explorations in the most manageable and fruitful way, next month we will discuss the transitions from pre-modernity to modernity, and then to postmodernity and how these were and are reflected in architecture – that is momentous and revealing enough.

Although hers is not the framework we will be drawing on, let's close with a table adapted from Charlene Spretnak's brilliant book *The Resurgence of the Real*. Here she contrasts three paradigms – or as she prefers, 'cultural ecologies' – Modernity, Deconstructionist Postmodernism (the transitory, hyper-relativist mode of thought usually referred to as Postmodernism) and Ecological Postmodernism, which she implies is the emerging long-term successor to modernity. Her vision of Ecological Postmodernism is consistent with new and emerging understandings from science and incorporates new visions of what it means to be fully human. Based on a living and unfolding cosmos, its understanding of reality is more dynamic, relational, complete and complex than that of modernity, strongly contrasting with both the 'objective', fixed order of modern reality and the arbitrary social construction of that of Deconstructionist Postmodernism. The table may not be exactly self-explanatory, especially without the supporting argument of the book, but even by itself is richly suggestive and worthy of contemplation in preparation for next month's explorations.

**6. Analysis of three 'cultural ecologies' adapted from *The Resurgence of the Real* by American academic and activist Charlene Spretnak. Consistent with new and emerging understandings from science, a vision of Ecological Postmodernism conceives reality as more dynamic, relational and complex, in contrast with the fixed order of modern reality and the arbitrary social construction of Deconstructionist Postmodernism**

**We invite readers to join the debate. Send your comments and observations on the AR's Big Rethink to [areditorial@emap.com](mailto:areditorial@emap.com)**

|                            | <b>Modern</b>                  | <b>Deconstructionist Postmodern</b>                         | <b>Ecological Postmodern</b>                      |
|----------------------------|--------------------------------|---|---|
| <i>Meta-narrative</i>      | <i>Salvation and progress</i>  | <i>None (They're all power plays)</i>                       | <i>The cosmological unfolding</i>                 |
| <i>Truth mode</i>          | <i>Objectivism</i>             | <i>Extreme</i>  | <i>Experientialism</i>                            |
| <i>World</i>               | <i>A collection of objects</i> | <i>An aggregate of fragments</i>                            | <i>A community of subjects</i>                    |
| <i>Reality</i>             | <i>Fixed order</i>             | <i>Social construction</i>                                  | <i>Fragmented</i>                                 |
| <i>Sense of self</i>       | <i>Socially engineered</i>     | <i>Fragmented</i>   | <i>Processual</i>                                 |
| <i>Primary truth</i>       | <i>The universal</i>           | <i>The particular</i>                                       | <i>The particular-in-context</i>                  |
| <i>Grounding</i>           | <i>Mechanistic universe</i>    | <i>None (total groundlessness)</i>                          | <i>Cosmological processes</i>                     |
| <i>Nature</i>              | <i>Nature as opponent</i>      | <i>Nature as wronged object</i>                             | <i>Nature as subject</i>                          |
| <i>Body</i>                | <i>Control over the body</i>   | <i>'Erasure of the body' (It's all social construction)</i> | <i>Trust in the body</i>                          |
| <i>Science</i>             | <i>Reductionist</i>            | <i>It's only a narrative!</i>                               | <i>Complexity</i>                                 |
| <i>Economics</i>           | <i>Corporate</i>               | <i>Post-capitalist</i>                                      | <i>Community-based</i>                            |
| <i>Political focus</i>     | <i>Nation-state</i>            | <i>The local</i>  | <i>A Community of communities of communities</i>  |
| <i>Sense of the divine</i> | <i>God the Father</i>          | <i>'Gesturing towards the sublime'</i>                      | <i>Creativity in the cosmos, ultimate mystery</i> |
| <i>Key metaphors</i>       | <i>Mechanics and law</i>       | <i>Economics ('libidinal economy') and signs/coding</i>     | <i>Ecology</i>                                    |





Neo-classical reworking  
of Rome's Pantheon by  
Thomas Jefferson at the  
University of Virginia

# THE BIG RETHINK PART 3: INTEGRAL THEORY

In the third installment of the AR's campaign, Peter Buchanan introduces Integral theory, which establishes a new framework for the design of 21st-century buildings and cities.

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The first two essays in this series merely set the scene, making the case for, rather than initiating *The Big Rethink: Towards a Complete Architecture*. This now begins in earnest. The second essay discussed some ways in which modernism, including modern architecture, is endemically unsustainable, and some of the most potent forces bringing epochal change. It listed particularly those that might bring enticing benefits as opposed to those, in the first essay, that threaten to bring calamities. It concluded by speculating that several epochs, coexisting simultaneously over different time spans, are now ending, so highlighting just how pivotal are our times.

Here we concentrate on understanding the modern era, its origins some four to five centuries ago, and why it is now waning; the implications of that alone are vast enough. We also look at the transitions from pre-modern to modern and then to postmodern and what they meant for architecture. From these foundations we can start considering the architecture of the future, that of the epoch succeeding the transitional phase of current postmodernism – what, in the table closing last month's essay, Charlene Spretnak calls Deconstructionist Postmodernism as opposed to the Ecological Postmodernism of the emergent era.<sup>1</sup>

The need to rethink recalls the situation a century or so ago when architects confronted a very different pluralism to now – a riot of historic motifs and styles, sometimes within the same building. The response was to break with history and reduce to basics, tossing out historic motifs and ornament, and embracing an abstract language shaped around function and construction – and, where possible, new types of both. Now we realise this approach was too reductive and we must seek a more complete architecture informed by a more complete view of what it is to be fully human, as well as to reground both architecture and humankind in history and culture. Thus besides a new architecture we need a very different way of thinking. As the Einstein quote that is deservedly a clichéd mantra for our time asserts: 'A problem cannot be solved by the same level of thinking that created it.' Nor can the opportunities for innovation latent in the challenges we face be grasped.

This third essay introduces a new mode and level of thinking to that of modernity and postmodernity that will guide much of the argument of the future essays. Known as Integral theory, it has developed over some decades and has antecedents stretching even further back. It is particularly suited to architecture: it too brings into useful relationship many disciplines and kinds of knowledge; and because many key ideas are explained in diagrams, it should be readily accessible to architects. The core diagram, for instance, includes and brings into relationship: individual subjective experience, including aesthetic pleasure; the communal and cultural dimensions of subjective experience, such as meaning, symbolism and shared values; the objective realms of observed behaviour (function); the physical characteristics of biological form and functioning (and, for architecture, form, material, construction and so on); and the many systems in which these objective functions and forms (including those of buildings) operate – ecological, economic, technical,

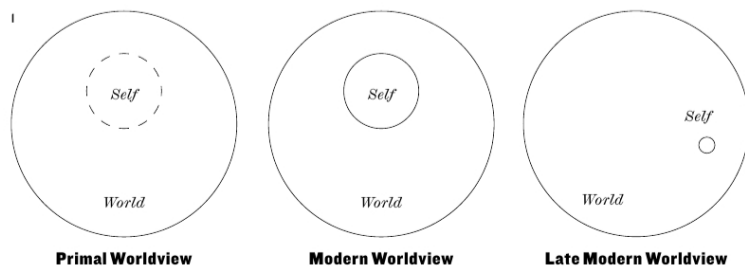
sociological and so on. Moreover, Integral theory is genuinely post-postmodern or trans-modern, vastly inclusive yet disciplined, so combining richness with rigour, breadth with depth, and giving equal value to the subjective and objective while also grounded in empirical evidence. It guides studies in various fields, providing a conceptual framework that stimulates new insights by highlighting neglected areas of investigation and unexplored relationships.

#### Different sorts of Integral

That Integral theory has hardly impacted architecture to date is damning testimony to the damage wrought by the distractions of theory courses and academic publications still recycling the same irrelevant philosophical and literary theories. Because the thinking presented here moves beyond the limits of modern and postmodern thought, transgressing key taboos of the latter (particularly those of political correctness), it is only slowly entering some academic departments. Exceptions, where it has been more readily adopted, are MBA courses, which hunger for new ideas conferring competitive advantage; some psychology departments, which are home to co-developers of areas of Integral theory; and some of urbanism and ecology, which, like architecture, must integrate several fields of study.

Both confines of space – 12 essays may seem ample to rethink architecture, but there is so much to reconsider – and architecture's current detachment from leading-edge thought, limit how much and at what depth we can explore Integral theory. Parts of Integral theory require what at first brush are challenging conceptual leaps and so are not even touched upon. Let's trust our discussion is not seen as excessively trivialising by the Integral community; but then Integral theory is just too useful not to exploit, even if only in such a superficial manner.

Before introducing Integral theory let's look at some diagrams from historian Richard Tarnas. He teaches at the California Institute of Integral Studies, which was founded with similar ambitions to Integral theory, yet they are independent and somewhat different. (Integral is a current buzz word, used in various contexts, yet with not quite the same meaning.) Tarnas' diagrams summarise something of the modern predicament in a poignantly potent manner that is immediately graspable intellectually, and maybe emotionally too. They contrast the worldviews of primal, modern and late modern mankind. Although Tarnas does not define these eras exactly in the source the diagrams are taken from,<sup>2</sup>



**1. Diagrams by Richard Tarnas with his captions: In the primal worldview, intelligence and soul (the shaded area) pervade all of nature and the cosmos, and the permeable human self directly participates in that larger matrix of meaning and purpose within which it is fully embedded. In the modern worldview, all qualities associated with purposeful intelligence and soul are exclusively characteristic of the human subject, which is radically distinct from the objective nonhuman world. In the late modern cosmos, the human self exists as an infinitesimal island of meaning and spiritual aspiration in a vast purposeless universe.**  
**2. Table of differing phases of cultural development according to, from left to right, Marshall McLuhan, Jean Gebser and William Irwin Thompson. The stages in one column are not coincident with those in the other two**

2

|                   |                 |                          |
|-------------------|-----------------|--------------------------|
| <i>Oral</i>       | <i>Archaic</i>  | <i>Culture</i>           |
| <i>Script</i>     | <i>Magical</i>  | <i>Society</i>           |
| <i>Alphabetic</i> | <i>Mythical</i> | <i>Civilisation</i>      |
| <i>Print</i>      | <i>Mental</i>   | <i>Industrialisation</i> |
| <i>Electronic</i> | <i>Integral</i> | <i>Planetisation</i>     |

primal refers to the vast majority of human history, those many millennia prior to civilisation, while here modern starts with monotheism and Greek philosophy, and late modern clearly is the post-Copernican, post-Nietzschean era. The diagrams are so eloquently evocative they need no more explanation than Tarnas' brief captions.

The Integral theory we will explore a tiny corner of, in a rather simplified way, is that developed by philosopher, transpersonal psychologist and prolific author, Ken Wilber. Besides Wilber's own, original contributions, he draws on and integrates the works of many other thinkers and disciplines. These range from GWF Hegel to Jürgen Habermas and include figures such as Henri Bergson, AN Whitehead and Pierre Teilhard de Chardin. Now a number of other scholars also contribute to Integral theory's ongoing evolution, not least as researchers providing a growing body of empirical evidence to expand that already subsumed in Wilber's thinking.

As implied by the name Integral, adopted from German philosopher Jean Gebser (1905–73)<sup>3</sup> and Indian philosopher Sri Aurobindo (1872–1950) (both among those who have most influenced Wilber), it is concerned with integrating, or at least bringing into relationship, all the rapidly expanding knowledge now available yet fragmented between specialisms. It thus helps us regain a grip on, and a sense of wholeness to, what Wilber refers to as the Kosmos, resurrecting the Greek term that refers to both the physical manifestation of the cosmos and all the forms of consciousness and culture it hosts. Significantly, then, Integral theory transcends the more limited perspective of holism (or systems holism) in attending not only to objective matters but giving equal weight to the subjective realms. Also, in developing Integral theory, Wilber sought to bring together the teachings of West and East, and so science and spirituality. Besides being an intellectual system, Wilber intends Integral theory to guide personal and spiritual development, another cause of academic resistance.

In common with some other currents in 21st-century thinking, the Integral approach is developmental in

nature: beyond integrating diverse disciplines, it is concerned with how organisms, consciousness, cultures and so on evolve and develop through distinct stages. Few have problems with the notion of development in the non-human world (through insect life stages, for instance, or the branching tree of biological evolution) or even that of childhood development from infancy upwards to adolescence. But that cultures and consciousness develop through clearly demarcated phases offends many in the humanities as it transgresses postmodern taboos on ranking and hierarchy. This is despite such ideas having ancient lineage, now backed by increasing empirical evidence, as well as Integral theory's insistence that none of these phases is better or less healthy than any other. This too has caused resistance to Integral theory. But any worthwhile rethink must rattle intellectual cages, and perhaps even offend a few.

Developmental theories in psychology, such as Jean Piaget's theory of child development and Abraham Maslow's 'hierarchy of needs' (and those of other more recent, but lesser known, figures such as Robert Kegan and Susanne Cook-Greuter) have shaped Integral theory. But so have theories of the development of culture and consciousness, such of those of Gebser and Aurobindo, and Spiral Dynamics, developed by Clare W Graves (1914–86) and now advanced by Don Beck and Christopher Cowan.<sup>4</sup> Spiral Dynamics, a model of how cultures develop through defined phases and now intrinsic to Integral theory, is richly illuminating, particularly in understanding multicultural contexts, as is often necessary in larger urban interventions. Many other thinkers have simpler yet complementary schema of historical development. Thus philosopher Marshall McLuhan saw us as evolving through and being conditioned by our communications media, and mathematician Ralph Abraham by the new form of mathematics that characterised an era. William Irwin Thompson (another thinker influenced by Gebser) prefers geo-political phases whereas Jeremy Rifkin, discussed in last month's AR, offers his own schema. For Integral theory, Gebser's schema was seminal and its stages now co-exist in it with Spiral Dynamics' more numerous ones.

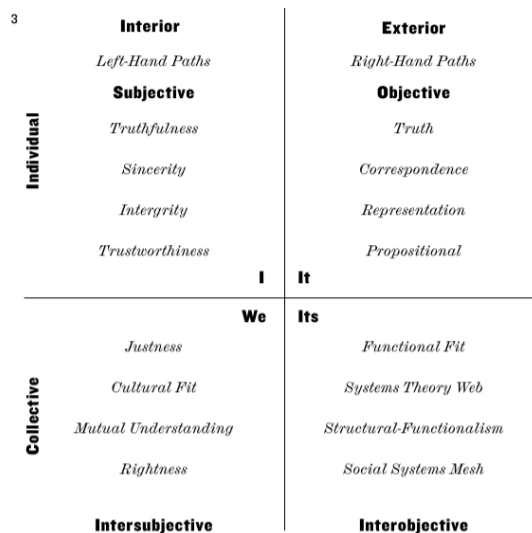
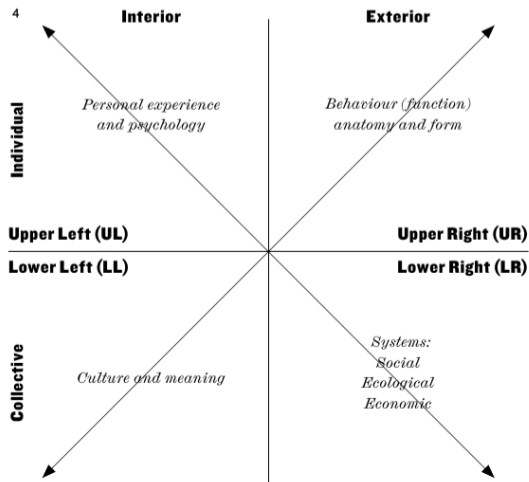
Central to Integral theory, as an integrative matrix clearly communicating some core themes, is the All Quadrant, All Level (AQAL – pronounced Ahqwal) diagram. Its bare bones are deceptively simple, giving little indication of how immensely useful it is; but fully annotated with its unfamiliar terms it might seem offputtingly arcane. Wilber arrived at the diagram when working on the most important of his many major works to date, *Sex, Ecology, Spirituality*,<sup>5</sup> and was seeking a framework with which to integrate all the diverse developmental theories. His operating assumption was that every one of them must have some value – if only a framework could be devised to show how they relate to each other, so also highlighting relative strengths and weaknesses. He tried placing his folders of notes about each theory into piles together with others of a similar character, hoping this would reveal further commonalities as the basis for an integrative framework. But always the folders formed four independent piles with little to link

**'Integral theory is concerned with integrating, or bringing into relationship, knowledge fragmented between specialisms'**

them – until he recognised these as the quadrants of what became the AQAL diagram.

The AQAL quadrants are defined by two cross axes. The upper part of the vertical axis marks the realm of the individual and the lower part that of the collective. The left part of the horizontal axis marks the realm of interiors or the subjective and the right part that of exteriors or the objective. The Upper Left quadrant (UL) is thus interior-individual, the realm of the subjective, of psychology and intentionality, of experience and unmediated aesthetic response. The Lower Left quadrant (LL) is interior-collective, the inter-subjective realm of culture and symbolism, meaning and morals. The Upper Right quadrant (UR) is exterior-individual, the objective realm of observed behaviour and of objecthood, whether of biological characteristics or of form, matter, construction and so on. The Lower Right quadrant (LR) is exterior-collective, the inter-objective realm of systems, be they ecological, economic, technical, social or whatever. The quadrants thus also correspond to the pronouns: I (UL), We (LL), It (UR) and Its (indicating plural, LR).

The left quadrants cannot be understood by observation alone but require an interrogation of the subject to gain insight, directly or through interpretative hermeneutics, and so are dialogical. The right quadrants are studied through detached observation alone, by empirical and positivist methods, and are referred to as monological. Each quadrant has specific criteria for assessing validity and its own intellectual disciplines and associated thinkers – very few of whom develop all four quadrants. This applies to architecture too. In the UL is aesthetics and phenomenology, currently written about by Juhani Pallasmaa. LL is semiotics (Charles Jencks) and the cultural realm, including anthropology, associated with Joseph Rykwert. UR is function and ergonomics, *Neufert Architects' Data* and the *Metric Handbook*, form and construction. Kenneth Frampton's studies of tectonics is concerned with the aesthetic qualities (UL) invested by attention to this UR quadrant. The LR quadrant of systems is the realm of contracting, industrialised



systems, returns on investment and so on. Obviously any truly complete form of thinking would give attention to all quadrants, to the subjective left as well as the objective right. Systems holism, which many see as the paradigm succeeding modernity, deals with right quadrants only – and so, as we shall see, is a limited modern mode of thought.

Each AQAL quadrant is bisected by a diagonal line marked at regular intervals. These denote the levels that rise with distance from the crossing of the axes, so introducing the developmental dimension. The levels are too complex to detail in a single essay, but crucially are organised 'holarchically'. Holarchy derives from 'holon', coined by Arthur Koestler to denote something that is a whole in itself but also part of a larger whole. Thus, to progress up the levels with an example from the UR quadrant, an electron is a whole that is also part of an atom, and an atom is a whole that is also part of a molecule, and a molecule is a whole that is also part of a cell, that is a whole and also part of an organism and so on. The Integral term for holarchical organisation is 'transcend and include' in that each level both transcends that below and includes it. An anomaly in some depictions of the AQAL diagram, and in our use of it to discuss architecture, is that some things depicted in the right quadrants, particularly the LR, are artefacts (human-created) rather than holons (the products of evolution). But this in no way impairs the usefulness for those seeking insights into creating better architecture through greater inclusiveness (checking all quadrants are considered) and increased rigour, even if not quite the ultimate in methodological rigour.

Among the key assumptions informing, and insights arising from, the AQAL diagram is that a progressive increase in level in one quadrant is matched by a similar rise in each of the others. Hence an increase in complexity of brain physiology (UR) is matched by an increase in

**The AQAL quadrants derived from Ken Wilber's *Brief History of Everything***  
**3. Simplified AQAL diagram defining the quadrants**  
**4. Each quadrant has its own specific criteria of validity**  
**5. Some thinkers representative of each quadrant**



|                   |                           |  |                                    |
|-------------------|---------------------------|--|------------------------------------|
| <b>Individual</b> | <b>Interior</b>           |  | <b>Exterior</b>                    |
|                   |                           |  | <i>BF Skinner</i>                  |
|                   | <i>Freud</i>              |  | <i>Richard Dawkins</i>             |
|                   | <i>CG Jung</i>            |  | <i>John Locke</i>                  |
|                   | <i>Piaget</i>             |  | <i>Empiricism</i>                  |
|                   | <i>Aurobindo</i>          |  | <i>Behaviourism</i>                |
|                   | <i>Gautama Buddha</i>     |  | <i>Physics, Biology, Neurology</i> |
|                   | <b>I</b>                  |  | <b>It</b>                          |
| <b>Collective</b> |                           |  | <b>We</b>                          |
|                   |                           |  | <b>Its</b>                         |
|                   | <i>Thomas Kuhn</i>        |  | <i>Systems Theory</i>              |
|                   | <i>Wilhelm Dilthey</i>    |  | <i>Talcott Parsons</i>             |
|                   | <i>Jean Gebser</i>        |  | <i>Auguste Comte</i>               |
|                   | <i>Max Weber</i>          |  | <i>Karl Marx</i>                   |
|                   | <i>Hans-Georg Gadamer</i> |  | <i>Ecological</i>                  |

consciousness (UL), as well as in cultural sophistication (LL) and social organisation (LR) and these all come about simultaneously. Such understandings are crucial if we are to progress to sustainability. At the moment this tends to be treated as largely an ecological issue (LR) to be tackled with attention to behavioural and technical matters (UR). Neglected are the left quadrants, although effective action in the right quadrants depends on left-quadrant empathic understandings and motivation as well as cultural transformation.

Although we lack space to recap Integral theory's sophisticated models of psycho-spiritual and cultural development, these can be broadly distilled into four key stages: ego-centric (concern with the self); ethno-centric (that progresses from concern with the tribe to the nation-state or race); to world-centric (when sustainability becomes a live issue); to biosphere-centric (that brings the vision to inspire effective remedial action). Thus for Integral thinkers, right-quadrant measures to achieve sustainability, no matter how useful, must be accompanied by left-quadrant development. When radical reorientation is urgently required, as now, this insight should inform the revision of education and also the work of artists and architects whose proper role is not spurious self-expression but contributing to the development of consciousness and culture.

The levels in the AQAL diagram highlight an error in thinking common in contemporary culture, what Integral theory labels the Pre-Trans Fallacy. In this, lower states of experience or cultural development (whether infantile or pre-modern and earlier) are mistaken for higher (Transcendent) ones evolved beyond current norms. Thus Freud dismissed higher levels of spiritual development (Trans) as regression to infantile states of still undifferentiated union with the world (Pre), while Jung often mistook the latter (Pre) for higher mystical levels (Trans). For Wilber, many 'deep ecologists' who

advocate empathic union with the Earth and its creatures, are guilty of the Pre-Trans Fallacy by advocating regression to an earlier state of undifferentiated union rather than forward progression to where this union is re-achieved at higher levels of consciousness, culture and cognition. This is a trap that some architects advocating a 'biophilic' architecture, or more extreme back to nature approaches, need to be alert to and avoid.

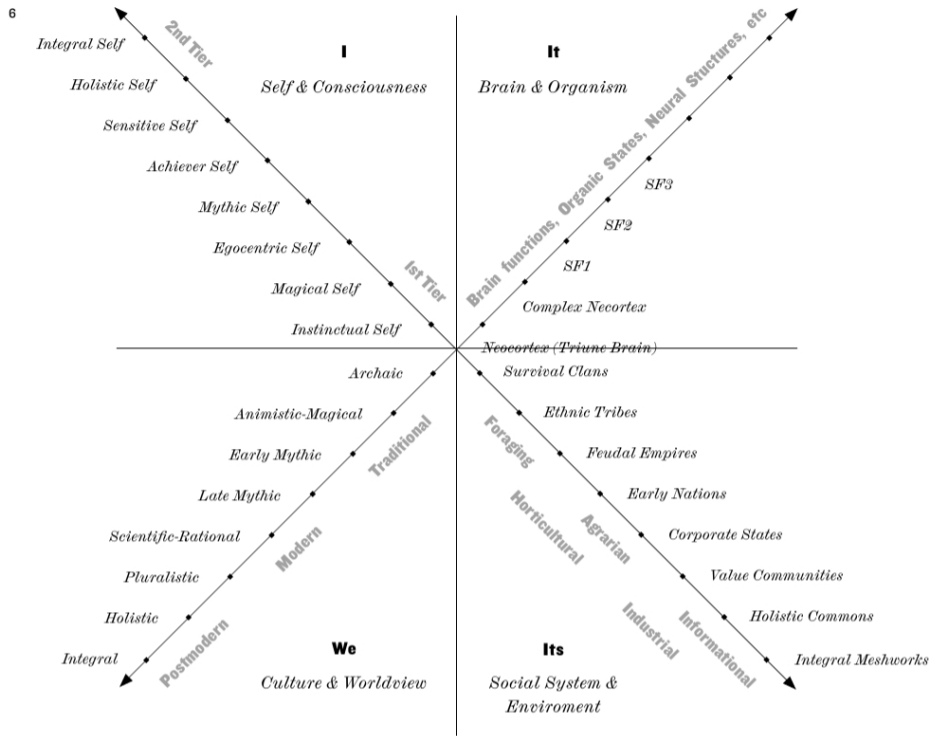
**From pre-modernity to modernity**

Even from this brief and very partial description of the AQAL diagram it should be clear how potentially useful it is in ensuring a more complete approach to architecture than that characterising modernity, which focused primarily on the right quadrants at the expense of those on the left, ignoring the LL in particular. But Wilber also uses the AQAL and related diagrams to quickly illuminate historic transitions, particularly those from pre-modernity to modernity, and then from modernity to postmodernity. This deepens our understanding of these eras and gives telling insights into their architecture.

All pre-modern cultures subscribed to a worldview often called the 'Great Chain of Being'. This can be represented diagrammatically as a series of concentric, or nested, circles. In its simplest form the central circle denotes matter; the one around it, organic life or the body; the next, mental activity and the mind; and the outer circle or circles, the soul and spirit. The terminology differs between cultures and religions, but the schema is identical. Such a worldview conferred a sense of organic unity to these pre-modern cultures that many now look back to with nostalgic envy. But from the modern perspective this worldview and the tight entanglement of its layers is also very constrictive, as Galileo found when his investigation of the stars (the inner circle of matter) was deemed to transgress religious edict (the outer circle of spirit). In such a context it is difficult to develop ideas in isolation and depth; and the only notion of evolution conceptually possible is up through the circles or levels, rather than within, say, the second circle of life, as with Darwinian evolution. In-depth investigation of a single layer only became possible with modernity.

The Great Chain of Being was the worldview up to and through the Middle Ages until the beginning of the Renaissance when faith as the underpinning of culture gave way progressively to reason. Various thinkers have chosen different events as marking the earliest stirrings of modernity. Examples that readers might be familiar with are Petrarch's ascent of Mount Ventoux in 1336, simply to get a better view (perspective on) the surrounding

**'An assumption informing, and insight arising from, the AQAL diagram is that increases in level in one quadrant are matched by rises in the others'**



6. The four quadrants as applied to humans  
 7. University departments arranged by quadrant.  
 Diagram derived from *Integral Ecology* by Esbjörn-Hargens and Zimmerman

countryside, which some see as presaging Filippo Brunelleschi's demonstration of perspective in 1413, after which, it is argued, objects became progressively more distinct from their background. Possibly most important of all were Johannes Gutenberg's invention of the printing press in 1439, which made books relatively affordable; and the Fall of Constantinople in 1453, which led to fleeing scholars bringing by-then forgotten Greek texts to Italy, so leading a rediscovery of its philosophy with its emphasis on reason.<sup>9</sup> Remarkably prophetic about the nature of modernity was the 23-year-old Giovanni Pico della Mirandola's extraordinary *Oration on the Dignity of Man* of 1486, envisioning a new sort of human, capable of understanding God's works and free from the limits constraining all other creatures. Also seminal was

**'The core determinant of the character of an era is its underlying notion of reality. For modernity this notion is that there is an objective reality, external to and independent of us'**

Nicolaus Copernicus' publication announcing the heliocentric nature of the universe in 1543. Today we see this as displacing us from the centre of the universe and so as somewhat marginalising mankind. But its immediate impact was the contrary: elation that in discovering and formulating the laws of God's universe mankind was itself, though to a lesser degree, demonstrating God-like powers. None of the above alone initiated modernity; yet all contributed and helped shape its essential character.

But to return to Wilber: for him a key step to modernity is what he refers to as 'the differentiation of the Big Three' – the True, the Good and the Beautiful. These were differentiated already by Plato. But with modernity the differentiation was eventually to become more extreme and led to dissociation between the Big Three and all the forms of fragmentation that characterise modernity. The Big Three correspond to the quadrants: the True, which includes nature and science, being UR and LR; the Good, which includes culture and morals, being LL; and the Beautiful, which includes art and aesthetics, being UL. From this differentiation came the power of modern thought and its incredible mastery of the material world, particularly as the True in the form of science was now set free to develop unhindered.

The re-ascendance of reason led initially to a flowering of both the left-hand quadrants in Humanism and the beginning of the long ascendance of the right-hand quadrants of science and technology. As the latter

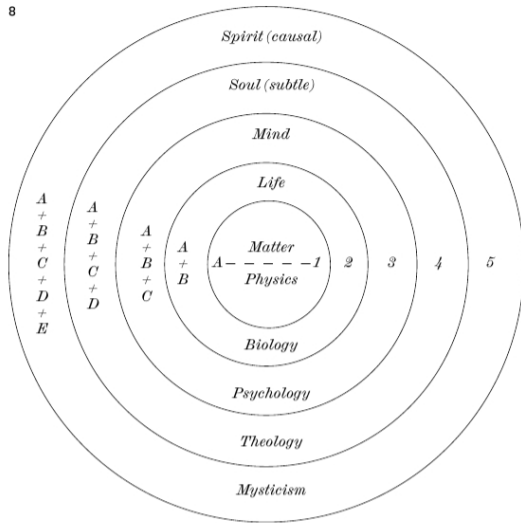
|                   |   |  |
|-------------------|---|--|
| <b>Individual</b> | <b>7 Interior</b>   | <b>Exterior</b>  |
|                   | <p><i>ARTS:</i></p> <p><i>English</i></p> <p><i>Screenwriting</i></p> <p><i>Music composition and performance</i></p> <p><i>Studio Art (painting, sculpting, photography)</i></p> <p><i>Theatre and Dance</i></p> | <p><i>NATURAL SCIENCES:</i></p> <p><i>Biochemistry</i></p> <p><i>Biomedical Engineering</i></p> <p><i>Cell and Molecular Biology</i></p> <p><i>Chemical Engineering</i></p> <p><i>Psychology</i></p> <p><i>Physics</i></p>   |
|                   | <b>I</b>  | <b>It</b>  |
| <b>Collective</b> | <b>We</b>   | <b>Its</b>   |
|                   | <p><i>HUMANITIES:</i></p> <p><i>Anthropology</i></p> <p><i>Classical Studies</i></p> <p><i>Cultural Anthropology</i></p> <p><i>Literature and Languages</i></p> <p><i>History</i></p> <p><i>Philosophy</i></p>    | <p><i>SOCIAL AND SYSTEMIC NATURAL SCIENCES:</i></p> <p><i>Business</i></p> <p><i>Ecology and Evolutionary Biology</i></p> <p><i>Economics</i></p> <p><i>Civil/Environmental Engineering</i></p> <p><i>Astrophysics and Astronomy</i></p> <p><i>Political Science</i></p> <p><i>Sociology</i></p> |

increased in its very demonstrable powers, this led to a slow but steady devaluing of the left-hand quadrants as Humanism withered into the humanities, the last refuge of the subjective. It also resulted in CP Snow's 'Two Cultures', of science and the arts, that neither talked to nor understood each other. Eventually, what had been a potently useful and healthy differentiation became too extreme, a pathological dissociation in which links among the Big Three were severed, so leading to the fragmentation and intensifying the disenchantment of the world so eloquently summed up in Tarnas' diagrams.

The core determinant of the character of an era is its underlying notion of reality – and the mostly unquestioned assumptions it results in that condition people's understanding of and experience of the world. For modernity this notion is that there is an objective reality, external to and independent of us. Baldly stated, this might seem relatively banal and inconsequential. But the consequences of adopting this historically unprecedented sense of reality were vast and still continue, explaining much about both modernity and modern architecture. Prior to modernity, the notion of an objective, independent reality was inconceivable: you were an engaged participant in reality to which you were responsible because it was, in small part at least, shaped by your actions and thoughts. Rituals were needed to ensure rains and harvest, even in some cultures to ensure the sun rose. You were immersed in and intrinsic to reality and the world – even if your powers over them were very limited and had to be reinforced by constant ritualistic entreaty.

Increasing numbers now profess New Age beliefs such as that we create our own reality as a mirror of our thoughts. They and others claim science, by discovering the participative role of the observer in quantum mechanics and phenomena such as quantum entanglement, has disproved the notion of objective reality. There is truth in these views, but the problem is less with the idea of an objective reality – which despite what scientific fundamentalists claim will always remain to some degree unknowable because inevitably conditioned by the limits of the subjective observer – but rather that this reductive right-quadrant view became modernity's dominant and often exclusive view of reality. (Postmodernity was in part provoked as the antithesis of this view.) Immeasurably compounding this problem is the idea that the reality of things can be fully understood by reductive analysis of them abstracted from context. Here it is the newer sciences of ecology and New Biology, of systems and chaos theory, and complex adaptive systems that challenge this view by insisting that things can only be fully known in their wider webs of relationships.<sup>7</sup> Even more challenging in the New Sciences is the increasingly subscribed-to view of a living universe and some heretics arguing consciousness as fundamental to the universe.

Modern science and scientific materialism, the concomitant mode of thought virtually synonymous with modernity, study this objective reality through detached observation, measurement and reductive analysis – as has proved hugely effective. But detached observation also suppresses our emotional and empathic connections with



the object observed and the world at large, so deadening us to tolerate experiments on other species and the exploitation of nature. These have become mere resources or commodities, and desperately undervalued ones. Science and the right quadrants, the only reality knowable with any certainty to the modern mindset, also came to progressively dominate, even suppress, the left quadrants of consciousness and culture; as for soul and spirit, along with religion, they were dismissed as mere superstition. Behaviourist psychology even rejected the notion of consciousness, which many others correlated as mere brain function, observable electric activity and an almost accidentally emergent epi-phenomenon, so collapsing the rich worlds of the left quadrants to the bio-mechanics of the right. Such reductionism is characteristic of modernity.

In Integral terms, the result is Flatland, a narrow and desiccated reality that excludes the sensual joys of embodied experience, along with psychological depths and spiritual heights. Also excluded are all the dimensions of meaning invested by the left quadrants, so intensifying the loss of meaning arising from living in Newton's dead, mechanical universe where even evolution is the blind product of chance mutations and natural selection.

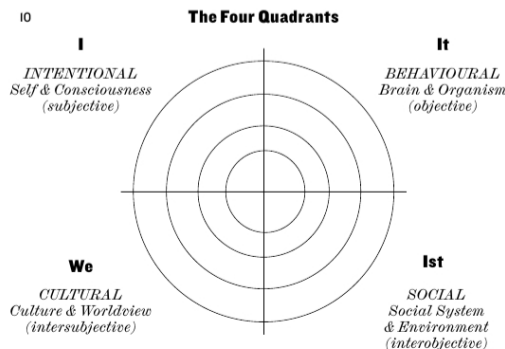
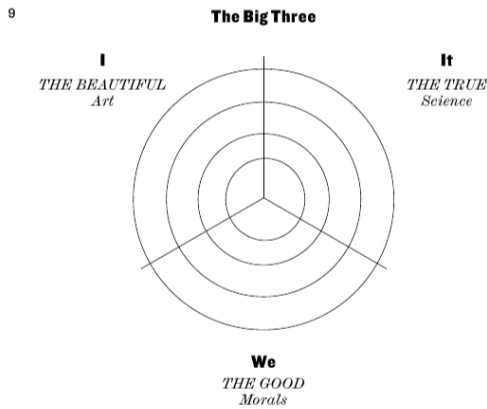
Objective reality explored by reductive analysis dissolved the sense of intellectual and experiential connections and relationships between things, and even between people. This led inevitably to the fragmentation of the world into isolated objects, as evidenced by the buildings in the modern city, to social atomisation, the rise of individualism and erosion of community – and again to the reduction of the natural world and other people to resources to be exploited. Compounding this, detached observation privileges the distancing sense of sight, further eroding emotional and empathic engagement. Moreover, sight tends to emphasise surfaces at the expense of seeing into things, also eroding meaning, and is well exemplified in the emphasis on the facticity of the medium in modern art, in painting, for instance, on the picture plane and the materiality and visible working of the pigment.

Hugely pernicious is that in living with only an objective reality, we are excluded from this reality, reducing us to observers and consumers, alienating us and shutting us out of the world, giving rise to a widespread sense of not being at home in the world, of merely camping or picnicking on it. Such feelings are compounded by the notion that this is a meaningless and dead clockwork universe. Little wonder people care so little about the environment and wall themselves off from reality and the world with addictive behaviours, such as shopping and the accumulation of goodies, as well as with television, muzak, air-conditioning and tinted glass.

**Modernity's unsustainability**

Many cultures prior to modernity employed unsustainable practices. But they lacked the technological power to do much damage or it was only a single culture and its natural habitat that were destroyed, the latter often to recover in time. But with modernity it is all cultures that are threatened, even those most remote from civilisation,

**8. The nested circles of the Great Chain of Being that represents the worldview of all pre-modern cultures 9 & 10. The Big Three correlated with the four quadrants 11. The Great Nest of Being as correlated with levels and their terms in the different religious traditions. Diagram derived from one by Brad Reynolds**





of perspectives repressed by the hegemonic, masculinist, instrumental views of rational scientific materialism. Two were particularly important, the voices of the colonised and those of women. Both announced ways the left-quadrant, interior realms were repressed by right-quadrant rationality. Initially the response was ‘to just be reasonable, or rational’ so denying feelings – of resentment, anger, injustice – accumulated from collective history and personal experience. Patronising rationality is a pervasive modern form of violence, the velvet glove hiding modern forms of barbarity, whether the victims were the colonised, women, nature or manmade heritage. (Women writers had also first alerted us to two other major forms of destruction wrought by right-quadrant rationality: Rachel Carson to nature in *Silent Spring* and Jane Jacobs to the city in *The Death and Life of Great American Cities*.) Also asserting the left-hand interior quadrants was increasing interest in philosophies attending to private experience: Existentialism, which expressed the alienation wrought by modernity; and, of greater long-term consequence, the phenomenology of thinkers such as Martin Heidegger, Maurice Merleau-Ponty and Gaston Bachelard.

Besides, culturally, modernity was doomed to failure, for reasons other than the devaluing of culture and the inner subjective worlds it speaks to and develops. As the concept of the Great Chain of Being makes clear, all pre-modern cultures are rooted – or perhaps, as more consistent with the diagram, wrapped – in a religious or spiritual worldview. Once reason had brought about Nietzsche’s ‘Death of God’, modernity was robbed of this deep wellspring, and art had to step into its place. This led to great flowerings of art right up to the early modern artists and writers of the first half of the 20th century. But art alone cannot underpin culture, especially when cut off from the history of culture, and so became progressively trivial.<sup>8</sup>

A clear, simple and useful understanding of postmodernism is as the re-emergence of the repressed flipside of modernity, the pendulum having swung too far in the opposite extreme from modernity’s objective reality (right quadrants only) to posit all realities as arbitrary (left quadrants only), at best consensual constructs we can momentarily agree on. Hence postmodernity’s ultra-relativist stances: all ideas and opinions are equally valuable – and challenging anybody’s provokes aggressive narcissistic regression. Its great weakness is less in stressing the left quadrants than its lack of any grounding. It rejects the right quadrants (even science is just another narrative) and the deep subjective with its archetypal layers of the left quadrants, as revealed in depth psychology – as well as, Wilber would say, the universals found in higher levels of spiritual development.

Historically, postmodernism is an important corrective to modernity. Sensitive to the values of the LL quadrant, it lacks the latter’s destructive drive and is more conservationist towards the built and natural environment. It also highlights, for instance, the importance of context in determining validity and value, and gives space to multiple voices and viewpoints so eroding the simplistic certainties of modernity and

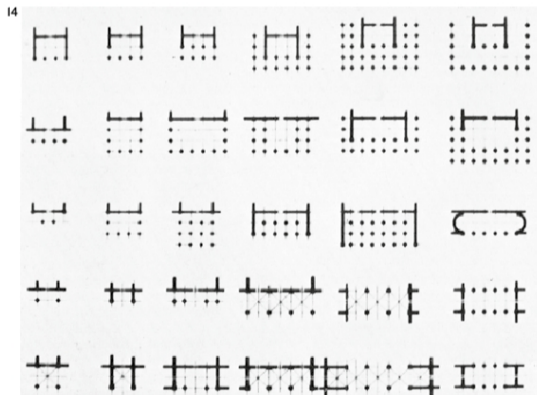
## ‘Modern architecture and urbanism created the city of doing as opposed to the city of being, where different roles are played out in different places’

facilitating the transition to the next epoch. But it is a transitional phase and not the next long-term paradigm. Moreover, postmodern thinking is now a serious liability. Rejecting hierarchies, it cannot prioritise; rejecting grand narratives and big picture thinking, it lacks much-needed perspective, so blocking consideration of and action on critically urgent issues. After all, evolution and ecology, sustainability and the new visions emerging from science, such as that of the cosmic unfolding, are all very grand narratives.

Even the tolerant relativism that is part of its ‘caring and sharing’ ethos is problematic, leading to endless discussions and further frustrating any effective action. So while academe and the civil service are full of postmodernists, some businesses use psychometric testing to screen them out from applicants. The lingering tenacity of postmodern thought, particularly in academe, is exactly analogous to Scholasticism at the close of the Middle Ages, arguing angels dancing on pinheads and oblivious to the burgeoning Renaissance. Even the urgency of global warming has failed to break postmodernism’s dalliance with frivolous theory. Nor, curiously has the financial crisis: as slippery constructs ungrounded in larger realities there is little to choose between bankers’ derivatives and the writings of Jacques Derrida.

### Architectural consequences

So how are the differing notions of reality that underpin modernity and postmodernity reflected in the architecture of each era? The settlements and cities of the pre-modern world clearly convey the Great Chain of Being’s sense of organic wholeness. Architecture being, rightly, a relatively conservative pursuit, it would take centuries before the built environment fragmented in the extreme manner associated with the 20th century, as is entirely consistent with modernity’s notion of an objective reality and the prioritising of reason. The progression of styles from the Renaissance onwards can be seen as series of attempts to reassert some notion of the rational, with less rational interludes. Thus with Renaissance Humanism, mankind whose reason had unravelled the mechanics of God’s universe, was elevated to the status of ‘Man the Measure’ at the centre of an architecture of controlled composition and harmonious rationalised proportion. Later, Neo-classicism, reacting against the ‘illusionism’ of Baroque with classical reverence for ‘truth and reason’, reasserted a more mechanically rational order, particularly in JNL Durand’s modularised classical components disciplined by mechanical grids. Retrospectively, this architecture came to be known as



**12. Renaissance Humanism expressed in architecture. The Pazzi Chapel, Florence, by Filippo Brunelleschi**  
**13. Neo-classical reworking of Rome's Pantheon by Thomas**

**Jefferson at the University of Virginia**  
**14. JNL Durand's mechanically modular Neo-classicism, showing variations on themes with modular components disciplined by grids**

Structural-Rationalism and its ideals were to influence proto-modernists such as Auguste Perret. And although Neo-Gothic was a Romantic reaction against the rationality of Neo-classicism, it too asserted its own form of structural-rationalism in truth to materials and honestly expressed structure.

It was only in the Heroic Period and the International Style that modern architecture exactly exemplified the modern paradigm. The erosion of intellectual and experiential connections accompanying the notion of an objective reality led to buildings as freestanding objects shaped around their internal workings and constructional assembly. Such buildings do not respond to context, local culture or even climate. They also neither contain nor positively shape urban space so that cities fragment into a collection of isolated object buildings. Privileging the right quadrants reduced the complexities of dwelling – a word resonant with left-quadrant psychic experience and meaning – to mere function, behaviour understood by detached observation. Attention went on what could be measured – ergonomics, furniture placement, space to circulate – at the expense of what is more difficult to measure, such as how the spaces between buildings are used – hence the many housing schemes with good dwelling units and dangerously undefined public space that soon became no-go areas.

Suppressed were elements that conveyed meaning and connection to the long narratives of culture and history, such as familiar rhetorical devices (pilasters, ornament and so on), and those that suggested the human body (like columns and vertical windows), and which helped people relate to the buildings. Privileging sight over the other senses further deprived the buildings of any experiential richness, leading to the insubstantial thinness and featureless flatness of modern construction, its lack of hapticity, sensual materiality and detail that might engage the body and hand. Maybe worst, the rhetoric of utilitarian economy and efficiency was lapped up by speculators and government agencies who used it to justify the most squalidly mean-spirited, lowest-common-denominator construction imaginable, much of which quickly turned into dirty and dangerous slums. All this is profoundly dehumanising, yet initially mistaken for the opposite.

There are psychic costs to such buildings and the faceless, placeless cities they create. People find them alienating and do not feel fully at home in them, although this was dismissed as irrational nostalgia. But it was rationality taken to an extreme that became irrational, just as efficiency taken to a narrow extreme became very inefficient in other ways. The fragmented city also fragmented communities and psychic lives. Modern architecture and urbanism created the 'city of doing' as opposed to the 'city of being', a city where different roles are played out in different places, such as employee at work, parent at home, fan at the stadium, and commuter who traverses the spatial and experiential void in between. But we only know ourselves to the degree that we are fully known by others, and with the dispersal of the city of doing few are known intimately for who they really are in all their roles and facets. Without this and the inevitable exposure of self-delusion we stay stuck in

a series of fantasy selves and miss out on the benefits to self-knowledge and psychological maturation. How different this is to the traditional city of being with its continuous and enveloping urban and social fabric in which you feel at home, and are continuously drawn into relation with your setting and its occupants, making it more difficult to live as fantasy selves.<sup>9</sup>

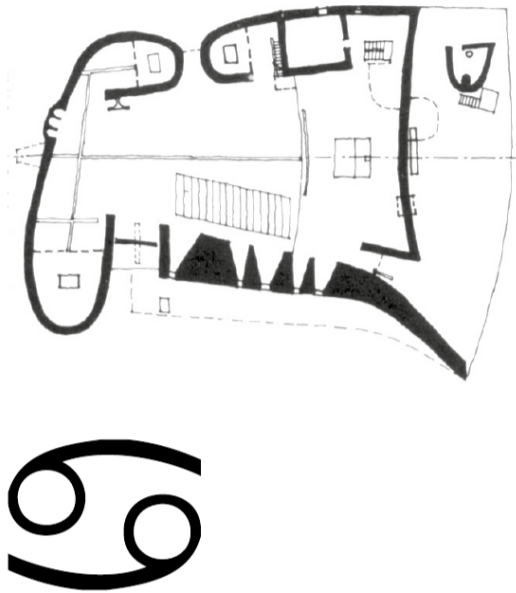
### Modernity and anti-modernity

Alert readers will protest that this characterisation of modern architecture is a caricature – although the characterisation of the resulting urban fabric, or rather lack of it, is generally all too true. Sadly, it is too, in some degree, of most modern buildings. But it is impossible for architects to entirely suppress their humanity and left-quadrant concerns (particularly UL aesthetic ones) inevitably crept in; the work of the best of today's mature architects, who remain true to many modern ideals while also fully aware of and addressing most of its failings, is quite different. But so too was the architecture of those few masters of early Modernism, particularly figures such as Frank Lloyd Wright and Le Corbusier (both, admittedly, disastrous urbanists). It is pertinent that we understand why.

An obvious reason is that these figures belonged to that last generation thoroughly educated in western classical culture. They knew their history – including of literature, art and architecture – the Bible, the Greek and other myths. A problem in writing about them today is that so much of this must be explained to better understand the works. With a figure like Le Corbusier, this requires explaining the occult: his later works are steeped in alchemical and astrological symbolism – although in this he was extreme rather than unique. Even his self-invented name, Le Corbusier has deliberate echoes with le corbeau (the crow) and so of the raven that is the avis hermetis of alchemy, transforming matter into spirit (a wonderful metaphor for the architect) and Corvus, the nearest celestial constellation to Libra, his birth sign. But then, remember the architect's training, the Masonic tradition had been largely about initiation into occult traditions. For figures like Le Corbusier, the occult was a distillate of ancient and historic wisdom and culture. Besides, the occult is about reading meaning into form and pattern – another marvellous metaphor for an architect. So when Le Corbusier said the roof of Ronchamp was inspired by a crab shell, he was actually alluding to the symbolism of Cancer (the Crab), the astrological sign of the mother principle. (The church is dedicated to Mary, Catholicism's mother archetype, and, for Le Corbusier, to his mother.) The glyph of Cancer (69 laid on its side), recurs in the plan as a tiny portion of the many levels of esoteric symbolism pervading this and other late Le Corbusier works. It was grappling with and synthesising such high and diverse ambitions, of all sorts not mentioned here, that gave these works a depth and intensity that you respond to even without knowing about such things.

For Wilber, today's postmodernism is the third wave of anti- or postmodernity. The first two were Romanticism and Idealism. Appalled by industrial modernity's destruction of the landscape and the dehumanising

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**15. The masters of Modernism did not conform to reductive notions of modern architecture. Le Corbusier's plan of Notre Dame du Haut, Ronchamp, has deliberate echoes of the astrological glyph of Cancer, shown below 16. Unlike the typical International Style building, Frank Lloyd Wright's Falling Water is embedded in nature and specifics of its site 17 & 18. Like many of Le Corbusier's late works, the Ronchamp chapel has deliberate echoes of Neolithic sacred constructions, including dolmen**





degradation of its labour force (William Blake's 'satanic mills'), as well as the right-quadrant crushing of the human spirit, Romanticism sought an alternative in the glorification of nature. In simplistic terms, Wilber's critique is that the Romantics mistook left-quadrant culture to be separate from and the antithesis of right- quadrant nature, although it had evolved from, and so is an intrinsic part of, a less reductionist vision of nature. Hence the Romantic worldview was fundamentally the same as that of scientific materialism. Instead of such dualism (another characteristic feature of modernity), they should have sought a unifying, left- and right-quadrant, vision of a culture that 'transcends and includes' nature. His critique of many current environmentalists is the same. He is more sympathetic of the Idealists, but the argument is not germane to our purposes here.

Although Wilber does not argue this, the greatest of the early modernist artists and architects can also be usefully seen as the third wave of anti- or postmodernity, as can, to a lesser extent, other figures. James Joyce, TS Eliot, Ezra Pound and Igor Stravinsky clearly do not conform to any reductive modern paradigm. The concerns of giants like Frank Lloyd Wright and Le Corbusier clearly fall into all four quadrants and in some ways they are as much anti-modern as moderns – most obviously post-Second World War Le Corbusier with his evocations of ancient architectures, including the Neolithic, and rough physicality that was for the whole body to identify with and not only the eye to glide over. Both architects revered nature and Wright was very much concerned with intensifying a sense of place while fitting into nature. But then both have deep roots in Romanticism, particularly John Ruskin; Frank Lloyd Wright was also influenced by American Transcendentalists such as Ralph Waldo Emerson, and Le Corbusier by various anthroposophical writers. So both were concerned with spiritual matters, as was Mies van der Rohe, as evidenced in a brilliant study by Thomas Beeby in the magazine *Threshold*,<sup>10</sup> who was rooted in German Romanticism, in the architecture of Karl Friedrich Schinkel and the painting of Caspar David Friedrich. In the latter's sacramental vision, every element is given equal weight and is equally pregnant with immanent spiritual significance; something similar applies with Mies' architecture in which components do not fall into classical hierarchies. (His comment 'God is in the details' was meant much more literally than is recognised.) Again, it is from such deep grounding in the left as well as right quadrants (all these architects were passionately interested in technology, materials, construction and so on) that comes the depth of their architecture that none can match today.

Current postmodernism in architecture was preceded by the call to loosen and expand modernism's reductive and abstract vocabulary in Robert Venturi's *Complexity and Contradiction in Architecture*, as well as by Pop Art's celebration of commercial vulgarity that inspired Learning from Las Vegas. Generally forgotten now was the return of the subject to architecture in the writings of Aldo van Eyck, evoking homecoming and the experiential dimensions of the threshold, as well as others. Important

too was an enthusiasm for the phenomenological writings of Gaston Bachelard, and only later did a few turn to some of the postmodern philosophers. Louis Kahn's example was also important both in talking about the initiating spirit of a design and in an architecture that evoked archaic roots.

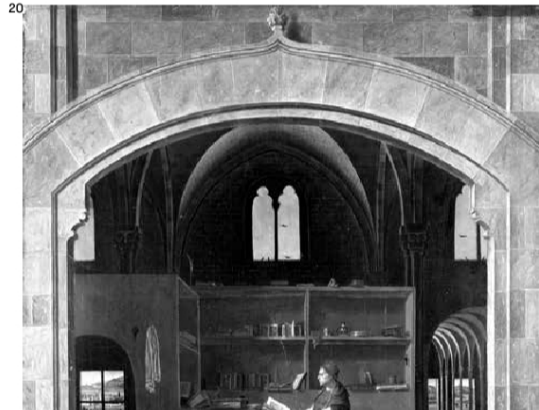
But somehow the promise latent in these sources never flowered. As with postmodernity in general, postmodern architecture is best understood in terms of the pendulum having swung too far to rest in the left quadrants exclusively, into an arbitrary reality – all is artifice – and ungrounded subjectivity. It expects to create its own reality in theories and concepts, scenarios and narratives – the attitude often seeming to be that the more spurious or obfuscatory these are, the better – which buildings then illustrate, or 'represent'. Thus what many think of as postmodernism, the collaging of historic motifs, or 'quotes', on what are otherwise banal modern buildings, so, (the theory goes) rendering them populist, is only one sort of postmodernism. The arch postmodernists are really figures like Eisenman and Tschumi, constantly elaborating and illustrating some theoretical position. Idea generally trumps reality, which is why many postmodern buildings seem built of crud (remember the plasterboard early works of Eisenman and Graves) and they are generally crude and unconvincing as construction. Even when well made, materiality and detail does not advance and help you engage with the design, although it might make for interesting episodes – as in some Koolhaas/OMA works, where these tend to erode rather than advance the originating concept. Much postmodern architecture has strong parallels with Conceptual Art, once you have got the idea there is nothing more to engage you. Postmodern architecture seems too silly an enterprise, some of its characteristic buildings too ineptly preposterous, to go on much longer. That is still persists reflects the pernicious influence of theorists incapable of architectural judgement as well as the confused state of architecture that prompted The Big Rethink.

Even this mere introduction to Integral theory sheds significant insights into modernity, postmodernity and their respective architectures. Implicit is that the Integral approach is among the most promising routes to resolving the impasses that currently stymie us; not least it could inform a left-quadrant, cultural vision properly grounded in right-quadrant empirical realities inspiring enough to motivate effective collective action. This culture will not be the antithesis of nature, as assumed by the Romantics, but rather will transcend and include nature from which it emerged as part of evolution. Admittedly the notion that the noosphere, the realm of mind and culture, transcends and includes the biosphere, the realm of nature, is mind boggling on first acquaintance, and inflammatory to 'deep ecologists'. But gaining such insights is the benefit of pursuing Integral theory further than here.

The AQAL diagram also helps gain critical leverage to assess the proliferation of pluralist approaches in current architecture. The best current work, as suggested in the first of these essays, is the mature modernism of mature professionals. Still inspired by the early Modernist greats and acknowledging the criticisms of postmodernity,

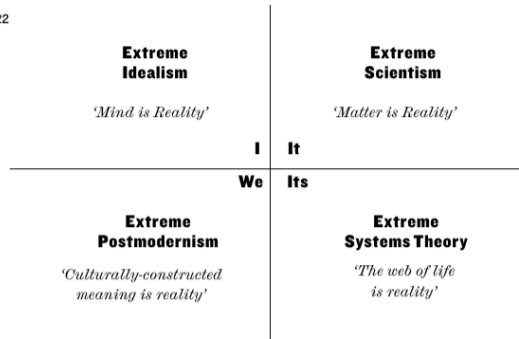


**19. Plocek House by Michael Graves is typical of much postmodern architecture, historicist or not, in elevating idea or image over reality and so being cruddy in materiality**  
**20. A painting by Caspar David Friedrich in which each twig is given equal sacramental emphasis. Something similar is found in Mies van der Rohe's work, and is clear in some of his perspective drawings**  
**21. Altes Museum, Berlin, by Karl Friedrich Schinkel, a Romantic Neo-classical architect who inspired Mies**  
**22. As modernity draws to a close, the differentiation of the Big Three has become extreme dissociation into exclusivist, near fundamentalist positions, including the quadrant absolutisms shown here. Postmodern theory and architecture are confined to the LL quadrant, much rhetoric and writing about ecology to the LR, reductionist Scientism of the sort associated with Richard Dawkins in the UR and New Age thinking to the UL**



**Picture credits**  
 12. Gryffindor  
 13. Aaron Josephson  
 16. Chris Spike  
 17. Grace Smith  
 18. John Lord  
 19. University of Virginia

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it matches right-quadrant expertise with left-quadrant concerns and sensitivity. The architecture selectively exploits available technology, is sensitive to history and context, refined in form and detail, and embraces the green agenda. The Modernist masters who would drool with envy at the technical expertise, the range of materials and new technologies now available, and the formal and constructional refinement achieved. But however fine they are, these buildings also lack the depth of the technically cruder buildings of the earlier masters, for reasons already explained. None can sustain the critical exegesis scholars apply to works of Wright, Le Corbusier, Mies and Kahn. Yet if less compelling as artworks, they are much better buildings.

In contrast to these architects, most others draw in a too exclusive and unbalanced a manner from either the right or left quadrants. Many still churn out squalidly mean-spirited, utilitarian buildings that exactly conform to the reductive modern paradigm. Others, who also limit themselves to the right quadrants, exaggerate a single aspect of modern architecture, sometimes intensifying what was pathological. They thus exemplify MacLuhans notion of the sunset effects, last fling flare-ups of a passing

phase. Minimalists, for instance, take abstract form yet further in pursuit of an evanescent immateriality or assertive materiality. The creepy deadness (and often the stilted interior arrangements) unconsciously reflects Newton's now waning, dead and meaningless, clockwork universe – exemplifying another MacLuhans idea: that art makes visible the environment (or paradigm) of the previous era. Other obvious caricatures of right-quadrant modernism are High-Tech, the fetishisation of industrial technology (the previous era, again) icons and Parametricism. The latter two take the sculptural excess that was an occasional feature of modernism to new levels of meaningless autism, as facilitated by the computer. As stand-alone objects the buildings resulting from all these approaches are fundamentally anti-urban, neither defining nor articulating urban space, unable to relate to other buildings, and defying any relationship with humankind. They are not merely sunset effects, but utterly irrelevant to the future, not least for being exclusively right quadrant.

Similarly irrelevant are the left quadrant extremists, the postmodernists whose works illustrate spurious and ungrounded theories, scenarios, concepts, datascares or whatever. How these have got away with it for so long is a tribute to the power of celebrity culture and uncritical gullibility and mind-warping theory. But current financial stringency might put paid to such foolishness.

Next month we will start to use the AQAL diagram as a framework to ensure comprehensiveness in our deliberations. In these we will redefine the purposes of creativity, design and architecture and explore what an architecture of the emergent era shaped by due consideration to all four quadrants might be. This will be founded in a more complete notion of reality than underpinned both modernity and postmodernity, while transcending and including lessons from both, so as to be relevant to a very different future and a much enhanced view of what constitutes the good life and full humanity.

**We invite readers to join the debate. Send your comments and observations on The Big Rethink to areditorial@emap.com**

1. This table was based on that in Charlene Spretnak, *The Resurgence of the Real: Body, Nature and Place in a Hypermodern World*, Addison-Wesley, Boston, 1997.  
 2. See Richard Tarnas, *Cosmos and Psyche*, Viking, London and New York, 2006.  
 3. Jean Gebser, *The Ever-Present Origin*, University of Ohio Press, 1985. German original, *Ursprung und Gegenwart*, 1949. Although this book, his only work translated into English, has influenced key thinkers, it is a far from easy read.

Unfortunately the best studies of Gebser's thought, such as those by Georg Feuerstein, are currently out of print.  
 4. See Don Beck and Christopher Cowan, *Spiral Dynamics: Mastering Values, Leadership and Change*, Blackwell, London, 1996.  
 5. See Ken Wilber, *Sez, Ecology, Spirituality*, Shambala Publications, Boston and London, 1995. For a more accessible approach to the contents of this book see Ken Wilber, *A Brief History of Everything*, Shambala Publications, Boston and London, 2000.

6. Both the availability of books and resurgence of reason led to an increase in linear thinking and left brain dominance (something different to the left quadrants), key characteristics of modernity. Leonard Shlain, for instance, in *The Alphabet and the Goddess*, Penguin, London, 1999, shows that women suffered huge setbacks in history as two key innovations prompted increases in linear left-brain thinking: when script was invented in early Mesopotamian cities, at the beginning of civilisation; and then with the witch burnings

that followed the introduction of printing, at the beginning of modernity. (Marshall McLuhan, who inspired Shlain's argument, had predicted prior to this that because of television and the general surfeit of images, both perceived in less left-brain dominant modes, the rise of feminism was inevitable.) Iain McGilchrist, in his utterly brilliant *The Master and His Emissary*, probably the best book on the evolution and character of modernity, also sees it as the product of left brain dominance taken to a pathological extreme.

See Iain McGilchrist, *The Master and His Emissary*, Yale University Press, London and New Haven, 2009.  
 7. See Charlene Spretnak, *Relational Reality*, Green Horizon Books, Topsham, Maine, US, 2011.  
 8. See Roger Scruton, *Modern Culture*, Continuum, London and New York, 2005.  
 9. A classic book on this topic is Richard Sennett, *The Uses of Disorder*, Knopf, New York, 1970  
 10. See Thomas Beeby, in *Threshold: Journal of the School of Architecture*, University of Illinois at Chicago.





# THE BIG RETHINK PART 4: THE PURPOSES OF ARCHITECTURE

**I. Indian stepped water tank, designed for rising and falling water levels, is a powerful symbolic and functional focus of communal life**

In common with many aspects of modern civilisation, architecture has lost its enriching sense of purpose, leading to toxic anomie. In seeking to restore architecture's rightful place in culture, as a truly qualitatively and quantifiably sustainable art, we must look deeper and redefine what it is to be human and what sort of lives we want to lead. In this, Integral theory offers a means of rebalancing and reconnecting with deeper transcendent meaning and purpose

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Marshall McLuhan explained our unawareness of how much we are shaped by our communications media by saying 'Whoever discovered water, it wasn't the fish.'

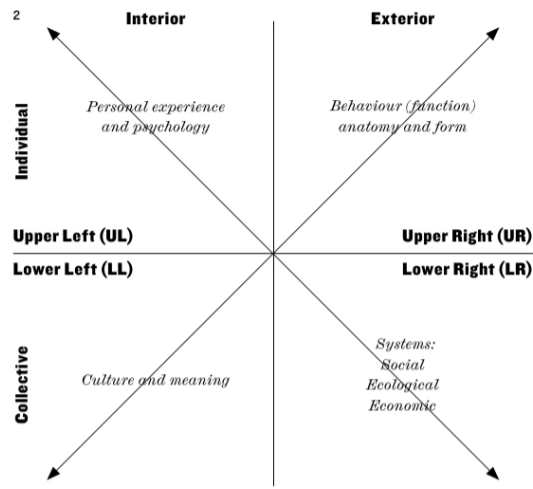
Something similar applies to architecture. Our relationships with it are so intimate, so fundamental and all-pervasive as the settings of our lives, that we do not fully register how much they sustain and shape us. Thus architecture is not a regular topic of normal conversation as are the other arts, an omission that is not fully explained by recognising that it is not only an art. Even architects underestimate how important architecture is and fail to grasp some of its fundamental purposes.

The inherent difficulties of knowing the purposes of architecture, arising from its ubiquity, have been compounded by the reductive and unbalanced views of reality, and so also of architecture, characteristic of modernity and postmodernity. In the confusing aftermath of these, any useful vision of a more complete architecture needs to be underpinned by a reassessment of its very purposes – the subject of this essay.

Of course, it is not only architecture that has lost an enriching sense of purpose. So has almost every aspect of modern civilisation. Among the clearest examples of loss or distortion of purpose is the shift from agriculture to agri-business. Just the inclusion of culture in the former word is profoundly telling. It implies that agriculture is much more than a means to produce wholesome food; it also encompasses a whole way of living on and with the land. Beyond tending the land in a spirit of husbandry and passing it on enhanced to future generations, as in the long temporal frame of culture, it includes such things as rituals of gratitude and reverence in autumnal harvest fairs, Thanksgiving services and so on. In contrast, agri-business is simply about maximising quick, short-term profits for absent owners and shareholders without caring how un-nutritious, and even toxically polluted, the food produced may be, or any regard for the concomitant destruction of soil quality, biodiversity, wildlife and rural communities.

Similarly healthcare is increasingly about dispensing drugs to maximise the profits of pharmaceutical companies and not about what would keep us truly healthy without prohibitive expenditure, such as low cost alternatives without toxic side effects, as well as nutrition, exercise, emotional support and so on. Almost everything in our late-modern world is more about making money for corporations and their shareholders rather than providing services in anything approaching an efficient, fair and equitable manner that is good for physical, mental, social and planetary health. Focusing on the quantitative and objective to the exclusion of the qualitative and subjective – the realm of meaning, morals and empathic connection – we have utterly lost our way. But let's return to architecture, which has lost its way for similar reasons, and to expanding our understanding of that.

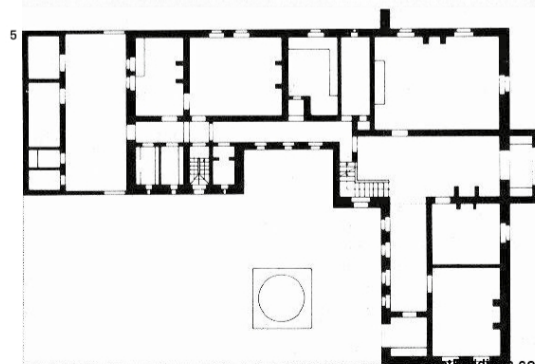
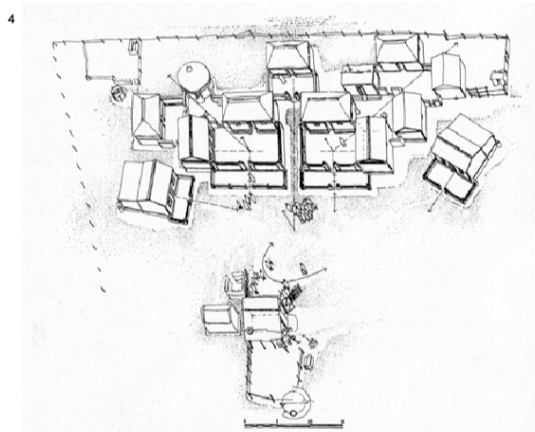
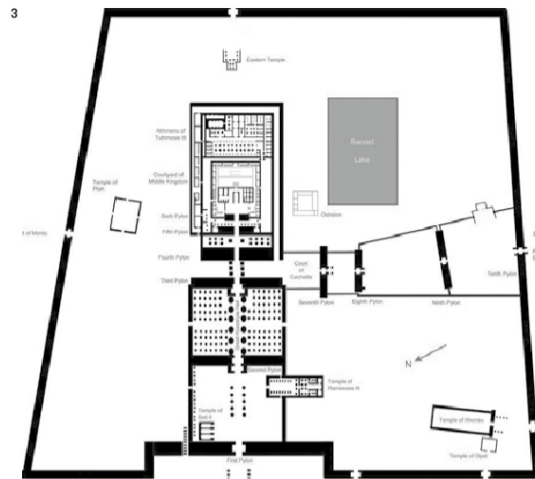
Last month's essay introduced Integral theory, in particular the AQAL (All Quadrant All Level) diagram, to explain aspects of modernity and postmodernity. The former over-emphasises objective and quantifiable



knowledge (the right quadrants of the AQAL diagram), at the expense of the subjective and qualitative (the left quadrants), including personal experience (Upper Left (UL)) and collective meanings (Lower Left (LL)). Much modern thought even assumed that things could be understood by reductive analysis that ignored the web of relationships that constitute context. In architecture this led to stand-alone object buildings that could not aggregate into satisfactory urban fabric, and so to energy-profligate fragmented and dispersed cities that are major contributors to modernity's assault on the biosphere and community life. Systems thinking (or systems holism) puts all this in context and helps us to understand the problem, but in acknowledging only the objective, right quadrants cannot develop really effective solutions. The fundamental purposes of modern architecture are thus limited to such right quadrant concerns as shelter, security, function and so on – all of them important, but not enough for a truly sustainable architecture because they ignore what sustains us psychologically and culturally.

By contrast, postmodernity overemphasises the subjective, particularly signs and meanings (part of the LL realm of culture). But it tends to be stuck at a superficial level so ignoring the more universal drives and phenomena of the deep subjective, which includes the unconscious, the greater portion of the mind with its supposedly universal archetypes and the collective unconscious. Because it is not properly grounded in either the right or left quadrants, postmodernism sees all realities as arbitrary, mere social constructs. For postmodernism, architecture might have to deal with such mundane matters as function and shelter but is much more about representation, about conveying messages to be read (semiotics) and illustrating spurious theories (critical architecture). These too are part of any complete architecture, but only part. And the relativist postmodern mindset is incapable of undertaking the determined actions now urgently required to progress to sustainability.

- 2. Simplified AQAL (All Quadrant, All Level) diagram**
- 3. Plan of Egyptian temple complex shaped around ritual**
- 4. Plan of N'debele village surveyed by Peter Rich, organised around social and gender hierarchies**
- 5. Plan of Red House by Philip Webb: complex compartmentation of Victorian home**



As was implicit in last month's discussion, an effective way to move beyond the limits of modernity and postmodernity is to adopt an Integral 'four quadrant' approach. Giving equal attention to the objective, including the collective realm of systems (ecology, economics, technology and society), and the subjective, both of individual experience and collective meanings, it is particularly suited to architecture. Not least because to fulfil any promise of achieving sustainability we must still draw extensively on the accumulating technical expertise of the right quadrants, while delivering the psychic satisfactions that come from attending to the left quadrants. Without the promise of such deep satisfactions as a truly meaningful life lived in accord with one's most personal values and in connection with others and nature, and of having ample opportunities to fulfil all one's potential, we will lack the will and commitment to see through the objective, and undeniably demanding, challenges ahead. We will also lack that sense of inner peace, that harmony with our deepest beliefs and values, which might bring to an end the dissatisfaction and restlessness that come from an unfulfilling life (Thoreau's 'lives of quiet desperation') and fuel our destructive tendencies. And part of the corresponding reassurance of 'all being right with the world' will come from knowing that our lives and built environment are shaped in accord with the best knowledge available, and that by embracing this we participate in the great adventure of our time.

#### The psychological necessity for architecture

So how would we redefine the most fundamental purpose of architecture to suit our times? This redefinition should acknowledge the developmental or evolutionary views that are in the ascendant, counterbalancing both the over-emphasis on the right quadrants that has dominated for so long, and the shallowness of postmodernity's foray into the left quadrants. It should also recognise that development in one quadrant (an increase in level) is matched by corresponding development in the other quadrants. Moreover, we need to remember that architecture began not only with creating shelter (Upper Right (UR)) but also with ritual – the spatial arrangement of collective acts that forge community and heighten experience and meaning (LL). Such rituals range from those as mundane as telling stories around a campfire to once-in-a-lifetime pilgrimages along a set route to a sacred spot, the vestiges of which remain in gathering around the dining table and processing down a church nave.

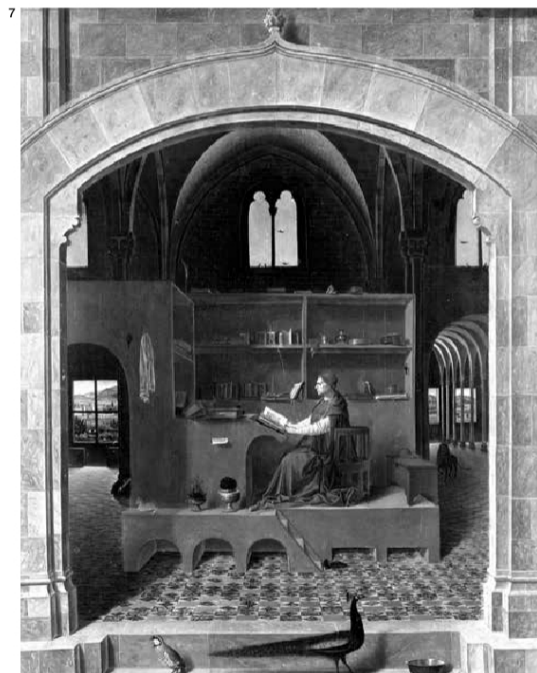
A conspicuous feature of the architecture of the last several millennia, after the prolonged period of relative stasis we refer to as prehistory, is that it has become ever more complex and differentiated. This is seen in the progression from single room huts to multi-room mansions as well as from simple gatherings of huts to villages arranged so that the huts of the chief and his wives have locations distinct from the others. It continues through towns where temple/church and palace/castle stand out from the surrounding houses, to great cities whose many diverse functions and institutions occupy a range of building types that both accommodate and communicate their contents.

What drives this compulsion to create buildings and cities of increasing complexity? Why have we progressively separated out cooking from dining, dining from living, living from sleeping and so on? Purely rational and functional explanations (right quadrant) can only be part of the story; psychological and cultural drives (left quadrant) must be involved too, probably largely unconscious ones. We have progressively sliced up and compartmentalised (in distinct rooms, for instance) what would otherwise be the continuities of experience so that we can focus on and intensify each isolated experience (UL) – originally perhaps because then free from distractions and danger. We also deploy those compartmentalised experiences in ordered relationships in space to further intensify and give additional meaning (LL) to these experiences. So secular gathering places (whether living room or piazza) might be placed centrally and an especially sacred function be set at a distance to be reached through processional pilgrimage during which anticipation and the sense of the sacred is intensified.

This compartmentalisation, differentiation and intensification are essential to how we have elaborated our many cultures – and equally to how we have created ourselves as complex acculturated persons. By separating out and dispersing our experiences spatially we also project and map our psyches in space so that we may then explore and progressively elaborate them. Thus one of the very most fundamental purposes of architecture, one underestimated by most architects, is as a means by which we create ourselves. Arguably, only language plays as important a role as architecture in driving the cultural evolution by which we have created ourselves.

But it goes much further than this: by projecting our psyches into space in this manner we not only create ourselves but also surroundings to which we sense a strong relationship so we feel at home in a world from which self-consciousness and awareness of death somewhat displaces us. This is taken to an extreme in some sacred precincts or structures that are shaped as a microcosm, a miniaturisation of the cosmos. Its parts are surrogates for celestial bodies equated with psychic drives (as in astrology, for instance) so that, aided by ritual and religious ceremony, the cosmos is internalised in the psyche, which in turn is projected into the cosmos as our home too. In all of this we are supported by the narratives and symbols, as well as rituals, that are essential parts of any culture that helps us be at home in our immediate world and the larger universe as well as the long span of time, both mythic and historical.

This is an area where modernity conspicuously failed. It promised freedom for self-realisation unconstrained by culture, community, place and history. Yet without these we are not at home in the world, hence the pervasive alienation, and the atomisation of communities into lonely individuals, characteristic of modernity. We now understand that self-realisation needs the support of and sense of belonging to this larger context. Without it we are reduced to consumers eating up the planet as we defend our lonely selves from a meaningless world by walling ourselves off with consumer goods, entertainment and other addictions. Indeed, there are strands in modern



**6. Trafalgar Square, London: a secular gathering place**

**7. *St Jerome in his Study* by Antonello da Mossina, 1529; space compartmented to serve function and intensify experience**

**8. Aerial photograph of Bern, Switzerland: a medieval city in which a few civic monuments stand out from the organic huddle of houses**



architecture that seek an accommodation with nature as an extension of the home, as when the boundaries between house and garden are blurred, or views of the landscape are framed as intrinsic to the architecture. Beautiful as the results often are, however, this is psychologically relatively superficial and often, as is modernity's habitual mode of wresting a home from the world, backed by brute technological force, at minimum in profligate energy expenditure.

#### **Who do we want to be?**

Thus from a developmental or evolutionary perspective, such as characterises much 21st-century thought, architecture is more than a mere reflection and record of who we are. Instead a fundamental purpose, probably the fundamental purpose, of architecture is as a means for creating our cultures and ourselves. As these essays have been arguing, it is now time to redefine and reorient our architecture, to create a much more complete vision of what it is, one adequate and relevant to the challenges of today. In this process, one of the most pressing questions to ask in these historically pivotal times is: who do we truly want to be? Or, in other words: what would be our vision of being fully human?

Each major developmental stage humankind has passed through has answered these questions differently. If the Middle Ages saw piety and obeying God's will to be the ultimate human virtues, then modernity prized rationality and the tangibly measurable – an inadequate vision that eventually reduced us to irrationally compulsive consumers and brought us to the brink of catastrophe. Yet this same modernity has also bequeathed us a vast amount of relevant knowledge, even if split between many fields, to draw upon and synthesise in answering the questions of who we want to be, or what it is to be fully human, as well as powerful psychological techniques to help realise this vision.

The urgent need to progress towards sustainability makes the redefinition of who we want to be especially pressing. Much of the world – thanks to the power of Hollywood and advertising as well as the economic, political and military dominance of the USA – wants some version of the American dream. But the planet is already struggling to support those enjoying the average American standard of living. Global population is projected to rise from its present seven billion to nine billion by mid-century. But if the number of Chinese, Indians, Brazilians and so on that will become middle class and aspire to an American standard of living is factored in the impact will be equivalent to today's population expanding to several tens of billions.<sup>1</sup> Yet it is not only the profligate consumption of this lifestyle that is problematic; it is also that it brings so little true satisfaction, so fuelling yet more desperate consumption.

Hence the eco-theologian and cultural historian Thomas Berry wrote that progress towards sustainability depends on nothing less than redefining what it is to be human.<sup>2</sup> By this he implies that it will also be necessary to rethink all our relationships with each other and the rest of nature, including our patterns of consumption, not only to be more benign in our impacts on the planet but also to

**'Architecture is more than a mere record or reflection of who we are. Instead, the fundamental purpose of architecture is as a means for creating our cultures and ourselves'**

bring much greater levels of meaning and satisfaction. In his memorable expression 'the universe is a communion of subjects and not a collection of objects', the latter is the archetypal modern worldview, which is exclusively right quadrant, while the former also returns due emphasis to the left quadrants.

Determining who we want to be, or what it would now mean to be fully human, could be properly understood as a design problem. And if the planet cannot support all of us living in accord with this vision of who we want to be, then the redefinition is still too superficial. A deeply satisfying life in which we can become fully ourselves, living in accord with our deepest values that are so difficult to honour in contemporary cities and suburbs, could be achieved without overtaxing the earth's resources in the way our current vision of the good life does. Only when we have some clarity on who we want to be can we think about what kind of culture – what underlying vision of reality, what narratives and social rituals – and what sort of environment will support and facilitate the emergence of such a vision, so that we may then design accordingly. Another great legacy from modernity is the huge battery of techniques – ranging through psychotherapy, energy psychology, coaching, management processes and so on – to transform ourselves and shed our conditionings so as to take some control of our destiny and live in accord with a vision that all this knowledge obliges us to apply in the urgent quest for sustainability.

Redefining who we want to be, as well as regenerating our culture and redesigning our environment to help bring this about, is probably the most urgent, epic and exciting challenge of our times. But this must be a collaborative exercise to which many will add their voices and creative contributions. We will return to some of these themes in later essays, but here it is appropriate to merely raise these issues and move on, leaving them for readers to contemplate and contribute to. The rest of this essay is about further purposes of architecture, but first we are now also in a position to briefly clarify some other important matters.

#### **Redefining design and creativity**

So, if a fundamental purpose of architecture, and the larger culture it is part of, is to help us create ourselves in line with an evolving vision of who we want to be, then how would we redefine the purpose of design? Clearly it would be much more than mere problem solving, let alone the branding exercise or lubricant for consumerism it has largely become. Instead design should become humankind's way of deliberately participating in the constant creative emergence that is evolution – natural, cultural and personal. Note how different this is from modernity's hubristic drive to control and conquer the

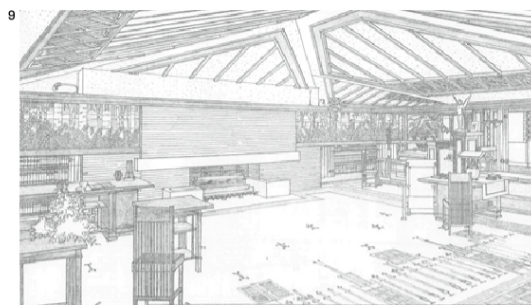
world for a humanity that is separate from it. Instead we must seek a purposively designed culture that has emerged from and includes nature.

And what then would human creativity be? Creativity ceases to be about self-expression. Instead it involves understanding (through research, analysis, intuition and so on) and then facilitating these various larger processes of creative emergence that constitute the many levels of evolution. Besides transcending self-expression, creativity then escapes the current frivolous obsessions with form and theory – a symptom of how lost we are and lacking in vision as to the purposes of architecture – to be about expanding the world of human possibility so that we can become more of who we aspire to be in our emerging view of what it is to be fully human.

#### Quadrant by quadrant

With all this in mind, let's examine briefly some of the other purposes of architecture, using the quadrants to ensure a degree of balance and comprehensiveness. Only a few of those qualities relating to the right quadrants will be mentioned, and none discussed in detail. This is because after 400 or so years of modernity and 100 years of modern architecture, today's architects (aided by engineers and other consultants) have considerable expertise in these realms. Decidedly more purposes will be listed in relation to the left quadrants, where examples will also be cited of how these might be fulfilled. Yet even here the listing of both the purposes and ways of fulfilling them is far from comprehensive. The examples are limited deliberately to be only enough to spark readers into thinking of many more purposes and ways of realising them for themselves. They will thus become active participants in The Big Rethink – and the AR looks forward to letters communicating the insights that arise.

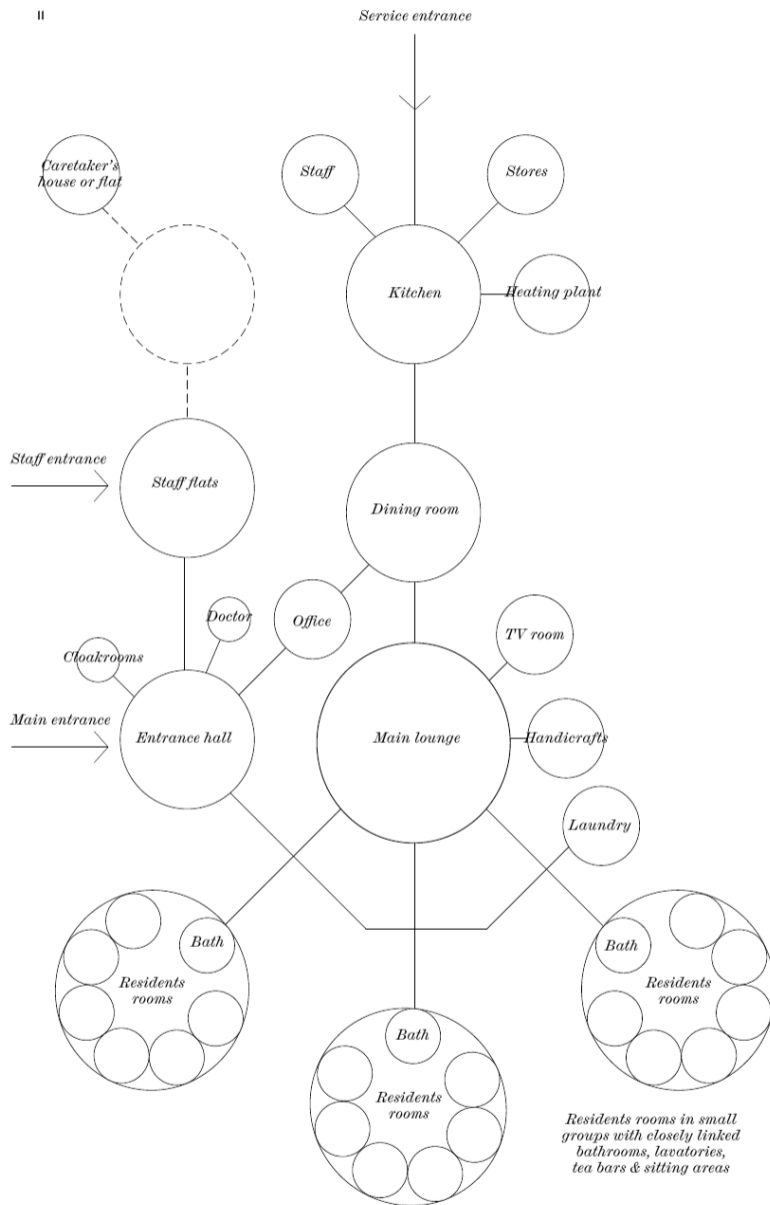
Past experience of engaging students and architects in this exercise has encouraged attempting such a participative approach. Some essays in this series are much abbreviated and simplified versions of lectures and exercises I've taught in master classes over the past decade or so. Starting with some movement and imagination exercises (devised using insights from neuro-linguistic programming (NLP)) to give an intensely vivid, visceral experience of how we project our psyches and map them in space, and then some to free the imagination, as much as a day is devoted to clarifying the purposes of architecture, quadrant by quadrant, and then listing and sketching ways of fulfilling these. With the class broken into small groups, each of these will be asked to brainstorm as many as 20 purposes within each quadrant and up to 10 design devices to realise each purpose – the best of them often satisfying more than one purpose. This long exercise has always stirred exceptionally excited participation, climaxing in the creation of a vast chart collating everybody's input. Even then, in some instances a few have continued the exercise through the night to come into class bleary-eyed the next morning. Generally, participants have reported that it is the single exercise that most expanded their understanding of the purposes and potentials of architecture as well as their personal design repertoires.



**9. The living room of Frank Lloyd Wright's Coonley House is dominated by the hearth, the symbolic focus of the home**  
**10. A village well: social focus for drawing water, washing clothes and watering animals**  
**11. The functional flow diagram of a care home from The New Metric Handbook**

While the AQAL diagram can be used in this manner, attending individually to each of the four quadrants so ensuring both comprehensiveness and balance, it should also be remembered that it highlights relationships between quadrants. For instance, a key concern of design today is the highly efficient use of resources, particularly of non-renewable materials and energy, and the recycling of these. The resources themselves and the logistics of obtaining and transporting them, paying for and recycling them, all belong to the LR quadrant of systems and flows. But the aspects of a building designed for efficient resource use best belong to the UR quadrant.

Yet a major reason our use of resources is so profligate is because we no longer revere the physical world of matter and energy. Cooling water splashing in a patio fountain of a house in a hot, arid region, like the warming fire in the hearth, is a semi-sacred communal focus of symbolic potency, all LL. How much more aware of these we are than when simply turning on a tap or the central heating, and even more so if the water is gathered at a distant well and the firewood from the forest in what is again usually a social ritual that strengthens communal bonds and punctuates the day. But this lack of reverence is more than the product of convenience: it is also the direct consequence of modernity's denial of value beyond the utilitarian to the nonhuman realm. Modernity's notion that such things as consciousness and spirit are found only in humans diminishes our own consciousness and spirit, as summarised by Richard Tarnas in last month's essay.



Also, most concerns that may at first glance fit into one or two quadrants, when thought about more deeply have correlates in all. Thus a primary UR quadrant purpose is security. But as well as by robust construction and locks (UR), this is also ensured by social equity and stability as well as overlooking by neighbours (LL), and also by still-intact cultural taboos and customs (LL) that result in psychologically mature individuals (UL). And particularly with architecture, but generally too, it is sometimes difficult to separate the concerns of the upper right (the realm of individual behaviour and form) quadrant from those of the lower right (the realm of systems including social behaviour).

**Upper Right quadrant**

As already mentioned, purposes that clearly belong to the upper right are shelter, security and accommodating function. Modern architecture emphasised the last of these and at its best was sensitively attentive to function (as well as to ergonomics), which it accommodated in a wide range of ways, from being tightly tailored to (and so also constraining) optimal use, to abstractly gridded 'universal' space that provided flexibility by minimally constraining use. Functional purpose, as is reflected in the best plans of modern buildings (which will be discussed next month) was recognised to go beyond accommodating independent functions but also to relate them to each other and circulation patterns to promote the desired forms of interaction between these activities and prevent unwanted intrusions (hence attention to flow diagrams). It is further fulfilled by spaces of appropriate size and shape, orientation and aspect, acoustics and levels of light and ventilation. So the modulation of comfort conditions and external microclimates is also a prime purpose, which for energy efficiency is best served by passive means such as operable windows, adjustable shading devices, light shelves and so on. These purposes and the devices to achieve them are all obvious enough. But concentrating on them predominantly, as much modern architecture did, results in an aridly utilitarian architecture to which people do not relate at any depth. Even such obvious purposes as providing some richness of choice, most easily achieved by designing in contrasts – in size, light levels, accessibility, outlook, acoustics and so on – are often overlooked.

**Lower Right quadrant**

In the lower right quadrant, modern architecture recognises its purpose in serving social needs but tends to do so in a mechanically quantitative manner, still sometimes with monofunctional freestanding building types, and with little thought given to using and getting to and from these. Hence schools of differing size for different age groups might to be deployed within the appropriate maximum walking distance for their age group from the housing they serve, and a range of open spaces from small playgrounds to large playing fields would be similarly distributed. This is mechanistic modern rationality at its most reductive where purpose is reduced to quantitative allocation with minimal thought for anything else. Anybody who thinks this an exaggeration should look at a town-planning textbook from the 1950s.

Of the architectural purposes relevant to this quadrant, the most flagrantly neglected by modern architecture are the creation of satisfactory urban fabric and shaping the public realm. It seems almost incomprehensible that modern architecture failed to recognise as a fundamental purpose that buildings should aggregate into good urban fabric, and shape and shelter the public realm of streets, squares and other public space. Another purpose is animating this public realm by the way movement is channelled through it, the activities located adjacent and the articulation given by such things as the entrances and windows of the buildings lining the public realm. Modern architecture's slippery-sleek glazed facades promise transparency but instead sever relationships with the street, so that they neither arrest the flow of space nor create a sense of place. Besides framing public space, further architectural/urban design purposes are to create variety and hierarchy in the public realm so bringing experiential richness and legibility, and creating within its network locations that are functionally and symbolically appropriate to the different uses and institutions that make up the city (note that although the means are right quadrant many of the benefits are left quadrant).

Other LR systems that shape architecture are economics and ecology. Thus a common architectural purpose is to make money, whether blatantly in speculative developments or less so in treating houses as investments as much as homes. Purposes relevant to ecology would be to regenerate where necessary, and otherwise respect, local ecological and hydrological systems as well as harness ambient renewable energies, modulate microclimates, create wildlife corridors and so on. As with the upper right quadrant, this is all stuff architects are becoming increasingly good at and needs no further discussion here.

#### Lower Left quadrant

The lower left quadrant is where modernity and modern architecture have been particularly weak by devaluing culture and its shared meanings, often conveyed in myths and symbols that can be slippery with the ambiguities modernity distrusts. Modern architecture deliberately rejected the rhetorical devices and iconography of previous periods as irrelevant – as was entirely consistent with the larger paradigm of modernity. In the human sciences, the LR is the field of sociology, a relatively objective study of society – although the best sociologists draw also on such UR fields as psychology. The LL is that of anthropology, which, besides recording customs and so on, is concerned with inner worlds of mythic historic narratives, the subjective beliefs these inform, and how all these shape relationships with the community, place and the rest of creation. Culture's role is to locate us in a much expanded realm of space and time and it is modernity's undervaluing of culture that allows us to be so destructive towards the planet and our inherited manmade legacy.

Thus a prime architectural purpose that needs to be recovered is to be a metaphorical bridge across time and space. Architecture should root us in the past while looking confidently to the future, recognisably evoking tradition while also transforming its legacy and innovating

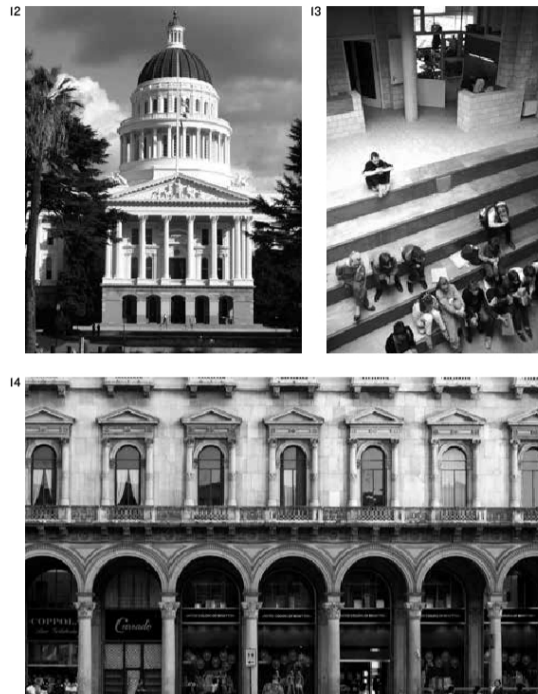
## 'The shaping of the public realm and the modulation of the transitions between public and private are important in encouraging social interaction'

to meet the demands of a very different future, while also cementing visual connections with its setting to draw the world around into relationship with it. This does not imply resurrecting the rhetorical motifs and iconography of the past. But it might imply that we need to evolve new rhetorical forms that resonate with the grand narratives emerging from our many sciences, helping us to find our place in an ever-evolving world and within rich webs of ecological and community relationships.

Somewhat related as a purpose is to invest buildings and urban fabric with distinct identities intrinsic to the local cultures, against or within which we may shape our personal identities. In less elevated terms, another architectural purpose is to help confer status on the institution it houses. Examples of how this could be easily done without recourse to obvious iconography are through such things as size, particularly the height of the building and ceiling heights within it; enlarged external openings (doors and windows) and pronounced frames around these; raising the main level so that it is approached by broad external stairs; and by location, siting the building on the top of a hill or terminating an axis of some sort. Such devices are not strictly functional, but they are abstract enough to be embraced even by modern architects. But to regenerate a vibrant culture we will need to go further and embrace some form of narrative and symbolism.

If the upper left realm is that of personal experience and individual psychology, the lower left is where much of this subjectivity is shaped, both by culture and in community interactions, and where these come together in such things as religious worship and more secular festivals rooted in local culture. It is within these interactions that character and self-knowledge are forged. So another key purpose of architecture is to set the stage for the slow formation of new communities and the preservation of existing ones. Here the shaping of the public realm and the modulation of the transitions between public and private are important in encouraging and defining apt forms of social interaction. For instance, the networks of both paved and green open spaces can be elaborated to suit a wide variety of uses and interwoven with each other in such a way as provides opportunities for casual meeting and spontaneous interaction, as well as places for more formalised forms of community engagement. In the past we depended on each other more, and met daily in places such as the street market and at the village well, so community was inevitable. Today we only have the supermarket and Starbucks, but the longing for and recognition of the benefits of community grows, demanding creative design interventions that might help stimulate its formation.

**12. State Capitol, Sacramento, California displays rhetorical motifs – dome, pediment and sculpture, colonnaded portico – to convey its civic importance**  
**13. Herman Hertzberger's Apollo schools in Amsterdam suggest multiple ways in which pupils may interact with and use them**  
**14. The arcade and aedicular windows interlock the interior and exterior space, helping to create a sense of place**



#### Upper Left quadrant

By creating a placeless world of thin, sleek abstract forms, much modern architecture is alienatingly difficult to relate to and impoverished in terms of the quality of experience it offers. These are major failings within the UL quadrant: the realm of personal experience, individual psychology, intentionality and direct aesthetic experience as unmediated by culture. But for all modernity's failings in this quadrant, it was always given some attention, if only at the level of trying to please the eye with elegant proportions, harmonious colours and now, in desperate fashion, with sleek curving forms (often clumsily executed) and jazzy syncopated rhythms. Mid-20th-century attempts to 'humanise' buildings with 'warm', 'natural' materials such as brick and wood also evidence UL concerns. Architects' discovery of phenomenology, starting with the writings of Gaston Bachelard and Martin Heidegger through to the current writings of Juhani Pallasmaa, show an increasing awareness of the importance of this quadrant and of modernity's failures in relation to it.

Obvious UL architectural purposes are thus to provide aesthetic pleasure and create beauty, and to assert order, coherence and legibility, all of which help us to relate to the built environment. Equally important, if less obvious, purposes are to create a sense of calm, stillness (or repose as it is often referred to) and even silence (and not only acoustic) as well as the sense (rather than physical actuality of) safety and security. Bachelard reminds us that a purpose of architecture is to provoke reverie, or at least to provide a setting that encourages it, while an architect like Herman Hertzberger sees a purpose

of architecture as to provoke exploration by and creative interaction with us, discovering novel ways of using and responding to the building and so also provoking discovery and development of aspects of ourselves.

My discussion earlier in this essay about how architecture helps us to create ourselves, by compartmentalising experiences and setting these in calculated relationship to each other (so intensifying and adding meaning to them), and also to feel at home in the world, are clearly prime purposes belonging to this quadrant. So obvious related purposes are to provide as rich a range of experiences as is relevant, which is most easily achieved by designing many forms of contrast, and to intensify these experiences – for instance by the ways spaces are shaped and lit, located within a choreographed circulation system, choice of materials and colours, and even by the acoustic characteristics. Further related purposes are to create or intensify a sense of place and an architectural vocabulary that elicits empathic relationships in us. These are subjects that we will discuss in more detail in future essays, so for now let a few examples of how to realise these suffice.

Achieving a sense of place in the public realm is helped by: containing positively shaped spaces, both in plan and in section (hence the importance of the cornice) that do not 'leak' unduly (for instance, at the corners of public squares); using building materials of evident weight and palpable texture, so helping to anchor the building in place and slow the flow of space about it; and creating smaller spaces between interior and exterior that interlock the two, such as recessed ground level arcades and aedicular windows as are found on classical buildings.

Buildings can elicit relationships with us in many ways. One that is very familiar to us from historic buildings is the forms that suggest the presence of the erect human body, such as vertical windows, or are even surrogates for it to which we relate empathically, such as columns with visible entasis. Anthropomorphic resonances in plans and other forms can serve similar purposes. In huge buildings today structure may play an important intermediary role between the scale of the vast space and the human body, asserting a legible order that helps orientation, being a companionable presence to which you can relate both because of its size and its structural purpose.

The degree to which modern architecture neglected this quadrant is summarised in a short essay by the great depth psychologist James Hillman. He explains that in the psyche and dreams, the zone above our heads is that of spiritual aspiration, which is why in traditional buildings it is celebrated in domes, vaults and painted ceilings. To instead put pipes and ducts just above our heads and screen them with the tackiest suspended ceiling tiles is thus the ultimate insult to our fundamental humanity, the starkest sign of how far modern civilisation has lost sight of what should be its ennobling purposes.

1. See chapter 3 in Thomas Friedman, *Hot, Flat and Crowded*, Farrar, Straus & Giroux, 2008.

2. Thomas Berry, *The Great Work: Our Way Into the Future*, Bell Tower, 1999.



**1. Wind towers in Sindh, Pakistan: an example of a vernacular device to which sustainable design is giving a new lease of life in other places with similar climatic conditions**  
**2. A cluttered and gloomy 19th-century interior of the sort to which modern architecture was a more or less inevitable purgative reaction**  
**3. A typical spread from Christopher Alexander's *A Pattern Language***

# THE BIG RETHINK PART 5: TRANSCEND AND INCLUDE THE PAST

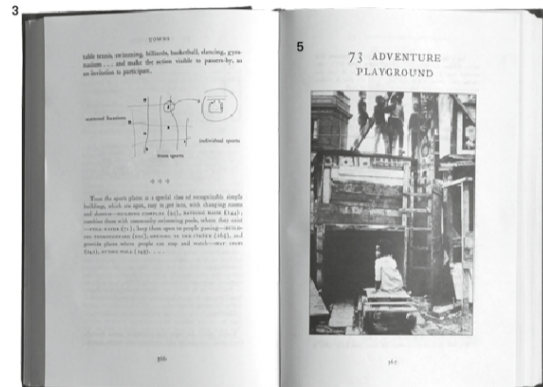
Major regenerative change provoked by crisis involves both a leap forward and a reappraisal and integration of the best of the past – a process known in Integral theory as ‘transcend and include’. The quest for sustainability has also given rise to a new interest in vernacular forms of construction and placemaking, and the lessons they might have for current architecture

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Although the best modern architects drew inspiration from the architecture of the past – particularly, but not only, vernacular – much of their justificatory rhetoric was about such things as shedding the irrelevant legacy of history and starting afresh from first principles. In the circumstances that pertained then, this was perfectly understandable, not only because of the new materials and techniques available and the new functions to be accommodated. Rampant eclecticism had eroded the meaning of historic motifs that were sometimes piled on one another in a frenzy of exuberant excess that matched interiors so overwhelmingly cluttered they inhibited spontaneity and freedom of movement. In the aftermath of the First World War, deference to status and the symbols conferring it was also waning. Even prior to that, those returning from time in the colonies had learned the pleasures of a more unbuttoned lifestyle, much of it lived in that realm between inside and out, the verandah. And as agricultural workers moved into the factories, sun and fresh air became essential to health and outdoor pursuits gained in popular appeal, confirming Marshall McLuhan's edict that we see life in the rear-view mirror and only fully appreciate our previous environment. Visiting a house as built and furnished shortly before the advent of modern architecture, it is difficult not to feel a strong urge to purge the interior of its clutter and open up the walls to admit light, sun, views and access to the garden.

Liberation from the cluttering and constraining conventions of the past allowed modern architecture to make significant innovations in pursuit of functionality, flexibility and various forms of freedom. But although many of these innovations were a leap forward for architecture, they brought downsides, some of which have been discussed in previous essays, such as buildings to which people could not relate and that did not relate to other buildings. Many, particularly non-architects, now focus only on these negative aspects while some architects cling doggedly and dogmatically to the ideals of modern architecture. Yet it would seem obvious that any relevant and adequate future architecture should reappraise and draw from all past architectures, selectively integrating the lessons and achievements of modern architecture, as well as those of the architectures of earlier epochs and of cultures in other parts of the world. This is consistent with a key idea in Integral theory, as exemplified in the holarchical organisation of the levels within each quadrant, which is that evolutionary development involves not only change or forward progression but also the selective integration of the best and most healthy characteristics of earlier phases of development. Only through this process of 'transcend and include' is the result to move vertically up a level (transformational development) rather than move horizontally (mere change).

Architecture is such a broad discipline, integrating so many fields of concern, that it is widely recognised that it takes a long time before architects enter what in retrospect is seen as the mature phase of their careers – Frank Lloyd Wright and Le Corbusier, who were both fine architects in their youth, were in their late sixties when they respectively built Falling Water and Ronchamp. Learning to appreciate and learn from the past is a similar life-long endeavour



to which sincere and serious architects are committed. So any brief survey of some of these lessons, such as this essay, is of necessity very cursory: it is intended more as a prompt for those not yet committed to reappraising the past to do so, and a reminder of only some of the many important lessons that might be learnt. The purpose, as always with these essays, is to aid us in our pursuit of an architecture that is more complete in its range of concerns than is the norm today, in which we can feel more at home and can live a life that brings deep satisfactions through the choice and quality of experiences made possible.

**A language of patterns**

A key precedent and resource in any such exercise in learning from the past is *A Pattern Language* by Christopher Alexander et al, a book that although mentioned periodically in architectural conversation and student crits has not yet had the impact it should have had – indeed, it is more likely to be found on the bookshelves of the general public than of architects. Patterns are physical devices or spatial arrangements, most of which add another dimension to how the built environment may be used; and in the book these are arranged in a specific sequence to ensure their appropriate relationship to each other. Although some patterns, particularly those relating to construction, might not convince, the book is crammed with wise insights and is a compendium of design devices and their relationships that have long proved their worth. The knowledge is mostly derived from close observation

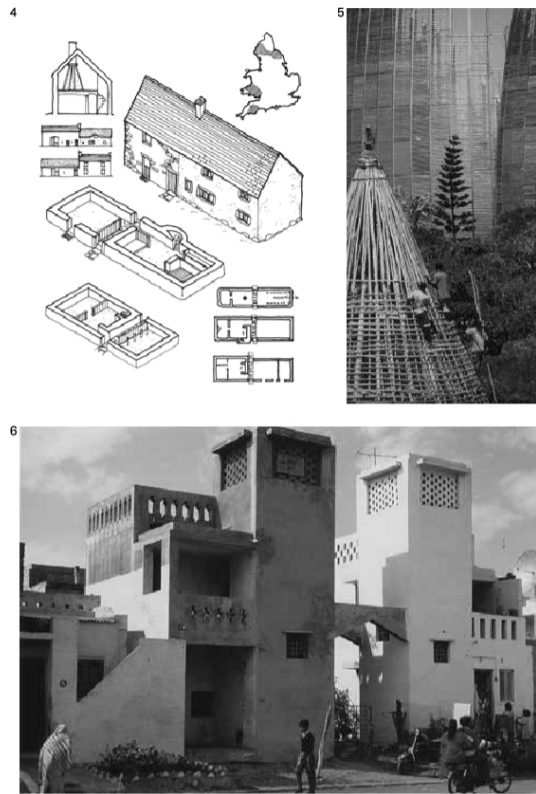
of places bequeathed from the past that not only function well but are also full of life, both in hosting human activity and in an elusive quality imbued in the physical fabric and forms of the environment – a quality recognisable in the feeling evoked, in the way the heart or soul is touched. (This experiential quality is in the Upper Left quadrant of the AQAL diagram, see AR March 2012.)

Moreover, the pattern language, with its 253 patterns that can each be shaped in a myriad ways, constitutes a vision of an environment extraordinarily rich in many sorts of potential experiences – the very antithesis of so much modern and contemporary architecture and urbanism. The environment envisioned encourages living a very full and satisfying life, from childhood to old age, in a setting that makes you feel fully at home (again a UL quadrant quality). It is this usually unremarked upon dimension of the pattern language that makes it so thoroughly subversive and forward looking rather than regressive, as so many misunderstand it to be. Even architects not immune to the charms of the places depicted, are loath to pursue the folksy aesthetic they see as implied and do not want to engage with such primitive construction – although the systemic collapse now unfolding may force that on them. The daunting challenge for architects then, if such a thing is even possible to realise, would be to recreate in a more contemporary idiom both the richness and quality of experience suggested by the pattern language.

#### Appeal of vernacular architecture

Many of the patterns and the photographs of them in *A Pattern Language* come from vernacular or 'anonymous' architecture. Modern architects admired such buildings and environments long before Bernard Rudofsky celebrated them in the exhibition and book *Architecture without Architects*. Among other things they admired the very direct response to need and available materials, which seems so uncontrived and unaffected compared with architect-designed pre-modern architecture. This seemingly spontaneous rightness was arrived at almost unconsciously, yet was also the distilled wisdom of centuries of slow trial-and-error improvements. Not designed on paper, vernacular buildings are a direct, first-hand response to what pre-exists – other buildings, the landscape and the microclimate – all of them subject to intimate first-hand knowledge by the builders. Structure and construction are simply revealed so that you easily understand and relate to the buildings. The results are often very moving to visit, or merely look at in photographs, where lifestyle and habitat fit hand in glove, giving a sense of being at home in and in harmony with both the manmade and natural world. Historian Jacquetta Hawkes has written to the effect that English villages enfolded in the landscape represent the highest form of lovemaking between mankind and nature – a lovely ideal to keep in mind when designing.

But the deep appeal of vernacular architecture – aesthetically and in the heart-touching emotions elicited (UL quadrant qualities) – should not blind us to the fact (easily overlooked now that so many vernacular buildings have been converted into delightful holiday accommodation) that it often sheltered lives of great



hardship, devoid of opportunity so that inhabitants merely accepted their lot in life and remained ignorant of anything beyond the local. This is a reminder that so far our use of Integral theory has been largely limited to using the quadrants to guide discussion and we have so far neglected how the levels within the quadrants pertain to socio-cultural and personal development. This is a major part of Integral theory that we will turn to in a later essay.

#### Lessons for sustainability

The urgent quest for sustainability has given new relevance to the study of vernacular buildings, both local and distant. They show how to best use local materials and ensure their longevity, thereby reducing energy-consuming transport in the initial construction and preserving the energy now embodied in the buildings. As explained in an earlier essay, total life-cycle costing has changed our ideas of efficiency. Concern with the lightness and performance of a component in place, doing 'more with less', has been shown to be a pernicious irrelevance. Instead what is critical is an assessment of the full impacts of using a material or component – from the extraction of materials through their transportation and processing, then during the construction and life of the building, to the eventual recycling of the materials or their return to earth. In such terms even heavyweight local materials will always be more efficient than lightweight high-tech ones.

**4. A typical longhouse of the English vernacular, as drawn by RW Brunskill from his book *Houses and Cottages of Britain*, combines house and cow byre separated by a walkthrough passage**  
**5. Nouméa, New Caledonia in the Pacific Ocean. In the foreground is a traditional Kanak hut that is periodically rethatched by the whole community, regenerating it as well as its habitat. Behind is Renzo Piano Building Workshop's JM Tjibaou Cultural Centre, its forms and slatted covering clearly inspired by Kanak huts**  
**6. Aranya low-cost housing in Indore, India by Balkrishna Doshi, reworks the forms and climatic control devices of vernacular construction**



(Some argue that as we pass Peak Oil, only local materials will be left to build with – along with some scavenged and recycled ones.) Yet it is also likely that no matter how much centuries of local experience have to teach in the use and crafting of local materials, contemporary computerised forms of analysis and shaping of materials, structural solutions and overall building form could also bring improvements and new efficiencies.

The use of local materials also brings notable aesthetic benefits that contribute to sustainability in encouraging us to treasure and conserve our built environment. They help embed the buildings in the land, from which these materials are derived, so that the buildings seem to belong there and do not disrupt the sense of organic wholeness. And unlike highly processed or synthetic materials – such as stainless steel, plastics and composites – these materials have a sense of life: the grain of wood and stone shows how they grew or were deposited in layers, and their weathering and wear records the passage of time and use, helping us to engage with them and establish an increasingly familiar relationship.

Vernacular buildings have much else to teach, such as the best ways of responding to local climate and microclimates: how to open up to, and provide seasonal shade from, the sun; how to channel cooling breezes through the building and deflect cold winds over it; how to use thermal inertia to stabilise temperature variations in temperate climates – or minimise thermal inertia in tropical climates so buildings retain and radiate little heat and cool quickly after sunset; how to capture and store precious rainwater. Now it is not only the local vernacular we can study profitably: the vernaculars in similar biomes in other parts of the world have often developed solutions that can be adapted to similar conditions elsewhere. Generations of experiment and refinement are now replaced by sophisticated computer modelling to best adapt an adopted design device to the new locale.

Vernacular construction is instructive too about siting, in terms of exploiting microclimatic conditions, availability of water and best orientation to sun and wind, and also in avoiding the unnecessary destruction of arable land. Settlements were often built on rocky or scrubby slopes leaving farmland untouched – in contrast to today's continuing destruction of a precious, fast dwindling resource. Striking also is how sensitively vernacular buildings might be placed visually, such as a small structure sitting alone on a sloping shoulder of land that is a precisely positioned optical pivot bringing new coherence to a majestic landscape.

Differing times and places during the 20th century saw attempts at a modern vernacular – buildings of relatively modest means, suited to local culture and conditions and using local materials and craftsmanship so as to slot fairly unobtrusively into place. Such ambitions are especially admirable in comparison with today's over-emphasis on individual creativity and personal style, or marketplace brand, so that to peruse publications on contemporary architecture is to visit a freak show of gesturing icons and spurious sculptural excess. Much northern European housing of the late '40s and '50s was of this sort, built of local brick, following the

existing street configuration and merely updating traditional forms and layouts while respecting their massing. Following Scandinavian example, this was typically built of local brick with timber – a humanised Modernism as a modern vernacular. This was arguably the last period of consistently decent architecture. But unfortunately architects seem to have become bored with submissively serving the welfare state and wanted to be more 'creative' and expressive, starting with Brutalism and other forms of macho posturing that would further decline into the icons and Parametricism and other anti-urban forms of our time. In contrast to these even Neo-Vernacular (or vernacular disease) – a generic rather than local style of faux rural/traditional forms concealing contemporary construction with imported bricks, gang-nail trusses supporting concrete tile roofs and ubiquitous coach lamps – or its current manifestation in New Urbanism, are almost palatable.

#### **Meaning and place in history**

The differences between vernacular buildings and historic architecture might sometimes be blurred and difficult to distinguish, but even if somewhat arbitrary the distinction is useful for the different lessons they offer. Although this is not strictly true, the vernacular could be seen as a rural and small-town building form while historic architecture is generally more urban and is often derived from a pattern book, or even architect designed. While vernacular is local in form, details and materials used, and slow evolving, historic architecture more typically follows styles generated elsewhere and might be subject to quite abrupt changes in style. It is thus much easier to date with some precision. It is also much more varied in its functional types and the sizes and degrees of status conferred by its buildings – or maybe it is only the richer people and more prestigious institutions that were accommodated in architecture rather than vernacular buildings. In short, historic architecture reflects progressive social differentiation and accelerating cultural change.

Among the most significant differences is that historic architecture has a representational or rhetorical dimension missing from the vernacular. Its characteristic language – particularly as applied to sacred buildings and others of civic importance – is often derived from representing in more permanent materials earlier and more ephemeral forms of construction. Thus the columns of ancient Egyptian architecture have been argued to have derived from those of bundled papyrus reeds, classical Greek architecture from wooden precedent and some ancient brick buildings in middle Asia are seen as mimicking earlier structures of woven reeds. In such buildings decorative elements might be permanent representations of what was once only temporary decoration, such as floral swags, again emphasising the importance of the building as decorum demands. Also, the parts of many historic buildings were shaped to evoke resonances with and represent the human body, the Classical column with its entasis a surrogate for the human body straining under the load it bears and the vertical window suggestive of the human body that

might be framed by it. What is important to us here is that in contrast to modern buildings, historic architecture conveyed meaning in a multitude of ways and also, in various ways, elicited relationships with us as well as with other buildings. The historic city is also a contiguous network of places – streets and squares, parks and gardens – of differing character; together these add to the range of civic experiences available and provide the appropriate locations and settings for all these differing kinds of institutions and their buildings.

In the historic city all the diverse institutions that contributed to the rich complexity of city life are clearly distinguishable, if not by their larger size and significant location, certainly by their architectural language and the messages this conveyed. Even a first-time visitor can read and understand the city, can quickly gauge its cultural wealth and its range and kinds of civic institutions. There is something hugely satisfying in this and it contributes to the deep appeal of historic cities. By contrast, the modern city has fallen apart and lost its meanings, made up of unrelated mute buildings that communicate little and to whose abstract forms and sleek thin materials we cannot relate. Many civic institutions, from law courts to major museums, are in anonymous glass boxes, or now in spuriously sculptural extravaganzas.

The recovery of meaning is part of the regeneration of culture, one of the huge collective challenges of our time – an exciting but dauntingly difficult one as indicated by how postmodern architecture's attempts to communicate have resulted in glib games (recognise the quote) and scenographic kitsch. Of course, the argument could be made that now that most can read, the rhetorical dimension of architecture can be replaced by big signs and that the medium in which daily life is conducted is not that of the physical fabric of architecture and the city but of the electronic webs of the mobile phone networks, the internet and GPS (Global Positioning Systems). But the counter argument is equally or more convincing: that the more time we spend engaged in such intangible worlds, the more we long for physical presence in face to face contacts and an experientially rich and tangible urban and architectural setting.

Similarly, as Newton's clockwork universe gives way to a vision of a live and creatively evolving one, there is a great longing for meaning and reconnection with others and the world around, and for our fragmented world to heal and connect up again. What sort of architecture does that imply and can we create an architecture that will engage our attention enough to create a strong sense of place without some representational dimensions? The issues of rhetorical form and symbolism and the meanings they might convey (LL quadrant) are too complex and problematic to pursue further now. Instead we can fleetingly raise a few issues about an architecture to which we can relate and that conveys a sense of place (UL quadrant). This too is a topic that will be discussed in more depth in a later essay.

Historic architecture adds to much human activity a ritualistic dimension that intensifies experience and elevates or dignifies its social meanings, reminding us that the creation and maintenance of community requires

**'The recovery of meaning is part of the regeneration of culture, one of the most difficult challenges of our time, as indicated by how postmodern architecture's attempts to communicate have resulted in glib games and scenographic kitsch'**

a degree of ceremony. A simple example is the process of entering a typical historic English townhouse. You climb a few steps that bridge the sunken 'area' to reach a broad, panelled front door set below a somewhat ornate fanlight and sheltered by a projecting roof supported on a pair of stout columns. The whole process of entry is prolonged and dignified, with greetings and goodbyes elevated into semi-public acts enshrined in a mini *tempietto*, a static place in itself that interlocks the public realm outside and the private inside. Compare this with the abrupt and unelaborated entry into many modern houses, or even worse with the long unpleasant walk along an exposed access gallery or dingy corridor to reach the front door in a typical modern housing block. Compare too a modern staircase tightly tucked in its shaft with a historic one gracefully descending in space to prolong and dignify, even glamorise, the now conspicuous process of 'making an entrance'. All these processes extend time and intensify experience, heightening awareness of where you are and what is happening.

Possibly most important is the role of the facade in historic architecture. Although keen that their elevations be elegantly proportioned, modern architects dismissed other compositional concerns as cosmetic facadism, arguing that elevations should simply reflect construction (frame and infill, solid loadbearing or whatever) and the functions behind. They simply ignored, and many still do, the obvious fact that the facade not only encloses the interior (their primary concern) but also frames the public realm outside that it should articulate and animate – and thereby help endow with a sense of place.

A crucial difference between a modern and a historic building is the way the latter 'holds' the space in front of it. This comes not only from the interlocking achieved by smaller places between inside and out – arcades, porticoed entrances, aedicular windows and so on – but also from how symmetry projects forward a stabilising axis and the physiognomic pattern of a historic facade. The role of symmetry, another anathema to strict Modernist dogma, is easily understood. Think of how the central axis of a chateau draws its grounds into relationship with it, or even how a small farmhouse with an axial drive up to it can hold its own in even a mountainous setting, or of how the cross axes of formal frontages facing an urban square help pin it into place. The role of physiognomic pattern is more subtle. Although this ceased to be true as the 19th century progressed, historic facades when analysed typically form a stable and irreducible pattern in contrast with modern and later historic facades which are mere repetitive extrusions.



**7. The Grand-Place, Brussels, lined by buildings that are each distinct beings in themselves, holding attention and the space before them**  
**8. A collage of a chaos of skyscraper icons that cannot relate to each other or the space around them**  
**9. Venice, a historic city from which the civic institutions stand out, each as architecturally distinct, communicating socio-cultural richness**  
**10. The Grand Canal, Venice, flanked by buildings of different eras but a common typology**  
**11. Street in South Kensington, London, where entrance porticoes interlock public and private realms and elevate greetings and goodbyes into a public ritual**

So while a modern elevation is simply a slice of a sausage across which the eye slides as if it were a train going by, a row of historic buildings is like a line of beings each commanding and holding attention. This and the sense of life the facades are endowed with, by further compositional characteristics we will return to, are yet more ways by which these buildings create a sense of place.

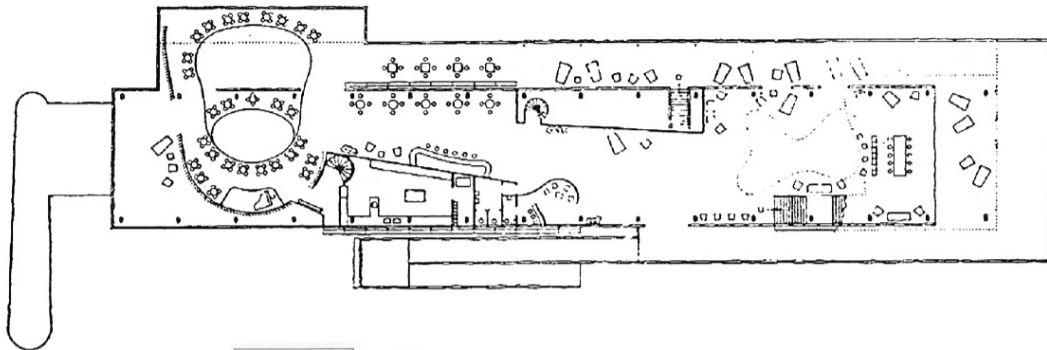
Among the greatest lessons vernacular and historic architecture have to impart is in the effortless achievement of harmony, both among buildings and between architecture and landscape. The key to this is the repetition of a limited number of typologies. Typically, the fabric of a village or town is made up of only a single, or perhaps two, basic typologies from which a few monuments such as church and castle stand out. Think of beautiful Italian hill towns, or those on lake or seaside slopes, built up of simple rectangular blocks of similar fenestration, shutters, roof slopes and materials. Or recall the canal-side palazzi of Venice with their open central loggias, a repeated type that brings harmony despite the variation in size and style – both Gothic and Renaissance. Or a village of white-painted fishermen's cottages arranged along the contour around a bay and resembling white-capped rollers that have come inshore – creating a harmonious whole of land, sea and buildings. Contrast all these with today's upmarket suburbs or resorts where each architect-designed house strives for novelty, desecrating landscapes and turning them into eyesores of conflicting forms and materials. Little wonder that some call for stringent design guidelines in such places. The alternative, an aesthetic control committee, often fails because, made up of architects, it judges each proposal on its own 'merits' or 'design quality' with insufficient attention given to the impact on the whole.

#### **Modernism and the free plan**

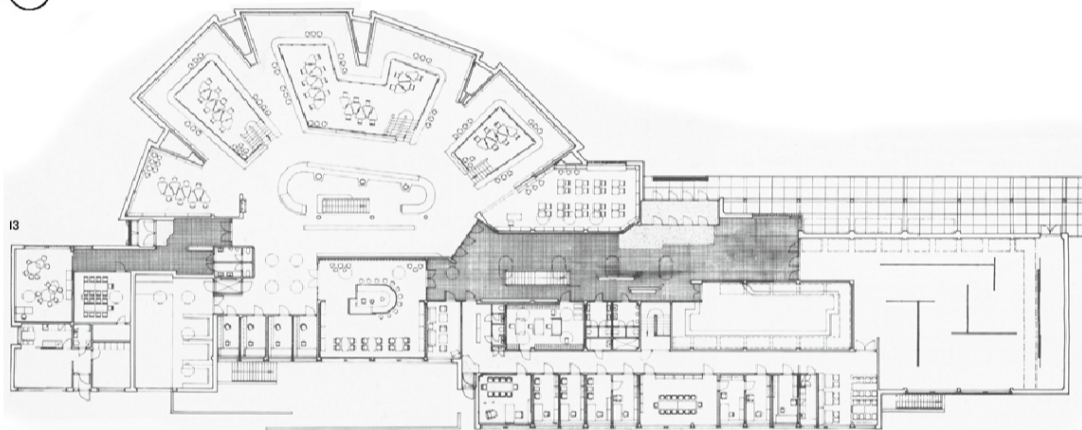
For all the opprobrium now heaped upon it, modern architecture more or less had to come into being, not least because it so exactly reflects the modern mindset in ways explored in earlier essays. In retrospect it might prove to have been a key transitional phase, a shedding of excess and now irrelevant rhetorical baggage, a purging and purification before real regeneration could begin, as befits the epoch emerging to succeed four or five centuries of modernity. Its gift to future architectures is in being attentive to, or even initiating, contemporary patterns of living and working, accommodating a vastly expanded range of activities, many pursued in a very different manner to ways we behaved in the past.

Modern architecture also was and is much less homogeneous than some characterise it, flowing through many quite different streams, with independent sources, that sometimes conjoin and later branch apart again. Common to all these is a concern with function, although the approaches to function, and the flexibility of function, might differ markedly. Actually, functionalism, the shaping of buildings around the strict analysis of function and how to serve it, started long before modern architecture, in the late 18th-century design of prisons (Jeremy Bentham's Panopticon) and hospitals. If prisons were designed around the easy supervision of inmates,

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**12. Raised floor plan of an unbuilt project for a yacht club in Rio de Janeiro by Oscar Niemeyer. Exemplifying an 'omancipatory' functionalism, this is a plan of great economy and precision**



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hospitals were designed around the admission of fresh air and the venting of contaminated stale air and, later, on the segregation of clean and dirty circulation and so on. This is, appropriately for these programmes, a highly prescriptive approach to function that dictates how things should be done and offers little flexibility.

Modern architecture, and particularly the variants of the free plan that constitutes one of its core concepts (along with, to a lesser degree, the free section), could be seen as a reaction against such an over-prescriptive approach to function so as to also bring choice and flexibility of use.

Another concern and instigator of the free plan was a concern with the relationship of means and ends, the economy of means actually enhancing the ends. This noble concern was to become abused to justify the alienatingly arid and utilitarian minimalism of housing estates and office complexes that now constitute the unloved areas of the contemporary city. Now, though, the pendulum has sometimes swung to the equally problematic opposite extreme as architects spend vast sums on buildings of great formal complexity that work no better, if as well as, more modest construction. These buildings are argued to be an extension of modern architecture's ideals, but are in fact a betrayal of them. When compared with the great designs of earlier phases of modern architecture, it seems the free plan is also

in danger of becoming a lost art. It is not unusual in student crits, and even in architectural competitions or submissions for awards, to see no really good plan (as this was once understood) among dozens of schemes.

The aim of the free plan is to both achieve the most apt deployment of functions in space and allow some flexibility in how they are performed. Different architects adopted differing approaches to flexibility and offered it in varying degrees. These range from the gridded 'universal' space of Mies van der Rohe that supposedly allows maximum rearrangement, as widely applied in office design, to the tightly tailored residential plans of Hans Scharoun where the position of each piece of furniture is precisely fixed. Another approach is the differentiation of 'served' and 'servant' spaces (the latter containing vertical circulation, lavatories and ductwork) developed by Louis Kahn for the Richards Medical Research and Salk Institute laboratories. This was adopted and taken further in a series of seminal projects, such as the Birmingham University Chemistry Laboratories and Loughborough University, by Arup Associates. And yet another approach was developed by Herman Hertzberger in which he uses overlapping spaces and forms that provoke you to discover potential uses rather than define them.

The classic free plan can be thought of as having two stages of conception, which typically would have

developed together in the iterative process of design: first, the appropriate deployment of functions in space; second, the minimal architectural definition and separation of these uses. The functions or activities are deployed so as to come into the most appropriate relationship to each other and the circulation routes, as well as to the outdoors with its views, sun and air. This involves more than finding the appropriate functional linkages, as the relationships and distances between activities, as well as the sequence in which they are encountered, enhance and even determine their character and to some degree give meaning to them.

The architectural articulation would then further define the character of the spaces, giving privacy, framing views, determining light levels and so on, and suggest its uses – for instance, with a gesturing curve – with due attention to material and formal economy and separating functions only as and when required. The latter point is important because one of the properties sought by the free plan is the fluid interaction (what Rem Koolhaas has aptly referred to as catalytic interaction) between what would previously have been segregated functions, so sparking new functions as well as flexibility in their performance. And the art of the great practitioners of the free plan, which does not include Koolhaas, is in finding that exact balance where sparingly deployed forms or devices suggest and minimally separate activities, bringing them to life without over determining them. In these terms most of later Mies – although not the Tugendhat house and some of the court house proposals – does much too little, and Scharoun far too much.

#### **Emancipatory and participatory functionalism**

A great example of the free plan is that of the elevated main floor of Oscar Niemeyer's unbuilt yacht club for Rio de Janeiro. Here, a predefined rectangular space below a gently curved roof is minimally articulated to host a range of activities in perfectly judged sequence and relationship to each other, and several of the elements are curved to add dynamism to the space and elicit a relationship with the people whom they guide and propel. Arriving at the head of the ramp and entering, the sea is visible straight ahead and moving forward brings a downward view of the moored yachts through a slot in the floor. To the right is a lounge with more intimate areas on and below a gallery. Turning left, you are greeted by a curved wall and guided between people at the bar and those at tables overlooking the bay to then be presented with a conspicuous and choreographed flourish (tah dah!) into the middle of the restaurant-nightclub.

An instructive contrast is a very different modern plan, that of Aalto's Rovaniemi Library. It too is designed with impressive precision round a beautifully choreographed and diagonally inflected processional route. But apt to its function, activities are less flexibly defined and, as the climate requires, the building is more enclosed and lit by generous clerestories rather than, as at the yacht club, from sides left largely open to the breezes. Instead of loosely partitioning a given volume, the enclosing, embracing exterior of the library is generated by the movement and activities within and the sculpting of the

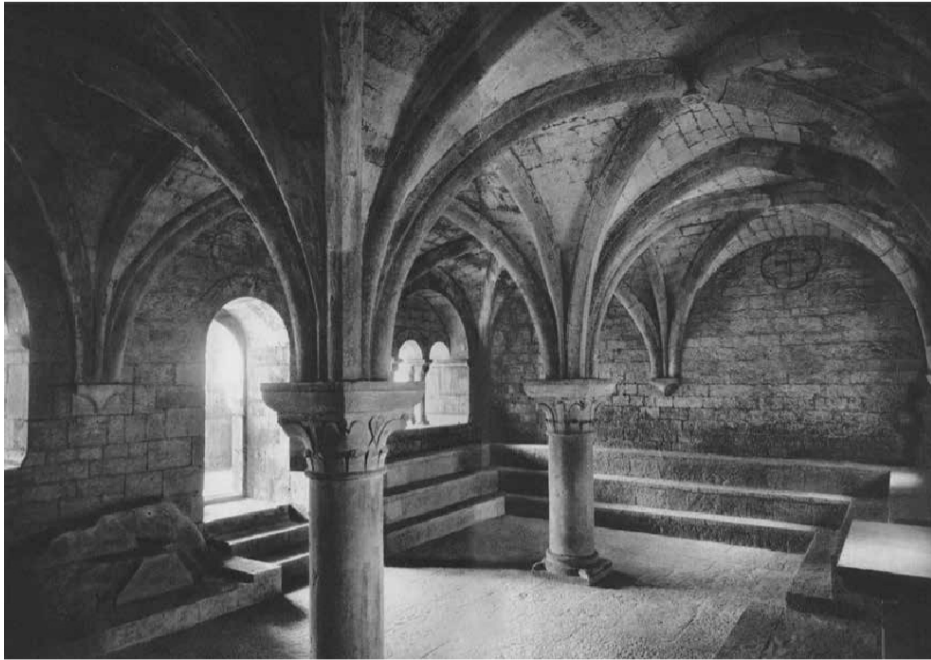
**'Starchitects spend vast sums on buildings of great formal complexity that work no better than more modest construction. These buildings are argued to be an extension of modern architecture's ideals, but are in fact a betrayal of them!'**

light from the large clerestories. From the wind lobby, you bear right across a clattery tile floor to be hushed as you step onto the library carpet. Like the control desk, the fan shape of the library distorts in recognition of the oblique entry. Indeed, the back wall seems pushed outwards in response to your momentum and by the pressure of your gaze as you move into the room, much as a soap bubble distends with the direction of the breath, while the indents between the bays assert a countervailing pull inwards to shorten the spans of the main beams.

Although the curved elements of the yacht club propel the movement of space and people, the building also hangs back somewhat. By contrast, the engagement elicited by the library is much more intimate. This goes beyond leaning on the continuous countertops, including those that form reading desks capping the bookshelves around the sunken reading areas. As the forms of the building lead you through it, with tactile elements falling to hand just where you reach for them, it is almost as if you were breathing the building into form with your movement and gaze, your exhalations pushing the reading bays outwards and your inhalations prompted by the constricting indents. The illusion of intimate participation in the formation of the building creates an extraordinary sense of identification with it. So if the yacht club represents an 'emancipatory' functionalism, in which use is set free and only partially defined, the library represents a 'participatory' functionalism, in which it seems that it is your very presence that is shaping it. These are just two of several approaches to serving function and evoking a relationship with the user found in modern architecture, many now largely forgotten and ripe for reassessing, as we will continue to do in the next essay.

As implied by limiting the discussion of modern architecture mostly to the plan, its strengths lay in its internal organisation. But exterior space, often undefined and residual, and the lack of articulation and animation of it by the massing and elevation of the buildings, was and is its great weakness. This, and the devastation wrought on our cities and landscapes, led to the inevitable backlash against modern architecture, and the pleas for greater concern with context and conservation, that were some of the factors that led to Postmodernism. But the architecture that reacted against reductionist modern architecture and so contributed to the lead up to Postmodernism, as well as Late Modern architecture influenced by Postmodernism, tended to be more interesting and instructive than that of Postmodernism. Next month we look in more detail at this architecture and that of some of the masters of modern architecture.





**I. The semi-subterranean Chapter House of the Abbey of Le Thoronet. Like other masters of Modernism, Le Corbusier drew on and transformed historic precedent. As a monastery, the monks sat as equals looking towards the central column. But La Tourette was a seminary, the pair of columns are towards one end, denoting the difference in status between the teacher monks who sat at this end and the novices in the larger portion of the room**

# THE BIG RETHINK PART 6: LEARNING FROM FOUR MODERN MASTERS

The architecture of the past and other cultures represents a vast resource to study and learn from, now made widely available by modern scholarship, publications and audio-visual media – a great legacy of modernity. To conceive an architecture adequate and relevant to our changing times, a useful initial step is to investigate and integrate lessons from past architectures, including those of very different times and places, and of the 20th century with its constant experiment and innovation.

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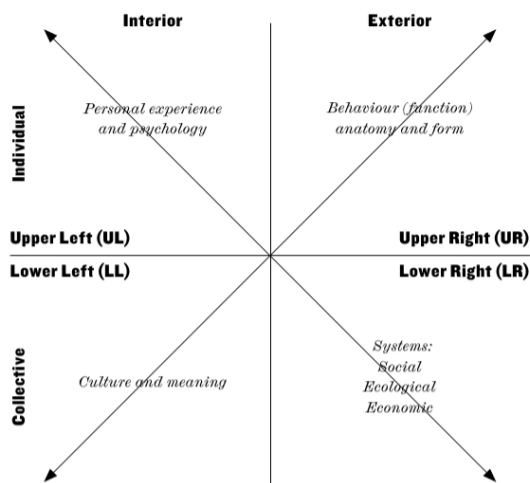
**AR JUNE 2012 PP 83-95**

Last month's essay initiated this exercise by looking briefly at some aspects of vernacular, historic architecture and modern architecture. This month's Campaign looks at a select few masters of Modernist architecture whose work still compels because both modern and yet also in antithesis to the reductive modern paradigm. A future essay will examine a few major contemporary architects.

Last month's essay suggested that modern architecture might prove not the fresh start it was assumed to be but more of a discarding of the outworn, a purifying purge and explosion of experiment, after which a much more broadly founded regeneration would be possible. The narrow reductionism of modern architecture might have proved disastrously destructive of communities, cities and ecosystems. But its innovations and explorations have left a rich legacy, much of it too soon forgotten, to be reappraised and integrated into a more complete architecture. And some of its core features, such as the development of the free plan that is sensitively attentive to the activities it hosts, are breakthroughs of lasting value to be carried forward into any future architecture.

Besides, as April's essay argued, a handful of great masters of Modernist architecture transcended the reductionist modern paradigm to do work of real substance, complexity and depth. Their concerns were not limited primarily to the right quadrants of Integral theory's All Quadrant All Level (AQAL) diagram, to such objective matters as function and construction. They were equally interested in the left quadrants, with subjective experience and psychological impact (Upper Left concerns) and meaning (Lower Left) – and many of them with some form of the spiritual (higher levels of the Upper Left). But reflecting roots in Romanticism, they tended to conflate spirit with nature. Integral theory sees even this as a form of modern reductionism, collapsing the many levels of the left quadrants into lower levels of the right. But for us today it also means most of these architects could be seen as proto-green, even though this is largely in terms of sensibility rather than actual performance, as is stressed today and largely made possible with the computer, both in predictive modelling and the monitoring of performance.

Despite reservations at conflating spirit and nature, and in contrast to most modern architects, these masters are instructive for attempting to recover a Four Quadrant approach to architecture and so were as much anti-modern as modern. They belong to that third wave of anti-modernity, between Romanticism and Idealism, the first two such waves, and the fourth and current wave known as Postmodernism. Limited space permits the selection of only four modern masters for brief discussion, and even then the focus is primarily on a very small aspect of their work. The architects are chosen for the intrinsic quality of their work and because that of each is so different. This, together with the contrasting aspects focused on, proves the breadth of their concerns and approaches, thus making them so fruitful to study. None were narrow functionalists and though their characteristic formal vocabularies might seem abstract, they are instead often richly allusive, their abstraction facilitating a denser layering of references than if these were explicit. Hence,



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in contrast to typical modern buildings, the work of these architects is richly communicative at many levels: they convey meaning, yet do so without recourse to traditional rhetorical motifs and iconography. This may yet prove a valuable precedent to any attempt to recover the cultural dimension of architecture.

The four architects are: Frank Lloyd Wright, and mainly on the spatial strategies of his domestic work; Le Corbusier, looking mainly at how he drew on and transformed lessons from history; Alvar Aalto and how his work draws us on and enhances the sense of occasion; and Louis Kahn who drew on history in a manner very different to Le Corbusier. To learn from and deeply admire an architect does not imply being oblivious to his or her flaws – far from it; a critical attitude best unearths what is valuable as well as what is problematic. With some of the selected architects, or some of their works, the flaws (or limits to their relevance) are considerable, particularly with their urban ideas and inability to make satisfactory urban fabric. But although Le Corbusier's urban ideas, in particular, were as pernicious as they were influential – including his proposals for La Ville Contemporaine and La Ville Radieuse, and the widely adopted edicts of the Athens Charter – the urban shortcomings of the others are mostly merely typical of their time and its dominant modes of thought. So the approach to examining the work of these architects is not that of a historian or critic but rather of a designer looking for positive lessons to deepen understanding and enrich his or her repertoire. (If only this dimension were added to the way history and theory are taught in most architectural schools.)

The promenade architecturale is a theme mainly discussed in relation to Le Corbusier's architecture. But all the selected architects exploit it masterfully, Wright in the sometimes convoluted approach to his buildings (particularly some of the Prairie Houses), Aalto in the way his buildings draw you through them, and Kahn in buildings such as the Kimbell Museum of Art. What all

**2. All Quadrant All Level (AQAL) diagram by philosopher and psychologist Ken Wilber, a key to Integral theory**



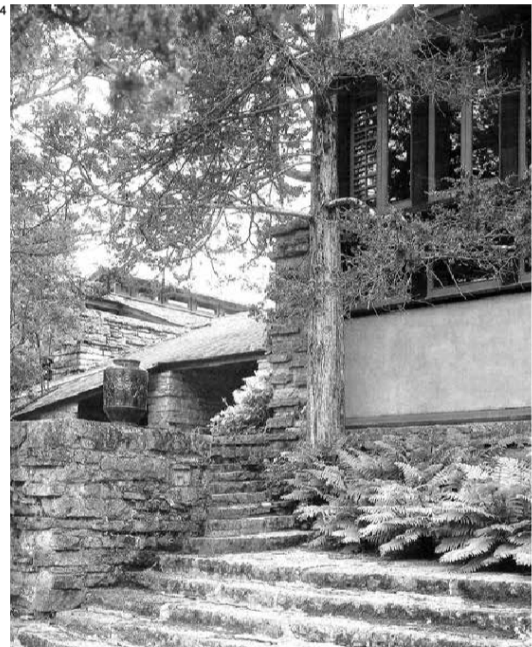
these architects understood is that architecture is an art of manipulating not only space but also time. The choreographed promenade separates and structures the sequence in which spaces and their activities are encountered in time too, so building anticipation, the sense of the sacred or whatever. Le Corbusier, in particular, manipulated time in many more ways than there is space to discuss, particularly in devices to slow our perception of it and so intensify our experiences.

Yet with these architects much more than their approach to design is instructive. So too is the scale of their ambitions – Wright and Le Corbusier sought to shape whole new ways of living – and how they created the conditions for their success. Particularly with Wright and Le Corbusier, these included shaping the persona they presented to the world and the personal myths they had to live up to, so intensifying the impetus to excel. The most successful architects recognise that skills in design and construction are insufficient to ensure success and that they must also design and shape their careers. Such things are not taught at architectural school, not least because the reason some are professors not successful architects lies in not realising or lacking the faith to design and follow their dream.

The quest for sustainability now makes it urgent that architectural education be designed to also develop the student psychologically and culturally. Architecture might then lift itself out of the egocentric shaping of icons, the competitive elaboration of obfuscatory theory and all other such trivia. Instead it can focus on the larger and now urgent concerns that are best understood and solved by designers who have evolved both psychologically and intellectually to reach a world- or biosphere-centric level of cultural and personal development. This crucial issue will be discussed in future essays that will in part draw upon so far unmentioned areas of Integral theory. For now it is worth remembering that even such grand egotists as Wright and Le Corbusier were concerned with far larger and more important issues than simply becoming famous, their ambitions driven by the intention to serve the larger world along with their clients. This was true too of Buckminster Fuller, a widely-influential thinker and designer who explored many topical themes, such as resource depletion and creating a world that worked for all. But his approach now also seems too narrow in its lack of interest in culture and misunderstanding of aspects of efficiency (such as the consequences of total life-cycle costing), some of the reasons he is excluded here.

#### Frank Lloyd Wright

Despite his obvious greatness as an architect and extraordinarily prolific fecundity, Frank Lloyd Wright is still sometimes dismissed with jibes like 'the greatest architect of the 19th century' or as 'a Romantic', implying irrelevance to our times. Certainly he was an architect associated mainly with suburban and rural buildings. But he still has much to teach us. Novice architects, for instance, struggling with small domestic extensions, can bring to them a sense of spaciousness and fluid ease by plundering his spatial ideas, especially as exemplified by the Usonian houses. Even when only partially and crudely

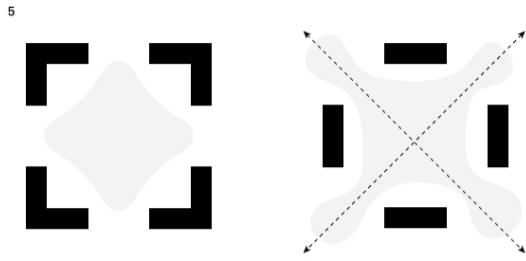


executed, these spatial devices can work wonders.

In most buildings, rooms are box-like spaces that open into each other and to the outside through openings in the middle of their walls, so leaving the corners intact and asserting a certain stasis by constraining the flow between spaces. By contrast, Wright knocked out the corner, often with the middle of the wall left for support, so that spaces slid fluidly into each other on the diagonal. Besides imparting an easy dynamism, the elongated diagonal views between rooms, and even onwards to the outdoors, dramatically increase the apparent size of the spaces, which is why so many modern architects adopted this device.

Of course, there was much more to Wright's domestic planning than this. The fluid flow of these diagonally connected spaces would be anchored by being centred on a solidly substantial masonry core containing the hearth, symbolic heart of the home. And here and there, blocking the spatial flow outwards from the hearth would be masonry corners adding more moments of rooted stasis. In a great Usonian plan, what is striking is the tension and

**3 & 4. Distant and close views of Taliesin East by Frank Lloyd Wright, which is 'not on the hill but of the hill'**

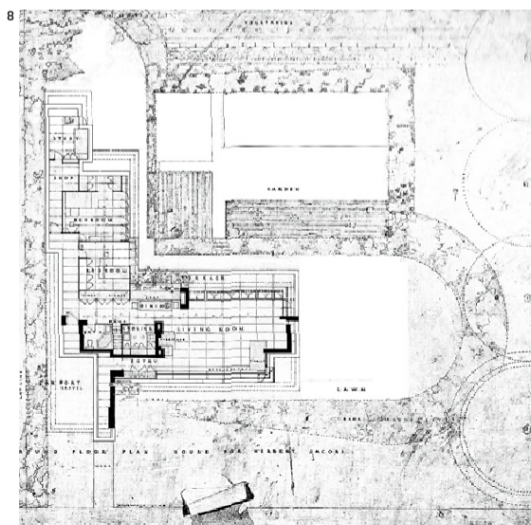
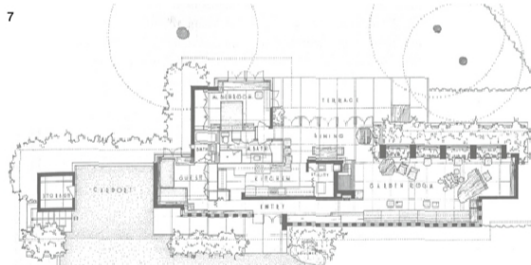


balance between contrasts: between the explosive dispersal of elements, such as the masonry loadbearing walls and the disciplining grid that holds them in place; and between the centrifugal outward flow of space and views and the contrasting centripetal inward focus, so the spaces are both dynamically extrovert and serenely introverted. Aided by devices such as broad overhanging eaves and an outward extension of the floor slab, space also flows outside and is tied back to the house, so interlocking the interior with the garden or landscape.

Moreover, the spaces are precisely judged also in functional aptness and domestic character: the dimensions, degree of enclosure and views between and out from spaces are all exactly right for the activities they house and these are brought into equally, exactly-judged relationship with each other. Natural lighting too, brought into the centre of the house by clerestories, matches the activities accommodated and there is a careful balance of fixed built-in and moveable furniture. These are rooms that are comfortable to sit alone in, quietly reading a book, yet which can equally easily host large gatherings. Yet no matter how crowded the rooms may temporarily be, there is always a strong sense of domesticity, the house centred on the visually dominant hearth, with the dining table for family meals nearby, so sacralising the home and nuclear family.

Wright was creating a new architecture for an expansive new land and a new way of living on it, in due reverence to nature. Unlike most modern architecture, his buildings nestled into and interlocked with their natural settings and intensified the sense of place. As he said of his home, Taliesin East: 'it is not on the hill but of the hill'. The fluid and extroverted spaces might match the endless prairies, but the centripetal focus on the hearth provided a stable and comforting refuge within the vastness of the American continent.

Despite his fecundity, Wright knew better than to always start each design as if from scratch. Instead he was a composer-architect, playing variations on well devised themes. Yet the results were never formulaic but well matched to client, site and budget, Wright excelling at low-budget houses as well as extravagant ones. To judge his success, it is instructive to compare the richly nuanced, emotionally succouring, warm liveability of a Usonian house, which celebrates setting and family, with the life-denying fridity of so many minimalist-inspired houses now illustrated in architectural publications. These have been designed to be looked at, for the



**5. Diagrams showing how solid corners of traditional rooms restrict the flow of space, contrasted with Wright's opening of the corners so space flowed freely along diagonals that introduced elongated views and a sense of spaciousness**

**6. Living and dining room of the Pope-Leighey House, a Usonian dwelling. Space flows on the diagonal past the hearth with clerestory bringing light into the middle of the house**  
**7 & 8. Plans of two Usonian houses: the Zimmerman House (7), and the first Jacobs House (8). Both show the interplay between the diagonal flow of space and the stabilising masonry hearth, piers and corners**

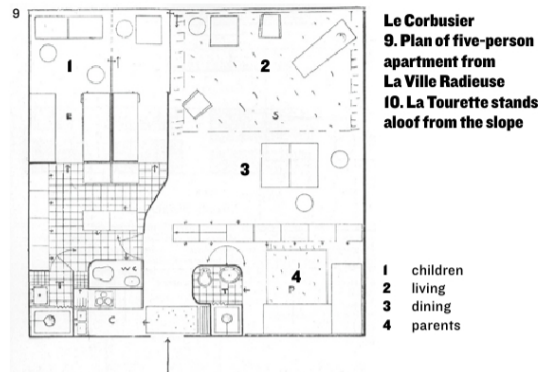
immediate impression given, rather than to be lived in. Wright reworked the same approach over and over again, and his works are mostly instantly recognisable as by him. Yet it is also instructive to ponder how much more convincing his designs are than those of today's architects who adopt a brand-style to secure their position in the global marketplace.

### Le Corbusier

Although it is irrelevant to their respective greatness as architects, Wright's designs are arguably easier to get to grips with than some of Le Corbusier's. How Wright's designs were generated and disciplined is relatively easy to detect and there are several excellent studies that illuminate this.<sup>9</sup> There are many equally excellent studies on Le Corbusier too. But although these illuminate his life, ideas and theories, and many aspects of his work, few do real justice to his extraordinary powers of synthesis as a designer, to his attention to the nuances of function (despite lapses too) and how his buildings suggest these, and to the multiple layers of allusion to be found in seemingly abstract works. In part this lack of understanding – and controversies about, say, how much his architecture was shaped by his interest in astrology, alchemy and religious heresies – is because, although he was a prolific author, there was much he chose not to write about. These matters he felt should remain esoteric, intended only to be noticed and understood by initiates – and the deserving, those who had cultivated their perceptions. But even to the majority unaware of such matters, the compelling qualities of his work that so many respond to arise from the many levels at which he engaged architecture and from how much of himself he invested in his explorations (much of it in the privacy of his painting studio) and equally important patient distillation and synthesis.

The name Le Corbusier was self-created, and even this has multiple esoteric allusions, such as to Corbeau, the crow or raven, alchemy's *avis hermetis* that transforms matter into spirit, and Corvus, the celestial constellation closest to his own sun sign of Libra, as well as featuring in numerology. Created initially as a *nom de plume* for articles he had written whose ideals he had not yet lived up to, it was a fictitious persona into which he grew as an architect as well as a constant incitement to excel. Tellingly, it was only some years after he had adopted the name as an architect that he felt his paintings were worthy of the same signature. This is just one example, an extreme one, of the many ways great architects have designed aspects of themselves, their careers, work methods and conditions, to contribute to their success. Wright too, as have been and are many architects, was something of a self-mythologist; as Carl Jung once said,

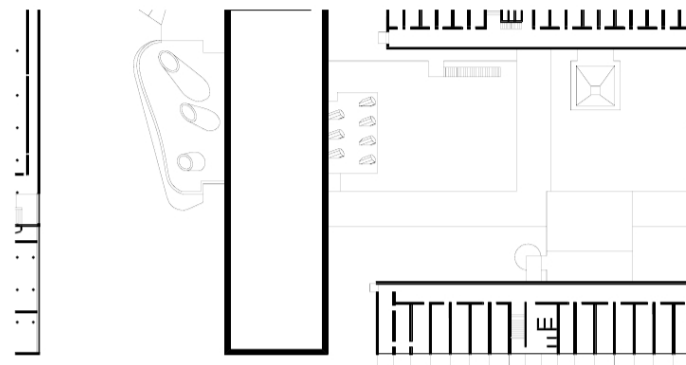
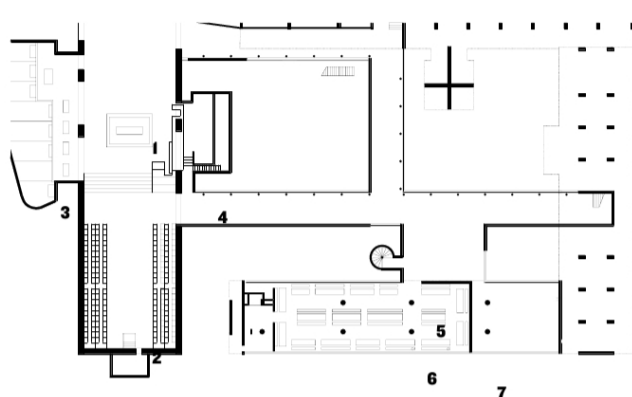
**'The name Le Corbusier was self-created, and even this has multiple esoteric allusions, such as to Corbeau, the crow or raven, alchemy's *avis hermetis*'**



in retrospect real life for Jung had started only when he asked himself what myth he was living.

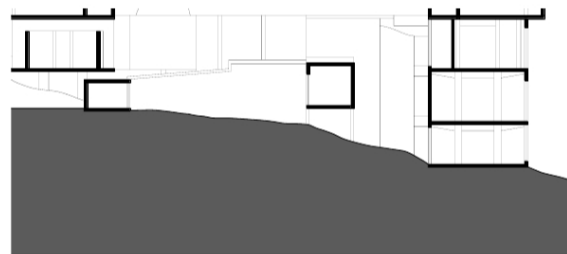
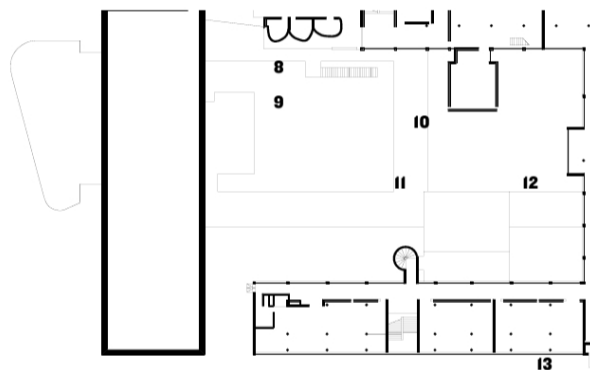
Although we admired and learnt from many other architects, for my generation Le Corbusier was the touchstone. The volumes of the *Oeuvre Complète* were the bible, the drawings and photographs rather than the text, although often you would only fully grasp a key lesson once you had made a similar breakthrough in your own work. It would take a thick book to elucidate everything that might be learned from him, or even to provide a detailed exegesis of a single major building. But Le Corbusier's own writings were often simplistic propagandising and usually help little in fully understanding the buildings. Nevertheless, many of his devices are still regularly exploited, such as the introduction of the double volume to engender some sense of spatial release, such as Wright provided with his diagonal flows between rooms.

One of the ways Le Corbusier achieved flexibility and a sense of spaciousness in even tightly planned residential units remains instructive: those elements that are unmovable (those with plumbing and large bits of furniture) are fixed in place and the rest of the space is left as fluid as possible to be subdivided as required. The series of apartments of differing sizes illustrated in La Ville Radiouse, each of 13 square metres in area per inhabitant, are inspiringly instructive, although acoustics would have been a problem. The approach has similarities to Wright's deployment of built-in and mobile furniture in his living areas. But in his houses the furniture was too



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**La Tourette**

by Le Corbusier

11. Plan of refectory and church level

12. Plan of cell levels

13. Plan of entrance and study level

14. Section

15. Refectory with columns subdividing into nave and aisles

16. Crypt chapel feels semi-subterranean like Le Thoronet's Chapter House

17. Monk's cell, like the church, is a megaron in form

- 1 lay brothers' church
- 2 monks' church
- 3 void over crypt chapel
- 4 sacristy
- 5 atrium
- 6 refectory
- 7 chapter house
- 8 entry
- 9 parlours
- 10 lay brothers' common room
- 11 oratory
- 12 library
- 13 lecture rooms

'La Tourette is a good example of how Le Corbusier drew on the past, not copying historic precedent, but radically adapting its forms and organising principles to suit very different programmes, times, materials and methods'



‘La Tourette was a commission particularly suited to his monastic temperament. Along with the Ronchamp chapel, it is also his most densely allusive work’

heavy to be easily moved while Le Corbusier used light furniture that could be readily rearranged. But in contrast to Wright’s concerns with cosy domesticity for the nuclear family, Le Corbusier Purist *machines à habiter* were ideally for rational technocrats and avant-garde art lovers for whom cosiness would be cloying. Yet from Le Corbusier’s example came an ideal for some mid-20th century architects of combining built-in and easily movable elements to design homes that could quickly change in function and mood through the day and seasons: a sunny children’s playroom during the day; a restful refuge for the parents in the evenings; a party space for large gatherings; and a winter garden when plants are brought in during cold weather. This is a dimension to residential design now sadly lost, but worth recovering.

Among Le Corbusier’s greatest works is La Tourette,<sup>2</sup> a commission particularly suited to his monastic temperament. Along with the Ronchamp chapel, it is also his most densely allusive work, so much so that to unpack the many rich narratives encoded in the building, particularly the more esoteric ones, is far beyond the scope of any brief essay. But La Tourette is also a good example of how Le Corbusier drew on the past, not copying historic precedent but radically adapting its forms or organising principles to suit very different programmes, times, materials and construction methods. Space here allows only a tiny insight into a few instances of this process.

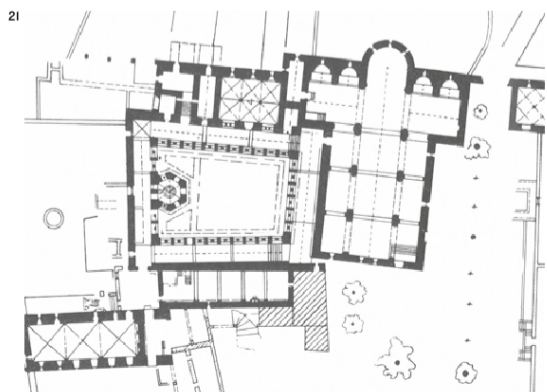
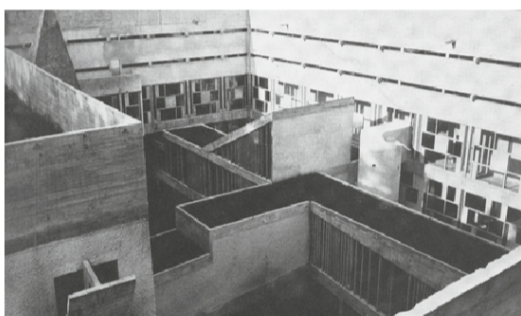
When commissioned to build La Tourette, Le Thoronet was suggested as embodying the spirit sought. But Le Thoronet is a Cistercian monastery, where monks slept in a single dormitory, tucked in remote seclusion in the countryside. La Tourette was built as a seminary, an educational centre, for the Dominicans,<sup>3</sup> an urban order with monks in individual cells. And although built out of town, it is readily approached by car and set in what is now a benign countryside very different to what would have been the wilds around the medieval monastery. This difference explains something that baffles many about La Tourette: are the enclosed covered ways across the central court a dud substitute for a cloister ambulatory? No, there is no cloister, as today a contemplative stroll in the countryside is more apt than circumnavigating a cloister ambulatory within the defensive enclosure of a monastery.

Built on a steeper slope than Le Thoronet – and floating above it rather than partially sunk into it, as is the older building – La Tourette follows the traditional monastery parti of being wrapped around a central court with the church taking up one side. But the ease of approach to the seminary and the secular nature of the teaching rooms on the entrance (middle) level presented a major problem: how to achieve an appropriate sense of

sacred contemplation within the cells and church? At Le Thoronet, once reached only by protracted arduous travel, the whole monastery is sacred. But to invest some sense of the sacred in the church and cells, Le Corbusier had to build into the compactness at La Tourette some such sense of distance, in physical and temporal terms, from the secular level sandwiched into its middle. With the cells, this is achieved by ranging them on long corridors deliberately designed, with rough plaster walls and no outlook, to discourage lingering and socialising. With the church this is achieved by gathering the novices under the sloping roof of the so-called atrium adjacent to the refectory, to then process together into the church.

Yet, and this illustrates how Le Corbusier learned from and adapted the lessons of history, there is something equivalent at Le Thoronet, not found in other Cistercian monasteries. There the ambulatory outside the church is raised several steps above its other arms and lined with a stone bench where monks would gather before entering the church. Le Corbusier has taken this distancing device and intensified it, but all in a stark Corbusian vocabulary. The church is just a long and tall concrete box lit by horizontal slots that throw light on the Bibles and hymn books of the monks aligned along its sides. Derived from the megaron, the early Greek sacred building form that when surrounded by columns would become the cella of the Classical temple, it is startlingly stark and direct in its simplicity yet powerfully sacred in ambience. But the monks' cells are also each mini megarons, the visual and semantic pun between cella and cell making clear the sacred nature and interdependence of these spaces set so far apart, one for communal worship and the other for individual contemplation and prayer.

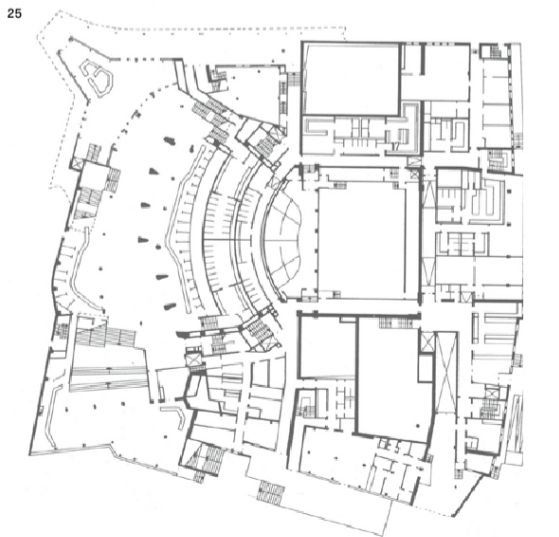
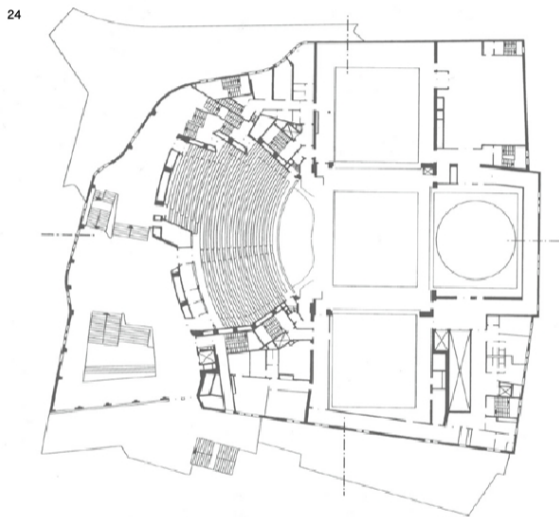
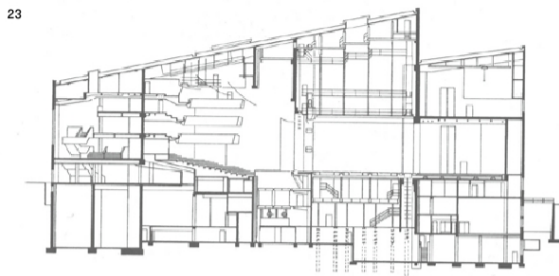
But the most distant and sacred space is the crypt, with its individual altars for solitary worship, reached by descending beside the nave to pass under it, so that the crypt seems semi-subterranean and very distant. As at Le Thoronet, the floor steps down with the slope of the hill, and to focus attention on the altars, each is individually lit by the large coloured, truncated cone of a rooflight, while the outer wall leans in as if further pressing attention on them. Here the formal and associative interplay is with an element even more distant than the cells, the little group of *parloirs* for meeting with visitors outside the entrance.



**La Tourette**  
**18. Monks processing to church from atrium**  
**19. Atrium – under sloping roof in central court**

**Le Thoronet**  
**20. Cloister ambulatory of this major Cistercian abbey built in the late 12th/early 13th century in Provence**  
**21. Plan of Le Thoronet**  
**22. Cloister with ambulatory floor set below garden**

**Essen Opera House  
by Alvar Aalto**  
23. Section  
24. First floor plan  
25. Ground floor plan  
26. Exterior viewed on  
approaching entrance



‘Aalto revered and sought lessons from nature, while his roots in Romanticism were inflected through the example of National Romanticism’

These take the form of a Neolithic burial chamber shaped like the Great Earth Mother – an archetype from which Mary Magdalene, to whom the church is dedicated, is perhaps a more recent incarnation – but now unearthed, exposed and minus the head, which is replaced by a viewing balcony: another complex dig at the Dominicans who massacred Le Corbusier’s forebears.

**Alvar Aalto**

If Le Corbusier was the greater architect of the two, more prodigiously inventive and producing deeper and more thematically complex works, then Aalto was the better one. For a client, Aalto was a considerably safer bet, his buildings much more likely to be functionally unproblematic, to weather well and last without undue maintenance. For lesser architects, Aalto was also the safer to emulate: bad Corbusian-type buildings can be disastrous while even a poor Aalto copy is relatively benign. And unlike so many modern architects, whose buildings are at their best when just completed and pristine for photography, Aalto built for the long term, claiming his buildings would be best judged after some decades (see *Reputations*, p110).

Like Wright and Le Corbusier, Aalto revered and sought lessons from nature, while his roots in Romanticism were inflected through the example of the National Romanticism of the generation ahead of him, represented in architecture by figures like Eliel Saarinen. If Wright declared himself an Organic architect, Aalto was seen by some as one too, but of a very different type. For Wright, Organic implied wholeness, an interwoven integrity in which all parts came together without compromise to their individual identity or the resulting, geometrically disciplined whole. Aalto was considered Organic, in part because his flowing interiors were like an inward extension of the natural landscape. But there tends to be less obvious geometric rigour, the presence of structure is often suppressed and sometimes sections show much poché. All of this was anathema to Wright and



many other modern architects. Like Wright, he was profoundly influenced by Japan, one source of Wright's gridded geometric discipline, ceiling treatment, eaves extending to interlock inside and out, and so on. But while Aalto borrowed details from Japanese architecture, it was his fascination with ikebana, Japanese flower arranging, that influenced his formal sensibility, reflected in the interplay of straight and wriggly lines, of balanced asymmetry and so on.

For many, the resulting architecture is enigmatically quirky, arbitrary and irrational, no matter how much they also admire and enjoy it. Yet if designing a building of similar size and programme to one by Aalto, you often discover his precedent to be surprisingly pragmatic, compact and efficient, the distorted spaces tailored to function as well as fluidly flowing into each other, either minimising or making the most of major circulation routes, with long diagonals increasing the apparent size of spaces, and the whole enveloped in a compact exterior volume. Such a building is the posthumous Opera House in Essen, Germany. Here a prolonged and virtuovso processional entrance sequence up to and through the tall foyer, the auditorium and full fly tower, and extensive backstage and ancillary facilities, are all simply enclosed under two interlocking, sloping roofs and wrapped around with a rippling stone cladding.

Like the Rovaniemi library described last month, it is a building that seems to unfold almost inevitably before you as it entices you forward, almost as a participant in its design, with tactile detail (door handles, ceramic tile column facings, leather-wound handrails) falling to hand as if exactly anticipating your touch. Entering a low-ceilinged ground floor, you pass wavy cloakroom counters that seem to propel you forward, as if by peristaltic action, towards an inviting broad stair that cascades towards you as it entices you forward to climb up into the light. The stair then doubles back on itself to lead you into a lofty foyer, off which is entered the auditorium stalls, the tapering plan form of the space reflecting the diminishing number of people passing through it. Above are balconies, which give access to the upper tiers of auditorium seating, shaped to recall crags lining a steep-sided valley as they close towards a distant stair that tumbles, almost waterfall-like, down to the foyer floor from these balconies.

Opposite these balconies, tall windows form a jittery rhythm as they look west over the park outside. For much of the year the low evening sun enters through these to animate the foyer floor and balcony fronts with patterns of light and shade and recall the evening Nordic sun shining through pine forests. Then entering the auditorium, the natural metaphors become more explicit as you pass into night, some of the wooden slats lining the walls curving to evoke forest trees bending in the wind and all painted a dark, almost midnight, blue. Above, the white painted fronts of the upper tiers resemble clouds in the night sky while the bright-lit stage is like a forest glade in which magic of the performance is enacted. So, in this seemingly abstract building, a night at the opera is enhanced by subtly evoked resonances with ancient rituals in primeval settings.

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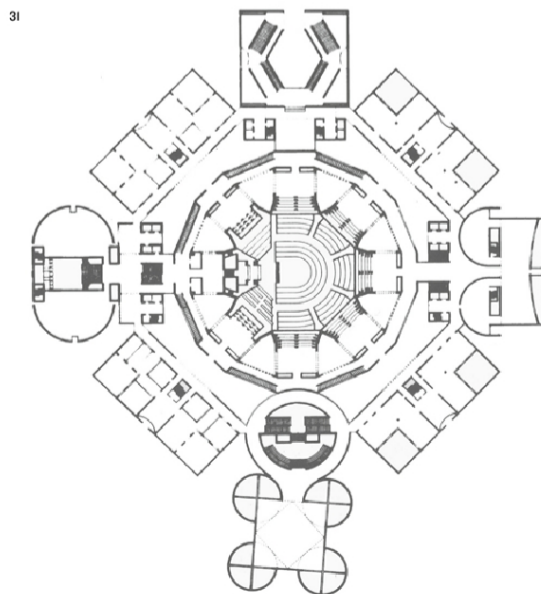
**Essen Opera House  
by Alvar Aalto**

**27. Ground floor with wavy cloak counters**  
**28. The foyer with stair leading up from below, jittery windows overlooking the park and crag-like balconies to the right**  
**29. The auditorium with midnight blue walls and seats and slat motif of wind-bent trees**

‘So, in this seemingly abstract building, a night at the opera is enhanced by subtly evoked resonances with ancient rituals in primeval settings’



**National Assembly Building, Dhaka by Louis Kahn**  
**30 & 31. Interior and plan of Assembly Building**



### Louis Kahn

If Aalto built to last, Louis Kahn (some of whose buildings should prove equally robust) was interested in a very different form of timelessness. And if Aalto was critical of a too arid and utilitarian modern architecture, and so humanised and naturalised it, Kahn's designs more obviously react against such buildings. Although doing better than decent work, mainly housing, for some time before, Kahn only emerges as a major architect relatively late in life when various forms of backlash against conventional modern architecture were already under way. These ranged from the Scandinavian softening of it with warm, 'natural' materials, to Festival of Britain-type prettification with patterning, to creating something more forceful in form and presence – rough, tough and muscular – in aggressively raw concrete and rough brick.

Kahn too sought a potent presence in his architecture, but a still and ennobling one. By evoking rather than copying the forms of ancient architectures he achieved what seems an abstracted condensation of them, thus giving his work the archaic spirit so many refer to. He sought to return dignity to what had become the merely functional, using architecture to re-elevate important facilities into civic institutions. He was also keen to regain the germinal origins of architecture. He talked about school starting with a teacher under a tree and the need to recapture and preserve that spirit. He pursued the ordering, dignifying spirit of rigorous geometric configuration. He sought to use materials in a way that was true to their nature and the most natural way of agglomerating components or conjoining materials. He explored ways of manipulating light, making it yet more magical as it revealed itself and the building it illuminated. Always he asked, what does this building want to be, in terms of its animating spirit, structural logic, the handling of materials? This was not empty rhetoric but a way of sidestepping the ego, to more deeply engage with and bring out the spirit of the building, to achieve a timeless grandeur that both transcended and yet seemed rooted in history.

Kahn's influence was various and can be detected in very different architectures, including what became known as the Philadelphia School, from which the influence rippled out further. His example also certainly helped to precipitate Postmodernism in architecture – if only any of it was of remotely comparable quality. His idea of differentiating served and servant spaces (the latter housing vertical circulation, lavatories and ducts) has become standard practice and his sensitive use of materials is widely emulated. He was, for instance, a master of both precast and in-situ concrete, even designing in detail the shuttering for the concrete at the Salk Institute to achieve effects that are still copied by many.

In his greatest works Kahn achieved a timeless and monumental quality unmatched by any contemporary. This is seen even in a building like the Kimbell Art Museum in Fort Worth, which from most sides seems to be only single storeyed – as well as blank walled and somewhat inscrutable. Yet the museum beautifully exemplifies Kahn's notion of institution, not as unduly

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**Kimbell Art Museum**  
 by Louis Kahn  
**32.** View from park with vaulted porch leading to entrance court and grove  
**33.** Entrance lobby  
**34.** Typical view of gallery  
**35.** Plan  
**36.** Section

imposing or exclusionary, but as conferring common meaning and values by dignifying our deepest impulses to share what is most important to us. It also achieves another of Kahn's ideals whereby structure and light work together to shape space and bestow upon it its essential character and identity, the structure 'making' (admitting and modulating) the light that in turn shows off the structure. The long repetitive concrete vaults, and the silvery light bounced onto them from the metal reflectors below the glazed slits along their tops, and the rhythmic modulation of the space by the vaults and flat ceilings in slight shadow between them are, along with the seeming simplicity of the cunning plan, what give the museum its mysterious spatial magic.

Although presently mostly entered from behind and through what is a basement, the museum was intended to be approached from either side and along the front that faces a small park – or did until Renzo Piano started building an extension. From whichever side you approach, steps first slow you before entering the lofty embrace of a vaulted porch, where benches, park view and the sound of water cascading into a pool below all slow time and elicit an appropriately contemplative mood. Between the porches is the central entrance court, its diminutive, close-spaced trees suggesting a sacred grove, so signalling the reverential attitude in which to enter art's sanctum. Then more steps up under another vaulted porch that sweeps attention to either side to further slow your approach. Finally, passing through the entrance doors, you inevitably pause while time stands momentarily still as the building at last reveals some sense of its entirety and what it has to offer. Ahead, the entrance hall opens into the museum shop under the next vault, while the vault overhead again draws the eye to each side, to the galleries visible to the

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**Photographs**  
**2, 3** Judith Bromley  
**9** Fondation Le Corbusier  
**11-14** Richard Weston  
**16** Lucien Hervé  
**17** René Burri  
**26-28** Liese Darsow  
**29** Ole H Krokstrand  
**30** Naquib Hossain  
**32, 34** Bert LaPrelle  
**35, 36** Richard Weston

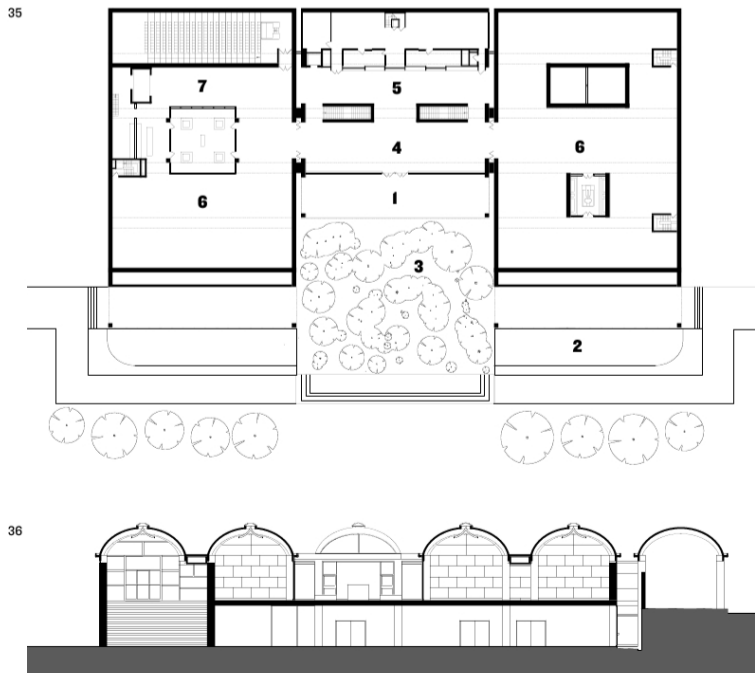
‘Kahn’s notion of institution, not as unduly imposing or exclusionary, but as conferring common meaning and values by dignifying our deepest impulses to share what is most important to us’

right below their alternating vaulted and flat ceilings, and to bright-lit courtyard to the left with the café visible to one side and the entrance to more galleries on the other. This moment of arrival, the gesture of welcome and invitation to explore as the building gives itself to you, is one of the great architectural experiences offered by 20th-century American architecture, conferring a generosity of spirit and connection to the long march of history in which the museum’s contents were created.

**Conclusion**

Briefly touched upon above are only a few examples of the many lessons that can be learnt from just four of the great Modernist architects, emphasising in particular the left quadrants of experience, meaning and the multiple forms of relationship the buildings establish with their users – all areas in which much modern architecture is weak. The intention is merely to suggest that this is a topical exercise worth pursuing in more depth and detail. With these architects, this is easily done as each has spawned a mini industry of scholarship. And the specific buildings discussed were chosen because I have written elsewhere about them in more depth, should anyone want to explore them further.<sup>4</sup>

- 1 vaulted porch
- 2 pool
- 3 court and grove
- 4 entrance lobby
- 5 shop
- 6 galleries
- 7 café



1. In particular see the excellent essays Robert McCarter (ed), *On and By Frank Lloyd Wright*, Phaidon, 2005.  
 2. Somehow the preposterous notion has gained credence that Iannis Xenakis was a co-designer of La Tourette, Le Corbusier’s most autobiographical work. In part this arose from a BBC programme that credited Xenakis as a co-designer, although it also made it obvious he had no understanding of the building. This was confirmed in a discussion I had with Xenakis who could not explain even the simplest and most obvious design moves and who dismissed as coincidence the long sequence of paintings by Le Corbusier, originating in the 1930s, in which he developed formal themes found in La Tourette. I later spoke to architects who had worked in Le Corbusier’s atelier at the time, particularly with Georges Candilis, and they all refuted Xenakis’s claims. He made some early sketches in the Le Corbusier archive, with

themes not in the final building, he helped with the engineering and making a model, and undertook site supervision. He later designed some villas in Greece that are awful.  
 3. The Dominicans were formed expressly to counter the Cathar heresy and led the crusade that massacred the Cathars, from whom Le Corbusier claimed to be descended. This accounts for many of the esoteric allusions, particularly in the church, most explicitly in what looks like a red cascade of blood.  
 4. Peter Buchanan, ‘La Tourette and Le Thoronet’, AR Jan 1987. This was intended as the first of several articles gradually probing deeper into La Tourette, but although delivered as lectures they were never published. Buchanan, Peter, ‘Aalto Opera House, Essen’, AR June 1989. Further description of the Kimbell can be found in Peter Buchanan, ‘On Respect and Inevitability’, in *Renzo Piano Building Workshop, Complete Works*, Volume Five, Phaidon.



**1. Freestanding object buildings with abstractly gridded facades in downtown Houston, Texas, exemplify the alienating placelessness bequeathed by modern architecture to the contemporary city 2, 3. The enclosed vista of a medieval European city is imbued with a strong sense of place. Contrast this with the placelessness of a contemporary street and its soulless, extruded elevations of gridded glass and metal**

# THE BIG RETHINK PART 7: PLACE AND ALIVENESS: PATTERN, PLAY AND THE PLANET

The cultivation of a sense of place embeds architecture more fully in the world as an experience that goes beyond buildings to articulate and resonate more intensively with wider human concerns and ideals

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Creating place – environments with a distinct sense of place (of being somewhere memorably distinctive that is rooted in and shaped by the many specificities of its larger setting) – is an essential aspect of how we have made a home for ourselves on earth, and so also of how we made the earth our home. It is impossible to generalise about all places: some can be forbidding and provoke unease; others, those we are concerned with here, are welcoming and entice us to engage with them. In such places it is easier to be fully present, to feel a sense of belonging to, and relationship with, our setting, to open up and simply be. Place thus contributes to our identity, it is where we can dwell rather than merely reside, facilitating the unfolding into the depths of our humanity and the experience of connection with and reverence for the world. Place is something that for millennia we created instinctively and inevitably, yet now only rarely achieve. But the environmental crisis and the need to create a sustainable culture is asking us to come back home, to feel a sense of belonging to and deep respect for the earth, things we cannot do in the alienating and placeless world we have been creating.

Among the most common criticisms of modern urban developments, one acknowledged even by architects, is the absence of a sense of place, Gertrude Stein's 'There is no there there.' Less widely recognised, although commented on by some, is modern and contemporary architecture's lack of aliveness – here intended as a quality conveyed by the form and fabric of buildings and spaces rather than liveliness of use (an equally important quality, but not our concern here). These absences, of place and aliveness, are closely related and the inevitable consequences of, even intrinsic to, modernity: the erosion of place is, among other things, a correlate of some of the freedoms it promised; lack of aliveness is, in part, an unconscious reflection of modernity's underlying Newtonian paradigm of a dead and meaningless clockwork universe. Both are symptomatic of what has now brought us to the brink of disaster, including the extinction of many forms of life as arguably presaged in our lifeless architecture. For reasons we will explore, reinvesting a sense of place and aliveness in our built environment must be part of creating a sustainable culture. Yet the experiential relationships that go with place and aliveness, the sense of connection they afford, can no longer only be to the locality and its genius loci, as it generally was in pre-modern times, but must expand to recognise our interdependent connections with the whole planet.

Place is now the subject of study and speculation in many disciplines such as philosophy, particularly phenomenology, as well as environmental psychology and urban geography. But discussion here is deliberately non-academic and narrowly selective, particularly to what is pragmatically applicable by architects. Aliveness in architecture seems still to be of concern to only a few architects, and is probably a baffling idea to most others. Yet it is a major theme in the writings of Christopher Alexander, and in *The Old Way of Seeing* by Jonathan Hale.<sup>1</sup> *The Timeless Way of Building*<sup>2</sup> and *A Pattern Language*,<sup>3</sup> by Alexander et al, are about the creation of networks and hierarchies of interlinked places of various

sizes and functions that exude a sense of aliveness, while the four volumes of *The Nature of Order*<sup>4</sup> are concerned, in large part, with the qualities that invest a sense of aliveness in artefacts. *The Old Way of Seeing* is less known than these books but equally marvellous, although it confounds a good proportion of those few architects who encounter it. Indeed, the latter parts of this essay may prove for some architect-readers to be among the most challenging of this series, less in understanding the argument than in the resistances provoked to applying some of what is implied as necessary to invest a sense of place and aliveness.

Some urban geographers argue that place is not conferred by physical characteristics but is a purely social construct, a cumulative intellectual or cognitive overlay. Certainly memory and meaning attach themselves to places and these add to our experience of them. Familiarity influences the experience of place, so that someone first encountering a place where locals feel at home might initially be uneasy there. But place, like aliveness, is something we recognise intuitively rather than intellectually, and both might even be recognised by the feeling stirred in us when we open up to engage empathically and experience rather than merely detachedly observe or rationally contemplate. The argument here is that these qualities arise largely from physical characteristics, the most challenging of which for contemporary architects to address is the role of pattern. This is not pattern as a continuous decorative surface, as is currently fashionable, but pattern as an irreducible perceptual gestalt that confers on a building a distinct physiognomy, a sense of stability and wholeness, and raises it from useful, subservient artefact to a being in its own right.



Some phenomenologists assert that place implies a distinct boundary, even if that is the horizon or beyond, as in a prairie or desert; also that as important as the sense of horizontal boundedness (which may be defined by the trees visible to and seemingly enclosing you if in a forest) is the vertical connection to earth below and sky above. Certainly manmade environments seem more likely to be experienced as places if spaces are positively defined and enclosed, as in a classic layout of streets and squares and, perhaps even more so, when combined with the closed vistas conferred by the curving streets and irregular layout of medieval urban fabric. A ground plane textured by cobbles and paving slabs also seems to enhance a sense of place, while blandly smooth ground surfaces can leave you feeling as if in a computer rendering. (For example, imagine how different would be the experience of the British Museum's Great Court if the floor was textured or patterned, with cobbles say, and how much more present you would feel when there, subliminally more aware of the floor beneath your feet.) Moreover, each such place is experienced as an entity in itself, even when on the way to somewhere else, ideally as part of both a network of interlinked places and a hierarchy of interlocked space of differing scale (such as street, projecting portico, ornamental doorcase and so on). Although not essential to a sense of place, such thresholds, and those between clearly differentiated urban areas, can enhance a sense of place by signalling visually the transitions between places, and intensifying and prolonging the experience of transition.

Phenomenology, and architects and writers influenced by it, have many other insights to offer about the characteristics and perception of place, such as that place is experienced through all the senses and not sight alone. And the visual perception of place does not privilege foveal vision, which is concentrated on the centre of the retina and holds the object observed at a distance, but also draws equally or more upon peripheral vision and the sense of intimate immersion in, and even tactile engagement with, the surroundings this brings. Place also tends to be engaged by the whole body, thus temperature (not just of the air, but of the warmth of wood or coolness of stone, say) and texture, whether felt underfoot or from a surface sat or leant upon (which could be soft leather or rough stone) might be crucial, even if these are evoked only empathically. As well as haptic responses of this sort, acoustics and smell can be important to the experience of place. Although phenomenology has much more to say about place, the writings of influential writers such as Juhani Pallasmaa, and before him Gaston Bachelard, are so popular with and well-known by architects that the subject need not be pursued further here.

#### **Modernity's erosion of place**

Modern architecture's erosion of place is largely obvious, although the gradual diminution of a sense of aliveness and place started earlier, as will be explained in the later discussion on pattern. Just the name the International Style announces its disdain for place. The abstract, floating white forms deliberately dissociate from context, local culture and history, and even deny



**4. A textured floor would have given the British Museum's Great Court a greater sense of place to make it less like a computer rendering**

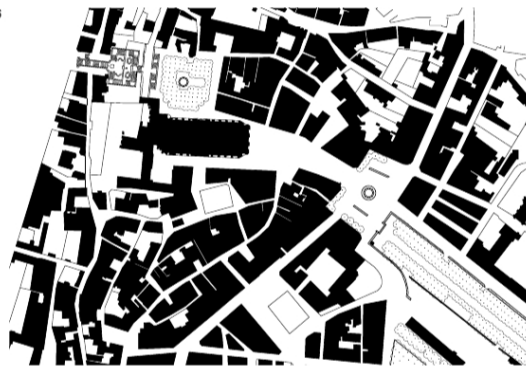
their vulnerability to the passage of time. The buildings were once pristine bubbles of newness where the cloying constraints of place and past had been discarded and the only connection with context was as framed views in the picture windows. The thin planar forms look weightless and invite no empathic engagement, appealing only to the distancing sense of sight (foveal vision), nor do the horizontal strips and larger expanses of glazing evoke the presence of the human body as did the traditional vertical window. These were buildings that refused to relate: to history, older neighbours or, except at the level of functionality, to us as humans. But place and aliveness are qualities of perceived and experienced relationship.

Such buildings are at their best in lush landscaping but, with notable exceptions such as some German housing schemes, mostly make unsatisfactory urban tissue. Freestanding, set back from the street and separate from each other, space is not stabilised by being enclosed and defined or by the sense of weight of buildings bearing heavily on the ground; instead it sloshes between buildings, under those raised on pilotis and up and over those without a cornice. Further developments compounded these problems. Neue Sachlichkeit or Rationalist architects proposed identical housing slabs in regimented rows, oriented and spaced only for ideal solar orientation and to obviate overshadowing, as in Ludwig Hilberseimer's well-known proposals. Postmodern criticisms of modern architecture have meant that architects are again inclined to at least respect the block pattern and address the street edge. But as the fad for icons proves, this is still far from universal, nor is it enough to create a sense of place. Too many architects are still infected by modernity's celebration of individualism and creativity as self-expression. This is perhaps seen at its worst in upmarket suburban residential areas where each architect-designed house is different in form and

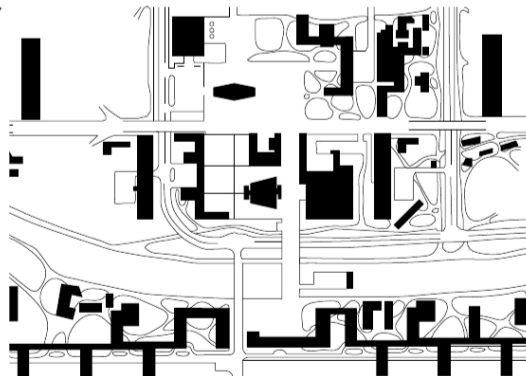
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7



**5. Ludwig Hilberseimer's hyper-rational vision of an anonymous, placeless modern city**  
**6. Plan of Auch, France, shows a network of well defined public spaces**

**each with a strongly differentiated character**  
**7. Le Corbusier's plan for St Dié with object buildings arrayed in undifferentiated sloshing space**

materials and reduces a once-beautiful landscape to an ugly visual cacophony. The repetition of only one or two building typologies not only results in visual harmony but also helps to create a sense of place.

Later, the sometimes-called Second International Style of air-conditioned glass boxes and towers ignore even orientation. Instead of delivering transparency, the hermetically sealed glazed facades sever all relationship between inside and out, occupant and passer-by, while their slippery sleekness accelerates the placeless space that sloshes past them. The curtain walls are mere wrappings and like most modern elevations are extrusions of a repetitive grid. When well-proportioned with skilfully shaped transoms and other details, the results can be very elegant; but they are also lifeless and, without any focus (or foci) to hold the eye or elements interlocking inside and out, are unable to hold the space before them and help invest it with some sense of place. Partly as a bored reaction to these glass boxes, came the forceful articulation of function and structure; circulation, service shafts, structural frame and different kinds of spaces are all separated out and clearly expressed, all in total disregard for the potential uses and meaning of the residual spaces around them. Initially such buildings were in exposed concrete and hard engineering bricks with raked joints giving them a deliberately macho and aggressive demeanour. Worse still was when architects tried to invest these buildings with some suavety, using dark brown or purple brick, dark anodised aluminium frames and dark or tinted glass.

To get some measure of what has been lost, two comparisons are instructive. First, contrast the dark, dead and inscrutable buildings just described with, say, a terrace of Georgian houses, the lively rhythms of the white windows jumping out from the velvety soft brickwork in which red arches and quoins contrast with the browner dominant brick. Second, contrast a recently built central urban area with a historic one, after hours once both are empty: the former is a lifeless husk while the latter, even without anybody around, is a comforting presence, full of life and the suggestion of life. Most modern materials

further compound the problems of lifelessness, in that they do not gracefully wear, weather and patinate, softening their presence and recording the march of use and time, nor do they record their long processes of natural formation as does the grain of wood or stone. These both invest the materials with life and help you to relate to them.

Again, all these forms of autistically aloof modern buildings described above stand free from each other with undefined space whooshing around them. And the outdoor space closer to the buildings is merely residual (often because ease and cheapness of construction resulted in rectangular buildings on a non-rectangular site), a purposeless and unloved left-over pathetically camouflaged with landscaping or paved and labelled patio or piazza. As must be obvious, Parametricism takes all these pathological aspects of modern architecture to an extreme, often stirring rather than stabilising and defining open space and devoid of forms of anthropomorphic resonances or physiognomic gestalt. This is why it is merely a sunset effect, saying goodbye to modernity, and irrelevant to the future – no matter how dynamically futuristic the forms.

These characteristics of modern architecture should not, as they usually are, be blamed on architects alone. They reflect, and are the inevitable consequence of, more general characteristics of modernity, the era that began with the Renaissance, particularly those on which modern science is predicated. These were rehearsed in earlier essays and only some are summarised here. A core notion underlying modernity is that there is an objective reality, external to and independent of us, that can be fully known through detached observation, measurement and reductive analysis. This denies the multiple webs of relationship – beyond those simple chains of cause and effect studied by mechanistic science – in which everything is inevitably enmeshed and which are again being recognised as crucial dimensions of reality. Place and aliveness arise from these webs of relationship and are perceived through evoked empathic relationship. In terms of Integral theory's All Quadrant All Level diagram (AR March 2012), modernity and modern architecture emphasised the right quadrants, but again place and aliveness are experiential dimensions belonging to the left quadrants, along with such other left quadrant domains as meaning and memory. Modernity is also seen as over-emphasising the left hemisphere of the brain – which is logical, linear and reductive (intellectual) – at the expense of the right hemisphere, which is more intuitive and holistic in operation. And as will be explained later, place is a consequence of drawing on intuition during design rather than the intellect alone. Little wonder, then, that modernity eroded the sense of place and aliveness in our built environment.

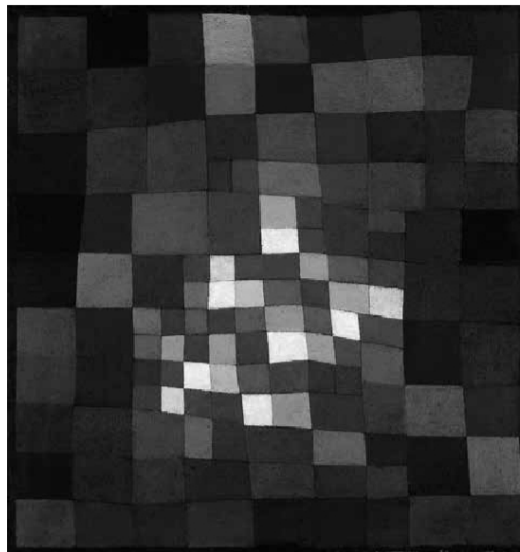
Electronic communications also impact our sense of place, though it can be argued both that they make it less relevant or, contrariwise, even more so. Today everyone, at least those with television and internet access, is connected, no matter where they may be, simultaneously with everywhere else. So while you may seem to be in just one spot, you are, in Marshall McLuhan's terms, connected

‘Creating places starts with sensitive attention to what is there and the embrace of a much larger spatiotemporal continuum than is customary with Modernism’





**8, 9, 10. Buildings in London during the 19th century became progressively more mechanistic in composition, from the cheering 'smile' conveyed by the buildings in Covent Garden, 8, each a 'being' in its own right that 'holds' the space before it, to the more mechanistic terrace in South Kensington, 9, where individual houses are still differentiated, to the dull extruded rhythm of another terrace in South Kensington, 10. Paul Klee's 'Blossoming' depicts in an abstract composition how nutrients in the surrounding moist earth feed and are fulfilled by the opening flower – an example of how buildings may draw on and fulfil their context**



by electronic extensions of your nervous systems to the whole globe from which you are bombarded with images and information. Some see this as an argument for the irrelevance of place, and others for the need for a heightened sense of place – intensified through exaggeratedly sensual and textured materials and plants (as encapsulated in the phrase high-tech, high-touch) – as a stabilising anchor in this world of overload and flux. Quite long ago now, Joshua Meyrowitz also argued, in *No Sense of Place*,<sup>5</sup> that television erodes our sense of place by blurring the distinctions between private and public modes of behaviour. Prior to television, we behaved differently in public than in private, formally in the former and more casually and intimately in the latter, as well as differently when in front of adults or of children. But television is a public medium that invades the home. Not only is it watched by adults and children, but it favours public figures who talk and behave in a quietly intimate fashion as if in private with you the viewer. The result has been the merging of once distinctively different modes of behaviour – or at least more nuanced distinctions between them. Is this something unconsciously presaged by modern architecture's blurring of the differences between inside and out as well as in the continuity and diminished distinctiveness of the internal spaces?

#### **Reinstatement of place**

As argued in previous essays, the modern era is now waning. As a mindset it proved immensely potent in mastering aspects of nature: harnessing energy; creating networks of transport and communication; increasing food production; eliminating many diseases and so on. But now we need a very different mindset to help us to use this power more responsibly and sensitively, with greater awareness of its knock-on effects on society and nature. We must also overcome the alienation and disenchantment

that are the legacy of modernity and its blind use of power. If these do not actually fuel our disregard for the environment, they certainly anaesthetise us from caring about its destruction. We desperately need to regain a sense of connection to and relationship with our surroundings and the planet. One step towards doing this, which might make the adoption of others less discouraging, would be to reinvest our built environment with a sense of place.

This is a formidable challenge as it requires different ways of thinking, perceiving and designing, as well as overcoming entrenched aesthetic prejudices. Here we discuss just a few measures that will help to reintroduce a sense of place, which need to be used in combination to ensure much success. Remember though that place rarely, if ever, has to be created from scratch. Instead it starts as a response to place, to what is local and pre-existing, enhancing and even intensifying the genius loci of both site and setting, as well as relevant factors in what might be a large hinterland; place is also a lasting legacy to be patinated with the overlays of time, use and memory. Thus creating place starts with sensitive attention to what is there and the embrace of a much larger spatiotemporal continuum than is customary with Modernism.

Design tends to cement relationships with elements in the surroundings, often resulting in novel relationships between these, while also bringing into visible focus the myriad forces – from climatic to cultural, economic to land use – that shape or act on the site and location. (Much of this will be discussed further in a future essay on urban design.) This is a very different dynamic to the sort of passively parasitic contextualism that merely tries to fit in or, as do so many minimalist buildings, depends entirely for its effects upon its contrasts with its setting; both these strategies tend to sap character and vigour rather than adding them to place. Instead of such parasitism, a designer might explore the many forces impinging on site and setting and seek to resolve them in a synergetic synthesis, as the essential nutrients for a design that is rooted in place and manifests as its ultimate flowering. Or the designer might ask, when drawing on all these same forces and factors, what would the earth or evolution dream into being here?

To enhance a sense of place in public spaces such as squares, many writings – such as those on Italian piazzas and urban design, or of Neo-Rationalists like the brothers Rob and Leon Krier – assert the virtues of traditional, positively-shaped streets, squares, courtyards and so on. Some of these writings discuss also the importance of preventing space from 'leaking', for instance through corners that are too open. (Such a rule is particularly relevant when a square is centrally located and has abundant pedestrian through movement. But if not, such a square can be dangerous and it is by being overlooked through such leaks that safety is ensured and people enticed into it. Thus the location of a square or other public space within larger networks of movement and open space determines much of its character, meaning and intensity of use and identity.) Less often mentioned than enclosure in plan, but also important, is the role of the cornice in terminating a building and suggesting an upper



limit, making the street or square more room-like. Though most contemporary architects are averse to cornices, seeing them as anachronistic, an equivalent is increasingly evident in the use of a recessed top floor under an oversailing roof, such as in several buildings by Renzo Piano Building Workshop. The handling of the ground plane can be critical too, both the paving and the levels and slopes. Part of the problem of an unsuccessful historic piazza in Barcelona was that the ground sloped up to a central fountain: when the ground was instead slightly dishd people crossed and occupied the now safe piazza. The tiniest details can profoundly affect the character of a place.

The composition of the facades addressing or surrounding a public space is crucial to its sense of place and aliveness. For modern architects, elevations were the products of the needs and expression of the functions behind them and/or the logic of construction with repetitive components. Alignments and proportions could be adjusted, but otherwise, to go beyond this was denigrated as facadism. Yet one of the facade's primary purposes, one just as important as reflecting what lies

behind it, should be the role it plays in articulating and animating the space before it. Besides aptly communicating many dimensions of decorum, facades bring a place to life in many ways, not least in how openings, balconies and so on suggest the presence of the inhabitants. Also important in creating a sense of place is how facades convey a sense of stability, how intermediary elements interlock inside and outside and how symmetry reinforces both of these.

As already implied in comments on how sleek, sealed glass facades erode a sense of place, the material presence and sense of weight of a facade can contribute immensely to a sense of place. Highly textured or visibly grained materials slow the apparent flow of space and add to the palpable physical presence of buildings (one reason for the rusticated base of classicism), while a sense of heavy loads coming down to the ground roots the buildings and arrests the flow of space further – as suggested by the engineering term, statics. If the discipline and logic of the structural solution is readily legible, this can also help people to engage with the building, even if only subconsciously, and this too adds to a sense of presence and place. Yet a light and filigreed facade that seems porous to the space before it, with sufficient coherence and complexity of pattern to command attention, can also contribute to a sense of place. This porosity can help a building interlock with the space before it, a place-making strategy usually achieved by interlocking of interior and exterior through smaller intermediary places, such as arcades and aedicular windows, porches and porticoes. These stabilise the outdoor space and suggest the presence of the occupants within, so humanising the space, as well as playing important rhetorical roles that can add another dimension to a sense of place.

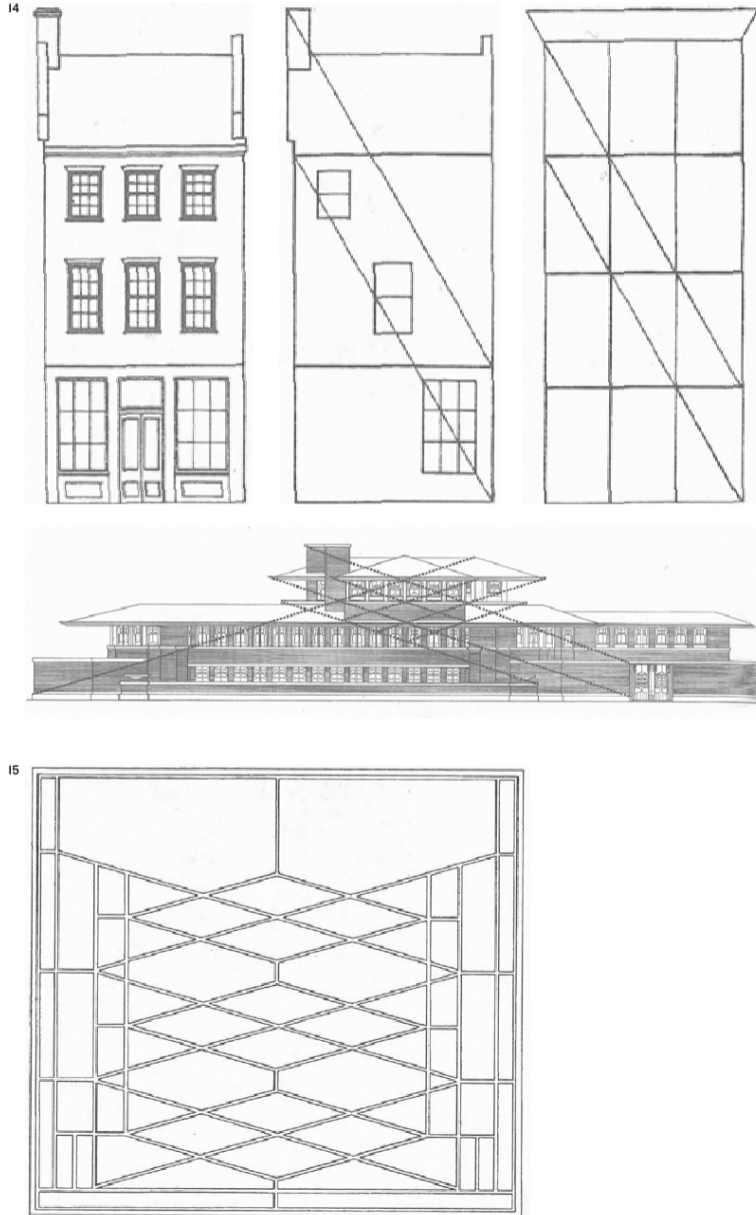
Along with rejecting facadism, modern architects tended to have a prejudice against symmetry, although it is one of the oldest and most powerful of place-making devices. A symmetrically composed facade, particularly with a central portico, projects a building's central axis forward into space. Cross axes from facades facing differing sides of a square help pin it in place and relate it to the buildings, while also perhaps bringing an ordering strength and serenity. The effectiveness of symmetry in bringing even a small building into relationship with its setting, or more usually vice versa, can be seen when a symmetrical building, perhaps with an approach avenue or garden extending the central axis, can command and draw into relationship with it an extensive landscape.

The key roles of such things as visual focus, composition and physiognomic pattern have already been suggested in commenting on how repetitively gridded facades are unable to hold the space before them. But these same facades, seemingly rolled out or extruded to area or length required, are consistent with the disciplines of modern construction. Yet they, and the tinted or mirrored glass they are associated with, as well as the minimal glazing bars they are fixed in – or often today, with the aid of glues or clips, none at all – are major contributors to the sense of placelessness and deadness of the modern urban environment. Though many architects would concede this, they may balk at adopting the

**12. Entrance porticos and aedicular windows interlock interior and exterior, house and street, in this London setting**  
**13. The symmetrical composition of Boschendal outside Stellenbosch, South Africa, helps the small building hold its own against the imposing mountainous backdrop**

**14, 15. Two diagrams from *The Old Way of Seeing* by Jonathan Hale. 14 shows how 60-degree regulating lines at 3 foot intervals organise the facades of early 19th-century commercial buildings in Massachusetts.**

**In 15, the pattern in the windows of the Robie House by Frank Lloyd Wright, one of the modern masters of placemaking, play with and reveal the regulating lines that governed the whole composition**

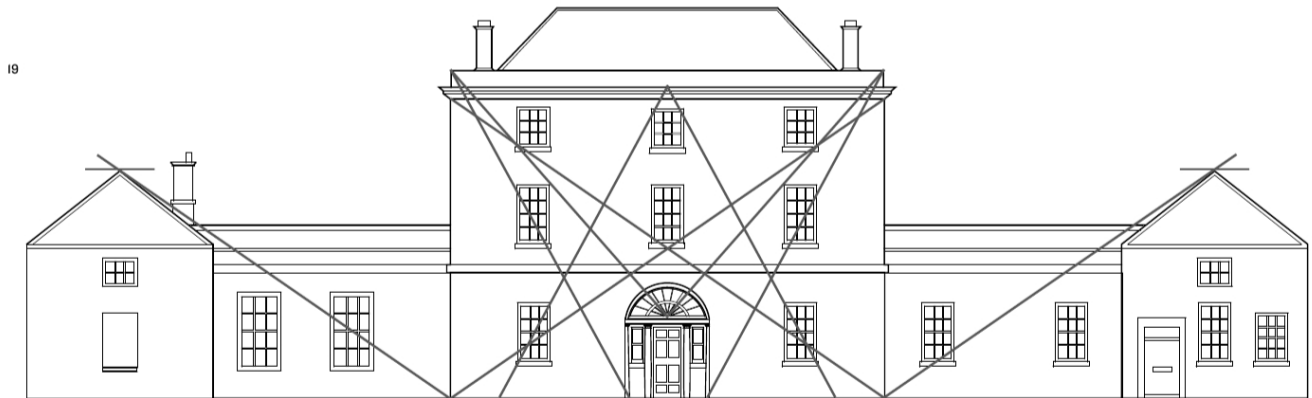


approaches to facade composition that counter these qualities. Instead, they may pursue strategies such as Renzo Piano has experimented with on a series of schemes, using carefully sized, proportioned and spaced terracotta elements to introduce an enlivening optical flicker. In some buildings he has compounded this visual vibration by placing adjustable glass louvres outside the terracotta facings for an effect he aptly calls pointillist.

Much more could be discussed in this vein, but we will finish by drawing on only a few of the key insights offered by two architect-authors, Jonathan Hale and Christopher Alexander. These insights are complementary to each other and have been validated to personal satisfaction by many years of intrigued but initially sceptical observation. In *The Old Way of Seeing*, Hale argues that architects have lost the capacity to see the patterns of light and shade in building forms and facades in the way we all once did. As architecture became more concerned with such things as function, economic return and mastering the rigours of contemporary construction, so it became increasingly an intellectual left-brain pursuit, and we lost the capacity for intuitive right-brain perception of pattern and its playful manipulation.

Once you start looking, it becomes unarguable that buildings from before the early 19th century have a companionable, subtly alive and place-making presence that modern buildings mostly utterly lack (Hale dates the beginning of the deterioration in America to 1830). It is not only a matter of attention to proportion (many modern buildings are elegantly proportioned), although in many old urban areas the use of similar proportions ensures harmony among what might be quite diverse buildings. Equally telling is that modern and contemporary buildings tend to be mechanically repetitive in their gridded elevations or the placing of openings, and the latter are devoid of coherent pattern, while buildings from before the mid-19th century are composed to form a coherent, geometrically disciplined and irreducible pattern. When analysed, these patterns are disciplined by regulating lines – which may be diagonals of various sorts, parallel lines at the same angle or lines radiating at common angles to each other – or other geometric figures such as circles or equilateral triangles. It is this that gives these buildings their sense of life and what he calls their smile.

Hale argues that the buildings were not necessarily consciously composed in this way, but that while we still retained the old way of seeing – right-brained, intuitive perception – and a playful attitude to design we managed to achieve such coherent patterns instinctively. He also asserts that this is a way of seeing that can be quickly recovered – it only requires a simple shift, such as that explained in Betty Edwards' well known manual *Drawing on the Right Side of the Brain*.<sup>6</sup> The benefits go beyond investing buildings with a smiling aliveness, an apt analogy because the irreducible patterns invest each building with a distinct physiognomy and presence. Thus each becomes almost a being in its own right, rewarding our attention with its coherent composition and holding the space in front of it and contributing to an animated sense of place. More than that, buildings composed in this way fit together harmoniously, even when very different.



‘Along with rejecting facadism, modern architects tend to have a prejudice against symmetry, although it is one of the oldest and most powerful placemaking devices’

**16, 17. Typical North London semi-detached houses enlivened by a compositional discipline which regulates lines and the interplay of various ‘centres’ of symmetrical elements between which the eye dances**  
**18, 19. Although austere and minimal, the front face of Church House, Grittleton, conveys a welcoming smile, owing to its beautifully disciplined composition**

**20. A recent building in Piccadilly by Robert Adam, made up of Classical components devoid of a disciplinary sense of composition, is both chaotic and lifeless**

Other, complementary ways of investing the composition of buildings with life are described by Christopher Alexander. In the first of his four volumes of *The Nature of Order* he lists and describes 15 characteristics that invest a sense of aliveness in designs or artefacts. Personal observation suggests one of these characteristics to be particularly pervasive and potent in enlivening facades and plan organisation. Alexander argues that aliveness arises from formal arrangements both constituted by a number of 'centres' and by the relationships between these 'centres'. The composition of many old buildings is indeed composed of a number of centres – each of them usually symmetrical, such as doors, porches, windows, bays of windows, groups of identical windows – and often of centres nested within larger centres, in an overall arrangement that need not be symmetrical. (The sub-symmetries, though, seem crucial.) It is the interplay between the centres, the way the eye dances between them, that brings such a composition alive; and this gains in coherence and capacity to hold the gaze (it smiles more) when the composition forms a coherent pattern of the sort analysed by Hale. Yet though the visual evidence might be irrefutable, it is difficult to imagine many architects being willing to adopt such compositional disciplines, which they might dismiss as anachronistic.

Analysing buildings, particularly street elevations, makes clear that the loss of aliveness that concerns both architects and critics did not start suddenly with modern architecture, and also there were modern architects who could still invest a building with life. Instead there was a gradual tailing off of visual vitality through the latter part of the 19th century as facades became gradually more mechanically repetitive, more extrusion-like with the rhythm of evenly spaced windows extending across rows of house fronts. Similarly, adopting the forms and materials of vernacular buildings or the rhetorical elements of Classical buildings without the underlying compositional discipline of physiognomic pattern achieves nothing. The buildings of contemporary classicist Robert Adam, for instance, pile up Classical motifs as a compendium of signifiers, but are a lifeless dog's breakfast as composition. In Hale's terms, he, like those who endorse such designs, and the New Urbanists too, has lost the old way of seeing, which is much more important in investing the qualities so many cherish than the use of historic forms.

### Conclusion

To want to revive a sense of place is much more than nostalgia. If our huge global population is to survive in decent living conditions, if we are to achieve true sustainability rather than just lower fossil fuel consumption and emissions, then we must profoundly change how we live on and relate to the earth. But to stop merely camping or picnicking upon the planet as irresponsible transients – to truly dwell upon, belong to and feel reverential connection with the earth – we once again need to make environments conducive to this: real places. One way we will know we are getting there is when there are no longer the meaningless and unloved residual



spaces that surround modern and contemporary buildings, and instead even the smallest spaces are proper places, and cherished for that. Yet though we must learn from the past, as Hale and Alexander have, we cannot merely go back to the way things were.

Although some sacred places had a microcosmic dimension, with symbolic connections to celestial bodies, space usually was essentially local and associated with a certain parochialism. One aspect of the AQAL diagram not yet discussed is the significance of the levels. Those in the Upper Left and Lower Left quadrants signify psychological and cultural development respectively. The many distinct levels they depict can be simplified into three larger categories indicating how people and cultures evolve from being egocentric to ethnocentric and on to world-centric. The places we cherish were created by ethnocentric cultures, which were relatively homogeneous and whose concerns and loyalties were parochial. Those we must create must be ethnocentric, cementing our relationship to community and locality, yet also world-centric, highlighting our planetary connections and responsibility, as well as being suited to the greater cultural diversity that characterises most cities today. How that will be achieved is one of the key collective creative challenges of our time, one we have not even started to think about.

### Photographs

- 1 3DI
- 2 Robert L Bracklow
- 3 Gabriele Basilico
- 4 Nigel Young
- 20 Morley von Sternberg

1. Jonathan Hale, *The Old Way of Seeing: How Architecture Lost its Magic (and How to Get it Back)*, Houghton Mifflin, 1994.
2. Christopher Alexander, Sara Ishikawa.
3. Christopher Alexander, Sara Ishikawa, Murray Silverstein with Max Jacobson, Ingrid Fiksdahl-King, Shlomo Angel, *A Pattern Language: Towns,*

- Buildings, Construction*, Oxford University Press, 1977.
4. Christopher Alexander, *The Nature of Order*, The Center for Environmental Structure, Berkeley, 2004.
5. Joshua Meyrowitz, *No Sense of Place*, OUP, 1985.
6. Betty Edwards, *Drawing on the Right Side of the Brain*, Tarcher, 1979.





I. Aurora Place in Sydney by Renzo Piano Building Workshop joins the city centre towers and gestures to the Opera House, drawing its influence inland while also relating earth and sky

# THE BIG RETHINK PART 8: LESSONS FROM LIVING MASTERS

The reappraisal of past architecture and the integration of its achievements into a new, higher level of synthesis underscores the transforming ethos of 'transcend and include', epitomised by this examination of the work of four exemplary living masters

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**AR SEPTEMBER 2012 PP 83-93**

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These Campaign essays are spurred by recognising this as a period of epochal transition, provoked by, among other factors, conditions so precariously poised and threatening that we cannot continue to blindly stumble forward. Instead we must act with the full awareness and responsibility that current knowledge should have, but has not as yet, made incumbent upon us so as to progress towards an inspiring and viable vision of the future. In part this vision would be shaped by a reappraisal of past triumphs and failures, including in architecture and urban design. The lessons learnt can then be synthesised in an unprecedentedly complete approach to the conception, in theory and design, of the built environment. We might then live more sustainably, not least because we feel more at home in the world and with ourselves because once again relating to community and place, culture and nature. This process of integrating the past achievements while moving on to a new, higher level of synthesis is an example of what Integral theory calls ‘transcend and include’.

This is the last of three essays looking at past architecture for lessons to inform this process. Each essay offers only a few examples, from what should be an exhaustive exercise, to inform and be synthesised in architecture adequate to the emerging era. The first of the ‘transcend and include’ essays in May touched upon a few lessons worth integrating in an architecture adequate to the emerging epoch from vernacular, historic and modern architecture in general. The second, in June, drew a tiny sampling of such lessons from just four great masters of modern architecture. In this third essay we derive another paltry sampling of lessons from architects still active today, whose work belongs to times that saw an increasingly diverse range of approaches evolving in the wake of the masters touched upon in the second essay. As with the architecture of this earlier period, the overall impact of this architecture has been problematic, particularly in urban terms. But there has also been much fine architecture and copious innovation and experiment.

This reappraisal of past architecture as the initial step towards transcend and include differs in emphasis from the studies of historians and those being churned out by students in masters and PhD programmes. In a transitional period such as now, it is also far more important, yet largely neglected in academe. It should be the subject of many essays or a number of fat books. Because of this, to look cursorily at the work of only four architects (as too with the June essay) from such a vibrant and various period of production seems almost absurd, and any choice of architects can only be extremely arbitrary. Equally arbitrary is to select architects rather than areas of exploration and expertise – such as urban thinking, technical innovation or green thinking, to name at random only a few. But this essay, like all the others in this campaign, should be seen merely as a prompt to provoke a much more comprehensive, collaborative and increasingly urgent Big Rethink. Besides, there is an underlying theme that manifests in very different ways with the four markedly different architects discussed; and this also links their work back to last month’s essay.

That essay discussed the loss of a sense of place and aliveness from the contemporary built environment.

This loss is largely because modern architecture tends to suppress relationships, both with other buildings and with most of whom we are as humans. This characteristic is inherited from the larger modern paradigm: its emphasis on reductive, materialist and mechanistic modes of thought, the AQAL diagram’s Right Quadrants, tends to eclipse the Left Quadrant realms of experience and meaning where the sense of relationship and the associations that go with it are forged. So the four architects discussed here are chosen not only for being very different, but also because the work of each provokes thought about the very different kinds of relationships architecture elicits.

#### Four living masters

Two of the architects may seem relatively obvious choices: Herman Hertzberger for his exploration of function, an issue so central to modern architecture that Functionalism is its synonym; and Renzo Piano, a master of advanced construction technologies, for some a key characteristic of modern architecture. But Hertzberger is chosen also because his approach to function is not only as understood by an objective detached observer (Right Quadrant) but also emphasises the creative responses of the users (Left Quadrant), thus establishing qualitatively different relationships with them.

Although initially a narrow technocrat, Piano’s work has progressively broadened to cement sensitive relationships with context and culture, and empathic relationships with users. A major consequence of modernity’s undervaluing of relationship is the creation of an alienating built environment and a general disenchanting of the world. A necessary step to sustainability is to re-enchant the world and evoke reverence and connection with it. Here, the early architectural projects of Emilio Ambasz have much to teach us. Peter Zumthor’s architecture is striking in its mastery of materiality and craft. But he reports that his starting point in design is with the atmosphere and associations he wishes to conjure, and so with the memories these stir and the complex sense of relationship these elicit between personal past and physical setting. Thus while all these architects have expertise in the Left Quadrants, they are also concerned with the Right Quadrants, from which come the initiating impulses of the designs of Ambasz and Zumthor.

‘A major consequence of modernity is the creation of an alienating built environment and a general disenchanting of the world. A necessary step to sustainability is to re-enchant the world and evoke reverence and connection with it’



**2. Haarlemmer Houttuinen housing by Herman Hertzberger: external access to the dwelling units and the external private space employ many devices to promote personal display and community interaction**  
**3, 4. Plan and central atrium of one of the Apollo Schools. The atrium is a multifunctional space in the corner of which are transitional spaces that relate to both atrium and classrooms**



**Herman Hertzberger**

Modern architecture might be synonymous with Functionalism, but the foregrounding of functionalist concerns precedes Modernism. It starts in the late 18th century with prison and hospital design and concerns with visibility and ventilation, respectively. But this is a highly constrained approach to function that dictates a single predetermined mode of use, an approach only apt to some situations. Early modern architecture, particularly in its use of the free plan, reacted against this sort of functionalism, introducing flexibility in the looseness of definition and overlapping of spaces and functions, so sponsoring spontaneity and choice. But the utilitarian rhetoric and ethos of modern architecture more generally led to a narrowly mechanistic concern only with such objective concerns as space standards, ergonomics, efficient functional relationships and cheap construction, and so to an arid and alienating architecture. This was becoming apparent by the middle of last century and led to inevitable reactions such as Brutalism that added an abrasively muscular oomph, and other approaches such as those associated with various members of Team X.

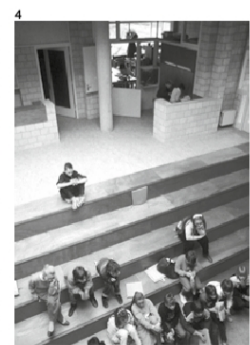
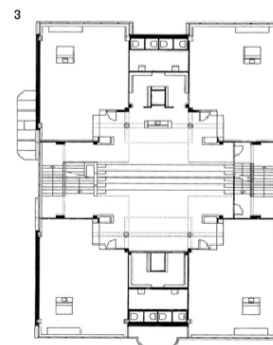
Particularly significant for the ideas developed in these essays was the response of Aldo van Eyck and Herman Hertzberger, who were concerned not only with how buildings were used (functioned – Left Quadrant) but also with the inner experience of the subject-user (Right Quadrant). So too, as explained in the June essay were the great masters of Modernism, those Van Eyck called the ‘Great Gang’. Hence van Eyck spoke of ‘homecoming’ and thresholds, the latter prolonging and intensifying experiences of transition, and devised ambiguously abstract architectural elements whose potential uses could be creatively interpreted in various ways – as in his seminal Amsterdam Orphanage (AR March 1982). Hertzberger could be seen as extending and almost codifying this approach, particularly in his mid-career from which the examples discussed here are taken, which is what makes this work of such great didactic value. Moreover, the work of van Eyck and Hertzberger was a reaction against the lonely

individualism and fragmenting atomisation of modern society and so provided many prompts to social interaction to initiate the re-formation of community. The designs and writings of both display an inspiring faith in the capacity of architecture to aid social regeneration, so leading to mean-spirited attacks by arch cynic Rem Koolhaas, when still desperate to make his mark.

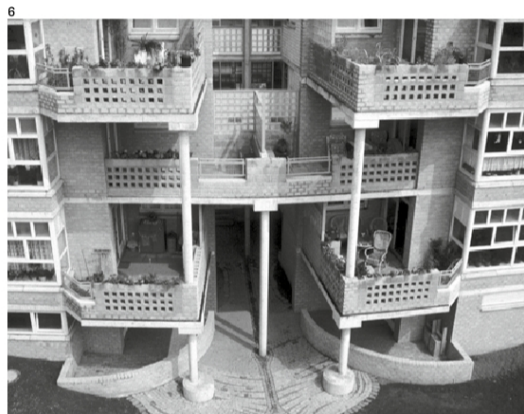
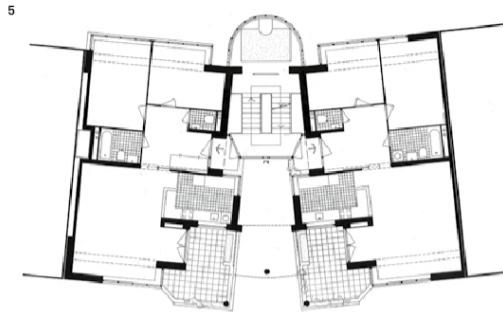
A suitable building to introduce aspects of Hertzberger’s design approach is the terrace of housing, Haarlemmer Houttuinen (AR August 1985), that sits between a busy route out of the city and a quiet new vehicle-free street near what were Amsterdam’s western docks. But, as with all examples of his work discussed here, we focus on only a portion of the building: the external access to the residential units and the external spaces related to each unit. Both of these are handled so as to bring the pedestrian street to life and help forge a community – in part by prompting a degree of publicly visible self-expression. Piers standing forward of the block provide an emphatic rhythmic articulation to the public space and support projecting balconies split between pairs of upper maisonettes. These second-storey balconies also shelter the external entrance stair that rises to the first-floor entrances to the maisonettes, while at street level are external spaces outside the entrances to the ground-floor flats.

Particularly striking are the many degrees of gradation between inside and out, and also between the public, semi-public and private realms. These gradations, and other devices like arranging the top row of the concrete blocks edging external spaces so that the holes in them might be used as planters, constitute a range of provocations to interact with and find potential ways of using them. Such interactions and embellishments make a public statement of personal identity. Coaxing residents out of anonymity in this way, and the copious opportunities to meet when coming and going, are just two ways Hertzberger helps the birth of community. Such concepts and devices might seem to be examples of an architect’s wishful thinking, but prolonged personal observation of Hertzberger’s works from this middle period of his career reveals that residents and others respond to them exactly as envisaged.

This is well demonstrated at the Apollo Schools in Amsterdam (1983), a pair of Montessori Schools.



**5, 6. Plan and portion of front face of Kassel housing, showing how stair hall and balconies are designed to promote social interaction**  
**7, 8. The Menil Collection, Houston, by Renzo Piano Building Workshop, glimpsed between a pair of bungalows and in a detail of the surrounding veranda**



Here again we discuss only a tiny part of each building, the central atrium and the spaces adjacent that are both part of the atrium and extensions to the classrooms that open off each of its corners. This atrium, with its floor of large steps, serves many uses: hall for school gatherings and performances, meeting place for small groups, perhaps from different classes, or simply as somewhere for a lone child to recline and read, perhaps using the step above as a desk. It is thus a space that changes in mood and use many times through the day. To a lesser extent, so too do the small spaces overlooking it that provide refuge for a single child, or small groups, quietly pursuing independent activities, yet in touch with their classroom and aware of the other classes using or passing through the atrium. These are buildings of very special atmosphere (or were when I spent time there nearly 20 years ago) born both of the richness of activities and interactions the design encourages, and the feeling of intimate reciprocity between building and user this interactivity elicits.

Many architects speak of creating vertical streets, of stairwells and lift landings becoming vibrant social spaces. But only Hertzberger has convincingly achieved this, first in a housing block in Kassel (AR October 1985) and then in one in Berlin (AR April 1987), and done it so well it is astonishing other architects have not adopted his solution, which again is our limited focus here. In both schemes each stair serves a pair of flats per floor. But instead of being shut away in a tight shaft, the stair looks outwards

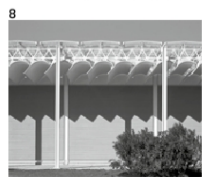
through both faces of the block, is also lit by light flooding down beside and between the flights, and the whole is overlooked from the kitchens. These latter are the pivotal spaces in the flats, from where a parent can keep an eye on wherever the children might be. Besides opening into the living rooms, the kitchens overlook the generous balconies, which in typical Hertzberger fashion have a more private portion tucked below the balcony above and a portion overlooked by it, so inviting neighbourly conversation if you sit there. Through a similar ingenious device, residents can indicate whether or not visits from neighbours are presently welcome. Each flat is entered through a pair of front doors, an outer glazed one and an inner solid one. If only the glass door is closed, passers-by see into the flat in a clear gesture of welcome; but closing the solid door is an equally clear deterrent to casual visits.

In the Kassel block, the uppermost half landings bulge into generous bay windows. Hertzberger had expected these to become communal playrooms for the children. Instead it is the mothers who mainly use them, often with smaller children, as places for communal coffee and chatting. In Berlin this communal facility is on the roof as a covered outdoor space with barbecue facilities for communal gatherings or single family use. The Berlin block, in particular, has other common facilities, including the shared central court and elements within it, all of them prompts to community interaction.

In traditional cities, more stable and homogeneous populations than now lived in buildings that lasted, so community was more or less inevitable, aided by familiarity fostered by working close by and meeting regularly in church, pub and elsewhere. But modern architecture and planning, and factors like more heterogeneous and mobile populations as well as the illusion of self-sufficiency brought by wealth, have destroyed and now inhibit the formation of communities. Yet community remains vitally important to socialisation and self-knowledge, to mental and even physical health. To regenerate community in the emerging era will probably require more assertive modes of prompting social encounters and community interaction than are found in traditional architecture, and are generally missing from modern architecture. We thus have much to learn from Hertzberger's architecture and the relationships it elicits with us as partners in interactive engagement with it, so discovering potentials within the architecture and ourselves. As discussed in an earlier essay, this is a fundamental purpose of architecture, to help us become more fully human according to our evolving understanding of what that means.

**Renzo Piano**

Although his output has taken a decisive wobble of late, with his inappropriate (to put it mildly) London buildings and the convent that desecrates the approach to and setting of Le Corbusier's Ronchamp chapel (AR August 2012), Renzo Piano is arguably the most significant architect of our times. If you imagined looking back on today from the future, and assuming environmental collapse and resource exhaustion has not reduced us to living in thatched mud huts, then his is the architecture



**9. JM Tjibaou Cultural Centre at Nouméa in New Caledonia, sits between a lagoon and the open sea towards which the main spaces turn their backs, inspired by the traditional Kanak hut in the foreground**



most likely to be a stepping stone to that future. In poetic resonances, if not in actual performance, his work evokes the ecological and evolutionary sensibilities of the emerging epoch: it seeks to harmonise technology and nature, and integrate the latest products of technological evolution into local context, in part by combining them with traditional materials and crafts. Thus the best of his buildings insert themselves into their physical and cultural setting like a new species in an eco-niche, transforming, yet revitalising rather than damaging, and bringing elements around into a new focus so that the design seems like a flowering of these local forces in a way analogous to Paul Klee's depiction in the painting shown last month.

Piano's early ventures in construction explored such narrowly technical challenges as spanning the greatest distance with minimum material – and few, if any, still exist. This first phase climaxes with the Pompidou Centre (AR May 1977), the ephemeral delicacy of the early structures now inflated to a monument to the idea rather than the reality of flexibility. The building is both a triumph and a dead end, as Piano recognised in dissolving the partnership with Richard Rogers and embarking on an intensely exploratory period in partnership with engineer Peter Rice. From this he re-emerged into the limelight he has enjoyed ever since with his first mature work, The Menil Collection in Houston, Texas (AR August 1983).

At The Menil, Piano – whose practice from then on is the Renzo Piano Building Workshop (RPBW) – first fuses the leading edge of global high-tech, of a highly crafted sort, with local construction materials and tradition, here America's two modes of vernacular construction: the clapboard-clad timber construction of the surrounding bungalows, which are part of The Menil complex; and the steel frame, exposed to echo a nearby Philip Johnson building in his Miesian mode and detailed in a Craig Ellwood manner. Oversailing these is the high-tech roof with ferrocement light-diffusing 'leaves' whose cross-sectional shape recalls the products of Charles and Ray Eames, who with Ellwood were prime exponents of the mid-century Californian architecture that was an apogee of American Modernism. The gridded plan is an intensification of the urban grid, which in turn intensifies the surveyor's grid that encompasses the country. Some argue the surrounding ambulatory with its slim steel columns echoes the porches of adjacent bungalows and verandas of southern plantation houses. And these are only some of the resonances and relationships established with local context and culture so that the building is arguably the most thoroughly American of its period.

Demonstrating Piano's responses to a very different context, climate and culture is the JM Tjibaou Cultural Centre outside Nouméa, New Caledonia (AR December 1998), built to preserve and foster the continuing development of the culture of the indigenous Kanak people. Strikingly contemporary, yet strongly rooted in and evocative of Kanak culture, the building has enchanted the imaginations of people everywhere. Its most distinctive and conspicuous elements are cages of wood ribs surrounding and rising above its main spaces. Shaped to entrain air movement – stack effect ventilation

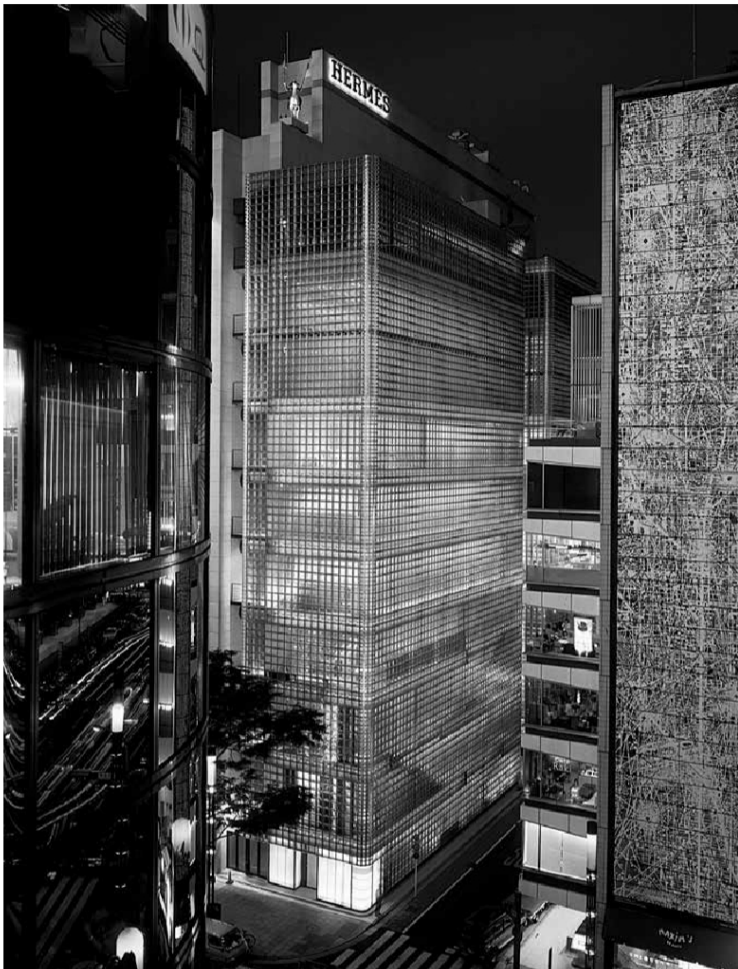
on still days – they more usually temper the force of prevailing trade winds sighing audibly through the wood slat outer cladding. The ribbed cages derive from the traditional Kanak hut and the visual vibration of the variably spaced slats harmonises with the surrounding Norfolk Island pines, one of the plants revered by and symbolically significant to the traditional pre-literate culture of the Kanaks. A landscaped pathway, designed with anthropologist Alban Bensa, leads to and around the building passing various natural features and plants in a sequence that retells Kanak myths and histories. Bensa also helped architects, engineers and clients ensure that components and joints conveyed legible and appropriate narratives. So, for instance, the vertical ribs of the cages represent the men of the village or tribe, minus the central pole of the chief (an omission deemed appropriate), while the horizontal structural members represent the outstretched arms and interlocked fingers of the women who hold the tribe together – with details that had to be revised until this narrative was clear to the Kanak clients.

As a result, the Kanaks and other Melanesians, to their initial surprise, readily identify with the building, recognising its resonances with their traditions. It might flirt with the folkloric, but the references to local culture are abstracted and intrinsic to the building, transformed and grounded by being crafted in a contemporary idiom. But it is also undeniably irrational, not least in surrounding small spaces with ribs reaching as high as a Gothic cathedral nave. This association with sacred buildings clarifies the building's deep appeal: it speaks to spiritual yearning to overcome the alienations of the modern age and reconnect with, and revere, nature and some of the values of traditional cultures that retain this reverence.

Aurora Place in Sydney (AR February 2001) may not engage with local culture as do these two buildings, but still relates to and consolidates its urban setting. It is thus something rare, a contextual icon, proving such an oxymoron to be possible. A tall office tower and a lower residential building overlooking the Royal Botanical Gardens both have sail-like curving, creamy glass curtain walls extending above and beyond the volumes they enclose as if to catch wind and light. These signal a visual affinity with the Opera House whose roofs resemble the billowing spinnakers of yachts in the harbour. The diaphanous, sky-striving facades also contrast with terracotta clad portions that bring the blocks to ground

**‘Although initially a narrow technocrat, Piano's work has progressively broadened to cement sensitive relationships with context and culture, and empathic relationships with users’**

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and relate them to their neighbours, while plants in the apartment block winter gardens suggest a relationship with the botanical gardens, another Sydney landmark. The scheme thus extends inland the influence of the Opera House while drawing together the cluster of towers and connecting them to the park, then adds to these horizontal relationships a vertical connection between earth and sky, so bringing a new coherence and unity to Sydney and its skyline.

The Parco della Musica concert hall complex in Rome (AR May 2003) is again clearly contemporary, yet also seems to have been there for millennia. It is built of the traditional materials of the Eternal City: shallow brick, travertine and lead for the curving carapaces enclosing the halls. These hover over a podium extending Rome's hilly topography, with its typical pines and olives. Yet the podium also resembles a semi-subterranean archaeological remnant, an association enhanced by the presence of a genuine ruin of an ancient Roman villa. Around the focal entrance piazza from which the complex is entered is enfolded an amphitheatre, achieving a very Roman mix of theatricality and public space as is found at the Fontana di Trevi or Spanish Steps. Used for nocturnal open-air concerts, with naked candle flames guttering along the travertine copings, it provides a magically timeless experience now intrinsic to Rome's cultural life. In contrast to the public open space in many modern and contemporary schemes, this piazza is no mere residual space, left over once the building is placed on its site. Instead, as with some other Piano schemes such as the extensions to the High Museum in Atlanta (AR October 2006), the piazza is the very heart of the scheme, orienting visitors before entering the building, and conveying and expanding the very spirit of the complex.

There are many further dimensions to Piano's architecture than those discussed here, even when limiting discussion to relationships in and with architecture. Some are well demonstrated by the Kansai International Airport terminal (AR November 1994), on a manmade island off Osaka, Japan, which made early use of the computer to develop a building enclosed in two directional



**10, 11. Tokyo's Maison Hermès (AR September 2001) by Renzo Piano may seem fashionably contemporary in mute minimalist form and enveloping jacket of huge glass blocks. But although self-contained and inscrutable, it again draws upon and is redolent with allusions to context and local culture. To resist seismic stresses, it adopts the structural principle of traditional pagodas, with a central row of fixed columns, while other rows have footings allowing some vertical movement or are jointed and so discontinuous between floors,**

**both devices decreasing the stresses entering the structure. And the huge brittle glass blocks are in neoprene gaskets so the whole suspended wall flexes during earthquakes. The high-tech building evokes traditional Japanese architecture in further ways: the glass block skin recalling shoji screens and the placing of the discontinuous columns creating a similar ambiguity about the edges of spaces as found in historic buildings. Even the rooftop garden has a Zen-like spareness and at night the whole building glows like a Japanese paper lantern.**

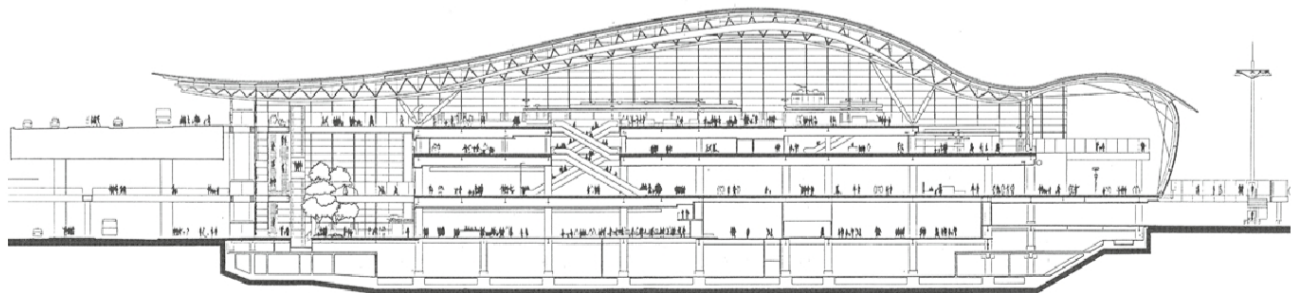
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**12. Parco della Musica, Rome. The halls sit on a plant-topped podium that extends the gardens of the Villa Giulia and is entered off a piazza-amphitheatre**  
**13-15. Kansai International Airport terminal, Osaka.**  
**13. Aerial view of the long boarding wing in front of a central terminal**  
**14. Passengers are greeted on arrival by the props supporting the trusses**  
**15. The asymmetrical section entrains air and orients passengers**



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curves. The design is the product of great synthesis and discipline, the double-curved forms providing structural efficiency, guiding conditioned air blown along the ceiling (eliminating suspended ductwork), allowing all aircraft to be visible from the control tower and helping passengers to orient themselves inside. Space, skin, structure and services find an exact fit with each other, every form and element shaped to fulfil several purposes simultaneously. The intimacy of accommodation (relationship) of these systems to each other, and the precise aptness of each to purpose replicates that found in organisms where honed through the long process of evolution, as made possible by the computer. Yet this also makes the Kansai terminal very different to now fashionable parametricist buildings, with their arbitrary computer-generated forms, so that it is the only 'blob' so far certain to be judged as convincing architecture in the future.

Unlike other parametricist blobs, and despite its vast size, the terminal elicits a surprisingly intimate relationship with people passing through it. Besides the discipline and lack of arbitrariness of the forms that allows you to read and understand the design rationale, and so intellectually engage with the building, the structure helps you to relate to the building more directly: intermediary in scale between you and the vast spaces it welcomes you into the building and then guides and accompanies you through it. The asymmetric curves of the main trusses over the departures hall both orient you and seem to tug you forward to where the ribs of the boarding wing guide you down to the floor of that 1.7 kilometre long space. There you then seem passed from one rib to the next as the tapering form clearly communicates whether you are moving away from or towards the centre. The contextual dimensions of the design are of a differing order to other RPBW buildings. Arriving on the island, the glistening curving carapace evokes waves on the sea or low clouds rolling off it. Arriving by air, the elongated, tapering boarding wings and strongly directional curves resemble a giant glider or mother craft, against which its airliner/progeny nestle. Then the gradual elimination and exposure of components under the landside eaves evokes

something very similar on Japanese temples in which layers of construction are gradually peeled away so that you can better understand and relate to the building.

A constant quest for Piano is the pursuit of lightness and transparency, major themes of modern architecture and consistent with the zeitgeist, modern technology and emancipation from the dead weight of tradition as well as opening up buildings to views, nature and sun. Today the lightness and strength of contemporary materials allow a poetic of pared precision so that the taut sprung forms of structural elements and other components elicit an empathic response in the observer. This paring to the structurally necessary and active contributes to transparency both in elements being less visually obstructive and in revealing the immediately apprehended 'truth' about how such elements perform. Also for Piano, lightness seems correlated with the liveliness, or aliveness, associated with the 'vibration' or optical flicker he seeks from carefully proportioned and spaced elements that create a weightless, shimmering dance that lends a vivacity to some of his facades.

Only a few of the many ways Piano's architecture elicits relationships have been evoked, some of which are now summarised. Unlike most other architects, some of whom claim to relate their works to context through such fatuous measures as aligning with grids or distant features, Piano at his best not only relates to local context and culture but draws elements in the surroundings into a new unity. He seeks to bring things into relationship, including with us, and also to bring them into balance, such as architecture with nature, and technology with history. Particularly significant and instructive is his quest to seek the appropriate balance between local, traditional materials and technology and imported leading edge ones, appreciating that for each place and kind of building this will be different and that today that balance will be different from yesterday or tomorrow. So although Piano is associated with pushing the boundaries of contemporary technology, he employs a broad palette of materials, including those referred to as 'warm' and 'natural' that weather and mellow with time. This is because the quality of relationship with context, culture and users is as important as innovation. Hence Piano's dictum: 'For me, technology is like a bus: I only get on if it is going in the direction I want.' This is a wonderful putdown of those blindly committed to what used to be called the 'technological imperative', of using the latest technology merely because it is available, as well as the over-assertiveness of some of the resultant architecture.

Guided by instinct and intuition and free from the constraints of theory and fashion, Piano likes to think of his architecture as the sort of thing that might be created by an intelligent craftsman making the best use of all that is available, including personal skill. His quest is for a 'natural' architecture, that feels right, that is at home in its setting and in which you feel at home. In this sense, and because of the already described balances he seeks, it could be said that his sensibility is ecological and evolutionary, the judicious embrace of the latest technology merely making use of what human and technological evolution make available.

#### Emilio Ambasz

Among the most inventive and successful product designers of our time, Emilio Ambasz has also designed a wide range of architectural projects. Until recently he executed only a few buildings and interiors, but in the last few years he has built a number of works in Italy and remains busy on others. Although his work has clearly influenced some other architects, he pursues a distinctly independent approach, unlike that of any other architect, not least in sometimes completely blurring the distinctions between architecture and landscaping, which typically swarms up and over his buildings. Yet to many his work remains baffling and they cannot grasp why others are entranced by it. That is probably because they look at the forms and analyse the functions in a detached and rational manner; instead they should imagine what the projects would be like to experience, and the thrill of their irrationally poetic aspects, which nevertheless often prove highly pragmatic.

Ambasz's designs employ an abstractly modern language, yet are not at all modern in their intent, and make liberal use of such primordial natural elements as vegetation, water (as pools and fine sprayed mists), sun and wind. All exploit extended, almost ritualised, processional approaches to potently affective ends, slowing time and bringing you into a state of quiet alertness, aware of and drawn out of yourself into your setting, while also turned inward to experience an inner serenity. Obviously the potent poetry of such designs does not begin with functional analysis but, says Ambasz,

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**16, 17. Similar in vein, with a more protracted processional route, is the Long Island house for Leo Castelli, a shyly recessive scheme despite its graphically potent geometric composition and the grandeur of the entrance portal: massive earth berms framing the beginning of the processional approach, like pylons before Egyptian temples. The presence of these and the upward slope of the path between them again slows those approaching until raised enough to pause before a panoramic view, and then suddenly discover the corner of a diagonal-set sunken court. From here a widening flight of steps again descends to where the lowest step bisects the bottom of**

**the court. As at the Casa de Retiro Espiritual, the effect will be to slow both your rate of approach and your sense of time so you reach the semi-circular pool marking the centre of the court both tranquil and alert. Edging the two far sides of the court is a colonnaded ambulatory overlooked by bedrooms. Beyond the corner of the ambulatory is the living room that bulges forward from the enclosing earth to command the broad view ahead, the centrifugal and horizontal extroversion of the room contrasting with the centripetal introversion of the still court with its implied vertical axis mundi marked by the central pool**

‘Ambasz’s designs employ an abstractly modern language, yet are not at all modern in their intent, and make liberal use of such primordial natural elements as vegetation, water, sun and wind’

begins with images that float up from his unconscious. Only later does he elaborate and interpret these images as he develops their functionality. In this latter process he makes use of and is guided by narratives he develops about what the design would be like to experience and what that might mean. His goal is to hone that narrative until so evocative that if related to several independent artists, each would draw exactly the same thing, and if conveyed to a competition jury, it would award the prize without seeing a design. This use of narrative is an immensely effective design tool, which others might adopt, to bring experiential intensity and coherence to a scheme.

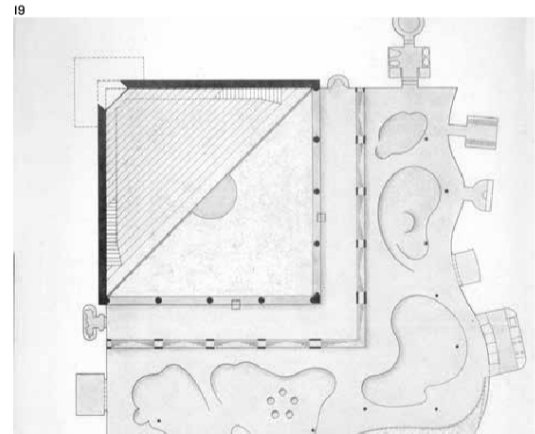
Ambasz’s architecture first came to attention with the project for the House near Cordoba, which he later built for himself as Casa de Retiro Espiritual (AR March 2006) in a stupendous setting outside Seville. This is a startling,

surreal work quite unlike anything else. Glimpsed from a distance, it disappears from view to suddenly appear close up, offering two tall blank walls with an ornate doorway set in the corner below a traditional screened Andalusian balcony. Once through the door, the walls are revealed to enclose nothing. Instead they offer an open-armed gesture to a spectacular view of lake and mountains. The walls extend up from two sides of a sunken patio into which diagonally-set steps descend, widening until the bottom riser bisects the patio and its central pool. On the two far sides of the patio is a shady ambulatory, beyond which is the cavernous interior of the house. Cantilevered from the tall walls on the closest sides are treads of steep stairs rising to the balcony-belvedere over the front door. Filling the whole space, and adding to its contemplative calm, is the murmur of tumbling water in runnels that form the recessed handrails to the steps.

Descending into the patio is to participate in a carefully choreographed ritual as the widening steps and circumvention of the pool slow your movement and sense of time until you reach the still centre of the house, and that in yourself. According to the seasons you can move to stay in shade or sun and at night you can enjoy the warmth radiating from the walls that reach up to connect you with the starry sky. And when so inclined you can climb to the balcony to enjoy the breeze and views of lake and mountain, or watch as the sunset tints the walls.

The Houston Center Plaza is designed to suggest a centre within the city’s centreless urban grid and provide cool, shady relief from the relentless sun and humid heat.

**18-20. Casa de Retiro Espiritual, Seville, by Emilio Ambasz**  
**18. Passing through the doors, the walk up is revealed to enclose nothing but provides a view across the grassed-over roof of the sunken house**  
**19. Plan of bermed-over main inhabited level of house**  
**20. On approach you are greeted by two tall walls, which frame a corner door and screened balcony**

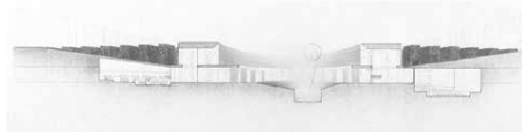


From the pavement edge, the plaza floor dishes downwards to a pool raised again up to pavement level, from which water cascades around its perimeter as well as inwards to some hidden centre from which rise swirling mists on which dance coloured laser beams. Between pavement and pool is a grid, a microcosm of the larger urban grid, of fragrant, flowering vines supported on steel frames and mesh, their tops always level with pavement and pool. Those tall enough have openings into bowers, scaled to intimate trysts, quiet reading, chess games and so on. Pedestrians passing are drawn inexorably inwards by the sloping floor, the cooling mists emanating from the top of each plant-swathed frame and the mirage-like vision of the central pool and its mist-generating cascades. By contrast, the proposal for the Plaza Mayor in Salamanca, Spain, is to transform an existing historic plaza, also to accommodate subterranean cultural facilities. Here too the plaza dishes inwards, with rows of steps and landings rather than a steadily ramping floor, the whole shaded by the spreading canopy of trees rising through the plaza floor from planters all at the same level. At the floor level of the existing surrounding arcades would now be a sea of soft green foliage. Into this you'd enter and descend as if a swimmer into surf to discover below a quiet and enchanting, shady semi-underworld suited to all sorts of solitary and communal activities – below which is a real underworld of cultural facilities. It is a wonderfully appealing vision, and would be a beautiful place, but is quite unsuited to Latin culture. The present plaza works perfectly for the evening passeggiata and sitting at café tables around the edge.

Ambasz's proposal for the Museum of American Folk Art in New York in the 1980s comprised an office tower, resembling a gigantic tallboy with floors spanning between the deep sidewalls containing vertical circulation and services, with the museum on its lower and basement floors. A proscenium framed the entrance stairs to the museum, focusing attention on a gigantic vitrine containing highlights of the museum's collection, and up to which visitors climbed before descending into the museum with its display levels. This is another potently ritualistic processional approach, much too compelling for daily use, and so the offices are entered off a pavement level slot in the centre of the grand stair.

A similar criticism could be made of other Ambasz projects, particularly the Leo Castelli House. It is precisely the power of these processionalists that is problematic: they verge on being too compelling for everyday encounter, and are more suited to the approach to a sacred precinct. But they usefully remind us of an architectural potential, a dimension too often absent today. Yet they are also most vividly imagined as experienced alone, or perhaps in a couple, rather than collectively. This is not only true of the houses – although

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the Castelli House itself (the approach to which would still be most effectively experienced alone) can be imagined with a family in residence – but also of the plazas. Ambasz thus designs intensely poetic, multi-sensorial refuges from the business and noisy distractions of the contemporary world, semi-sacred places in which to recharge. Missing is a sense of community and the communal. Nevertheless, Ambasz shows one way, using only abstract forms and nature, to bring an awe-inspiring magic into a disenchanted world in a manner that will help us to reconnect with our inner selves as well as with a sense of the cosmos – the latter especially in his house near Seville.

#### Peter Zumthor

Like Ambasz, and yet in an utterly different manner, Zumthor pursues a multi-sensorial architecture of high emotional impact. But by contrast, Zumthor foregrounds the materiality of his buildings, so that this and his wonderful feeling of materials is what probably strikes you first, and then perhaps the beautiful, understated 'rightness' of his details – all of these the products of a master craftsman who studied to be a cabinet maker and then learned about materials and construction from the restoration of historic buildings. Piano is a craftsman too, who also uses a wide range of materials. But he does so mostly in a peculiarly Piano way, breaking down into multiple spaced-apart elements to achieve a sense of lightness and an enlivening visual vibration. By contrast, Zumthor remains faithful to the essential nature of the particular material and lets that dictate how it should be handled. This gives his work a timelessness Piano's lacks. Zumthor is also much more concerned than Piano is with the depth of relationship the materials and his craftsman approach to them elicit in us, by stirring emotions, associations and memories.

Indeed, Zumthor says he starts design by pondering the atmosphere and associations he wishes to conjure. These are intended to convey the essential spirit of the building and its programme, which together comprise the total work, both triggering memories that deepen and add meaning to the work and the experience of it, and lingering in the memory. The buildings thus exist in, and connect you with, a much larger temporal period than do almost all other contemporary works – a reason why they are so highly esteemed. A possibly apocryphal story of part of how this is achieved is of many full-size mock-ups of the timber floor for an old age home, and much tramping on the boards and polishing with different waxes, to get the requisite sound and smell that Zumthor remembered from his aunt's house, and which conveyed for him the essence of reassuring domesticity. Thus through the sensory and phenomenological aspects of architecture, and without recourse to signs of symbols of any sort, Zumthor returns to architecture the experiential and emotional depths, and the meanings, missing from most contemporary architecture.

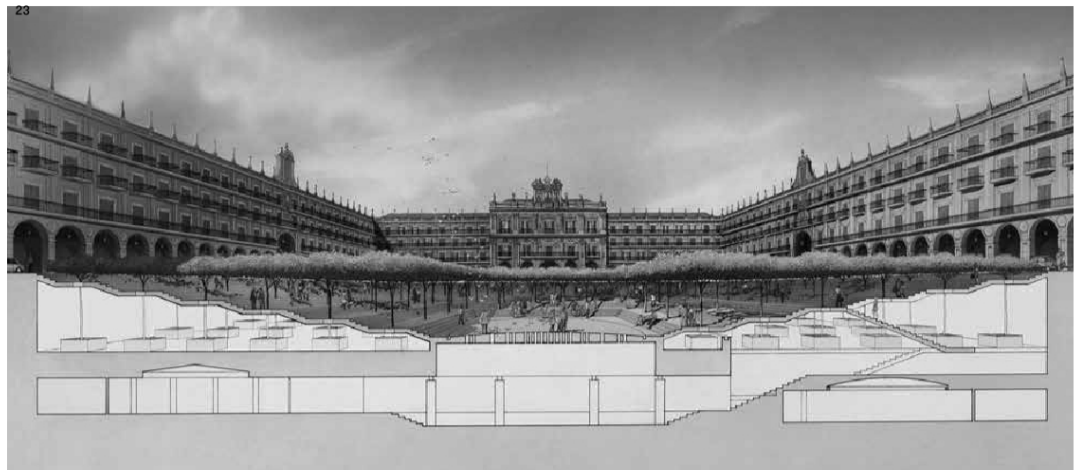
This grounding in craft, phenomenology and what these evoke in the psyche is also what makes his work so instructively different from that of his compatriots, Herzog & de Meuron. Their work is inspired by art and so, for all their virtuosity in the handling of materials, it is

**21. Section of Houston Center Plaza with its central pool surrounded by a sensuous grid of creeper swathed frames**  
**22. Ambasz's proposal for the Museum of American Folk Art in New York**

22

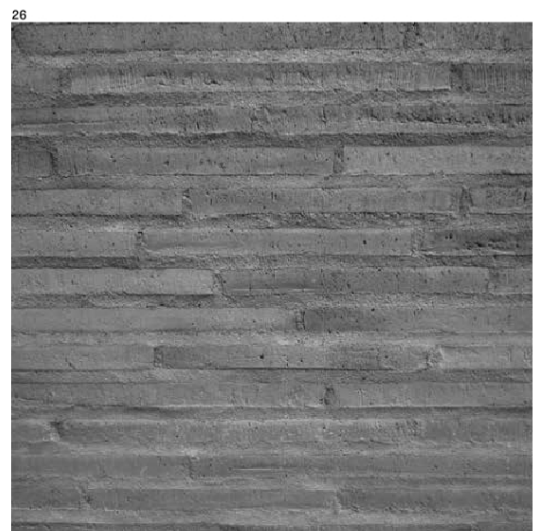






essentially frivolous by comparison with Zumthor's. Besides, they aspire to create art works, and just as a city cannot be made up of individual art works, nor can the larger world. This object fixation is part of the modern paradigm, to be transcended by engaging a larger and deeper vision of the purposes of architecture. So they are a sunset effect while Zumthor points to aspects of the future. Like that great, elusive poet of contemporary architecture, Álvaro Siza, the qualities of Zumthor's works are probably better experienced than discussed, so what follows is minimal comment on only a few works.

Among Zumthor's earliest works are the timber shelters he made for Roman ruins in Chur (AR January 1991), seemingly simple, almost prosaic structures, that are nevertheless intensely poetic thanks to a craftsman's precision of judgement and straightforward detail. Much more ambitious is the work that brought international fame, the Thermal Baths at Vals (AR August 1997), built of locally quarried stone, but using shadow and light, changes of temperature of water and air, as well as the perceived temperature and tactility of stone, metal and leather, to create a multi-sensorial and highly evocative sequence of spaces. At the Kolumba Museum in Cologne (AR November 2007), Zumthor had to build over and incorporate the ruins of a Gothic church. Perhaps drawing on his experience with the layered stonework at Vals, he had special long pale grey bricks made. These were then laid rather roughly in thick mortar beds of the same colour to resemble strata of 'living' earth or stone rather than the mechanical multiplication of the identical, precisely laid units of most brickwork. A tree-shaded court, a contemporary take on the Zen gravel garden, is then filled with a mounded surface of stone chippings that seem as if leftovers from the dressing of the stone-like bricks. And then upstairs is a room lined in wood panels whose coloration recalls the pelts of antelopes, and furnished with high-back easy chairs of pale leather. And rather than perfect light conditions, the galleries offer shadow as well as light, to create a whole that is as seductively mysterious as it is beautiful.



**23. Perspectival section of Plaza Mayor, Salamanca, a proposal to rework an existing plaza**

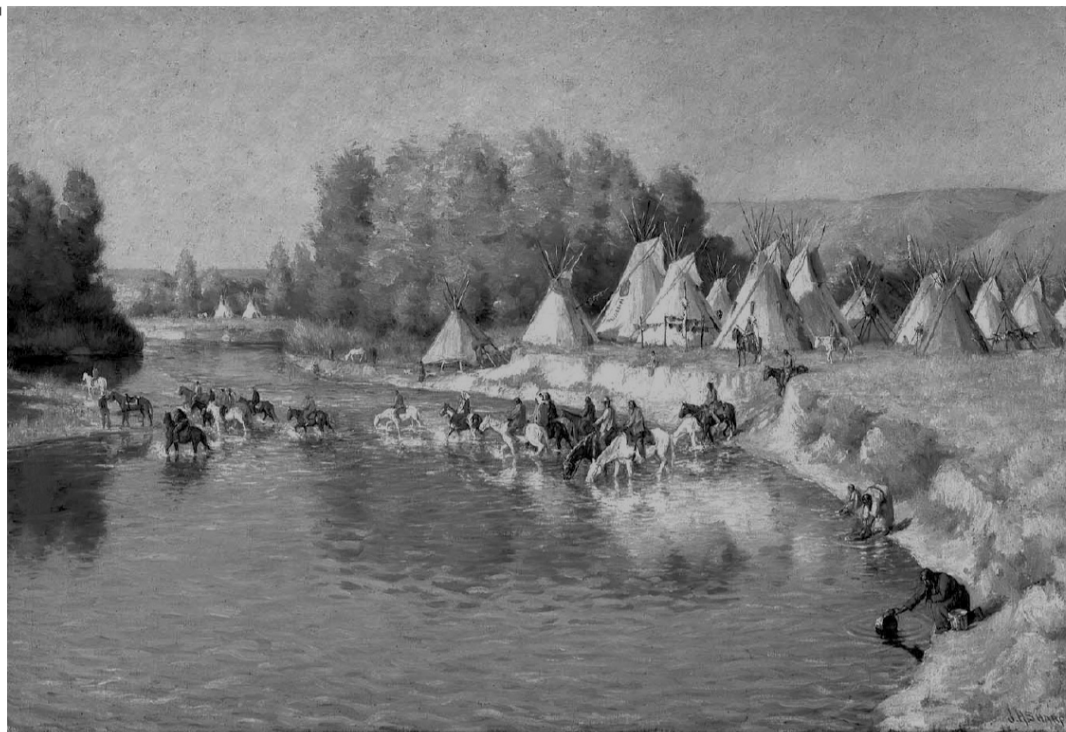
**24-26. Kolumba Museum, Cologne, by Peter Zumthor**

**24. A contemporary Zen courtyard with new and historic elements**

**25. The wood-paneled reading room**

**26. Detail of brickwork designed to resemble strata of 'living' earth, rather than the mechanical repetition of brick walls**





**I. Encampment of Crow Indians at Little Big Horn River by Joseph Henry Sharp (1908). A Romantic image of a settlement providing rudimentary shelter for a nomadic community**

# THE BIG RETHINK PART 9: ARCHITECTURAL EDUCATION

Detached from the ferment of epochal change, the groves of academe are failing to engage with current critical realities. Education for architects must be radically reconsidered, through a new, more fully human paradigm that engages with society and culture

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**AR OCTOBER 2012 PP 91-101**

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Apart from pleading for blunt and long overdue critical comment about various architects – some starchitects are nominated repeatedly, you can easily guess who – the most common request in the private emails received in response to these essays is to discuss architectural education. This too is a subject provoking strong opinions, though with rather less consensus. The unease, and often dismay, felt about architectural education is unsurprising and has been long festering. A primary theme of these essays is that we are in the throes of massive epochal change that must profoundly impact architecture. Hence the urgent necessity for The Big Rethink to which these essays are a tiny contribution. Yet to visit many architectural schools is to enter a time warp where the ‘anything goes’ postmodern relativism of the 1980s persists, and tutors and lecturers pursue their own interests regardless of any larger relevance. Indeed, it almost seems that the more overwhelmingly urgent the looming crises provoked by systemic collapse of interdependent aspects of our global civilisation, the more frivolous the pursuits of academe. Even sustainability is reduced to a much too narrow, peripheral subject added on to the curriculum rather than forming the core of a radically restructured education.

But quite apart from not preparing students for the very different future in which they will practise, schools are struggling to keep up with changes that are already transforming architecture. These include the proliferation of ever more materials and new modes of manufacture, assembly and construction management, as well as new software bringing novel modes of analysis to such things as structural stresses, ambient conditions (light levels, air movement and wind pressure, temperature, humidity and so on) and even movement patterns of pedestrians and vehicles (as with Space Syntax). This complexity puts demands on architects at the leading-edge of practice that are increasingly beyond the capacity of any individual. Hence architects collaborate with a widening array of consultants in multidisciplinary design teams in which even the architect component is made up of individuals of differing expertise. In contemporary parlance ‘we have moved from the age of genius to scenius’. Yet architectural education is still geared to producing the solitary genius, rather than today’s collaborator – although admittedly such teams might still benefit from the genius-type for guidance and final judgements.<sup>1</sup>

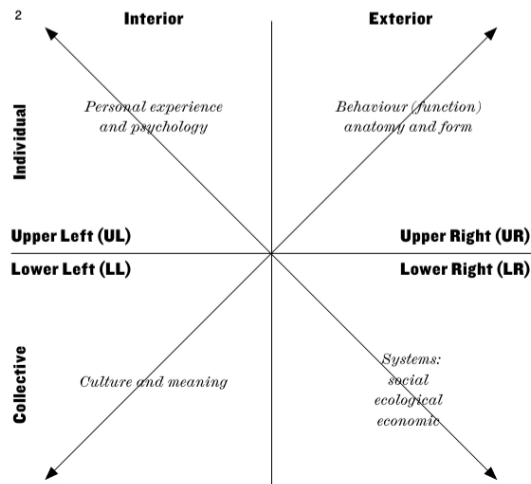
Often after lecturing at an architectural school and showing the computer modelling and analysis informing some contemporary design, as well as the techniques used to coordinate construction and so on, professors privately admit despair at the impossibility of finding the skilled people to teach such things, let alone be available for students to consult with. Yet a few of the schools dismissed as ‘provincial’ by those who see themselves as the metropolitan elite, reputedly give a good and more or less up to date technical grounding. Even in one or two of the elite metropolitan schools, it is possible to get excellent technical tuition and call on first class consultants for guidance during development of student projects – that is, if the student is so inclined and the unit master permits it. Confusingly, there is at least one ‘elite’

school whose graduates are much in demand by practices when recruiting, despite weak technical training, simply for the work ethos inculcated.

If practitioners moan about students unprepared for practice, a complaint consistently voiced by students, teachers and some practitioners is about the grip on architectural education of postmodern relativism, although that is usually not the terminology used. As explained in earlier essays, postmodernism initially brought great benefits. Its criticisms of modern architecture, such as for its contextual insensitivity, brought the new maturity found in the best contemporary buildings. Even postmodern theory was initially useful in broadening discourse and drawing attention to the semiotic dimensions of architecture. And what has become its excessive relativism was initiated by validating previously repressed voices, such as those of women and the colonised. The multiplicity of perspectives this alerted us to are important in breaking the grip of modernity’s too narrow certainties, so facilitating epochal change. But like modernity, postmodernity has hung on too long and the benefits it brought are now outweighed by its toxic downsides.

The relativism that characterises postmodernity rejects hierarchies, so cannot prioritise, and sees all forms of ‘reality’ as arbitrary constructs, so dismissing of science as just another narrative. The postmodern mindset has thus become a major block to both dealing with urgent issues, such as environmental collapse, and embracing more contemporary modes of thought, many of which are powerfully relevant to architecture. It is like a vaccine inoculating against the many new currents of thought. It resists the Big Picture thinking necessary to understand where we are in evolutionary and historical terms – essential to gaining insight into the problems we face and their potential solutions – and the developmental modes of 21st-century thinking and their science-based strategies of action. Besides bringing about the increasing

**2. The four quadrants of Integral theory's All Quadrant All Level (AQAL) diagram**



## ‘It almost seems that the more overwhelmingly urgent the crises provoked by systemic collapse of inter-dependent aspects of our global civilisation, the more frivolous the pursuits of academe’

irrelevance of architectural discourse, it has dramatically narrowed its concerns. Even many teaching in architecture schools complain the schools are not even participating in, let alone leading, the necessary debates of our time. Hence postmodern theory is exactly analogous to scholasticism at the end of the Middle Ages, which in its obsession with arguing over the number of angels on the head of a pin did not notice the Renaissance burgeoning all around.

But as we all know, the postmodern mindset dominates history and theory departments, home to PhDs who appoint other PhDs who, in knowing more and more about less and less, are not a natural fit with a generalist subject such as architecture. But these are the people who boost the research ratings and so the funding of schools, no matter how worthless that research to the practice of architecture. Hence some schools are staffed by disproportionate numbers of such scholars who lack the skills and experience to contribute much to the rest of architectural education. Besides, too often, studying for a PhD can ruin promising students, leaving them fit only for a career in architectural education. Hence many professors admit in private that a university is probably not the best home for an architectural school.

Theory courses tend to be more concerned with such things as literary theory and French philosophy than anything to do with architecture and mistake obfuscation for profundity, dressing up the most banal of observations in obscure language. But students and other staff seem to simply accept that theory courses tend to be irrelevant and taught by people with a limited grasp of architecture and even less ability to discern quality – which of course infringes postmodernity’s taboo against hierarchy or ranking.<sup>3</sup> But this irrelevance tends to be tolerated as relatively harmless: instead it seems more students are upset by the often poor teaching of history, recognising that this should be an important and really useful subject. Again, the problem is relativism as some lecturers, instead of teaching a thorough and rounded history course, discuss selective themes through the narrow lens of some personal interest. Ask a theory or history lecturer who has outlined such a course what might make it among the top 1,000 topics students should devote their limited time to and the question is dismissed as preposterous as the answer is obvious: well that is what interests ME. Yet besides improving the teaching of conventional architectural history, there is now also a need for courses reappraising architectural precedent with an eye to the lessons worth carrying forward to inform the process of ‘transcend and include’ (ARs May, June and September 2012).

Such courses can only be conducted by architects with a more rounded and pragmatic understanding of architecture and design than have most history lecturers.

The postmodern ethos has infected criticism outside the schools too, so that patent nonsense by architects escapes censure. Probably the most frequent complaint about the latter is the over-emphasis on concept – as consistent with postmodern art and architecture’s central concern being the representation of some theoretical position, concept or scenario. These are usually quite arbitrarily chosen, and typically at the expense of any grounding in larger realities, including that of the patient honing of craft through which the art work and the artist/architect acquire depth. Students also complain of the pressure in some studios to come up with a concept in the early stages of design rather than letting one emerge from research or design development. Worst of all though is that one concept is deemed as good as another, a patently preposterous notion, and for a visiting critic to point out flaws in a concept is seen as inhibiting a student’s creativity. Rather than relevance, what is sought is startling originality, no matter how spurious. A related problem is the pursuit of personal interest as the basis for design and research. All this fuels the fragmentation of approaches characterised as pluralism, the mask that attempts to camouflage confusion and uncertainty as to relevance.

These problems are further compounded by the unit system, a neo-liberalist way of subcontracting out studio teaching without taking much responsibility for it – so long as units attract students. Thus each unit strives for a distinct identity, further fragmenting the range of approaches, usually by pulling away from any useful common ground and exploring the often rather esoteric and inconsequential interests of the tutors, from which the students may leap off into even more obscure realms. In these circumstances, any notion of a coherent curriculum giving a fully rounded grounding in architecture becomes unthinkable – and many academics would dispute the need for any such thing.

### Integral theory and cultural values

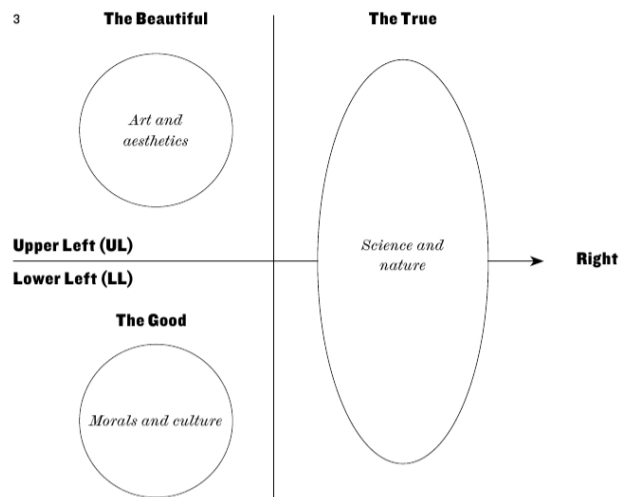
A key portion of Integral theory not mentioned yet is the association of particular epochs and their mindsets with particular cultural values and even personality characteristics. Remember that a key assumption informing the AQAL diagram (AR March 2012, p70), and one of its most useful insights, is that development in one quadrant – progression up a line, another subject not yet explored – is matched by corresponding developments in the other quadrants, in this case cultural development (LL) matched by psychological development (UL). Thus the ethos and personality associated with postmodernity is often referred to as ‘caring and sharing’, concerned with the wellbeing of others, respectful of their opinions and always seeking consensus – all upsides of relativism. Hence it is also associated with interminable meetings and ineffectuality, both on display in academe. Some businesses apparently use psychological profiling to screen out such types. Anyway, the downside of this personality is that while respectful of the views of others,

he/she expects similar respect and acceptance of his/her views, and if these are questioned there is a relapse into narcissistic anger ('who are you to question my interests? To force an agenda upon me?') Postmodernity's unquestioning tolerance leads to lecturers offering courses on the most abstruse of subjects, merely because it is a personal interest.

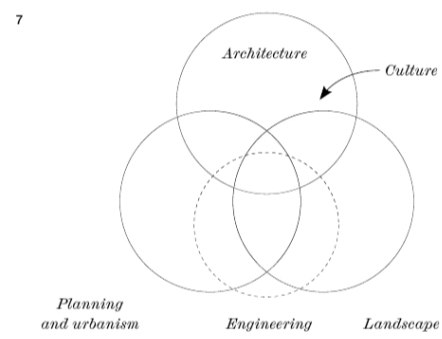
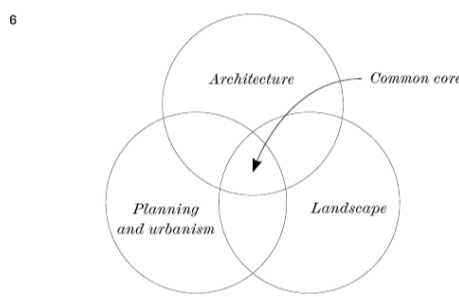
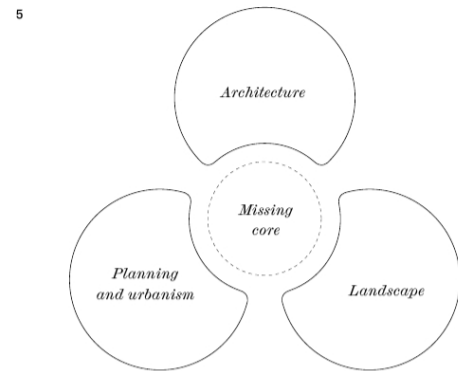
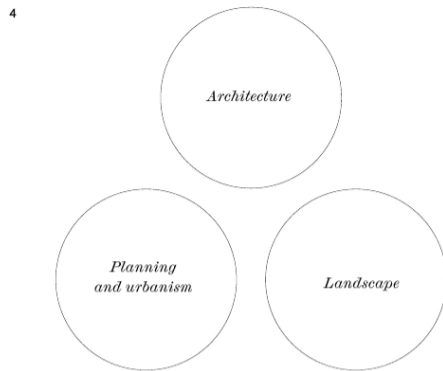
Postmodernism might have exacerbated the proliferating fragmentation of intellectual pursuits that is characteristic of our times, but this fragmentation starts with the origins of modernity, as explained in an earlier essay (AR February 2012). The two key innovations, differentiating modernity from every cultural mindset that preceded it and on which its powerful effectiveness depends, were both fragmentary in impact. One was positing an objective reality, independent of us. Underpinning modern, materialist science, this dualistic notion excludes and alienates us from a progressively disenchanted world and, together with its correlated modes of reductive analysis, erodes the cognitive and experiential relationships between things so that the world fragmented into isolated objects and unrelated fields of knowledge. This, and the downplaying of the subjective, along with religion and the spiritual (Friedrich Nietzsche's Death of God), undermined the underpinnings of culture, which once explained our place in the world and our relationships with other people, our origins and all else.

The second key innovation initiating modernity was that what had been the organic unity of the Great Chain of Being was differentiated into the three major fields of the True, the Good and the Beautiful. This was a distinction that had already been made by Plato, but now led to the separate fields of Nature and Science (the True), Culture and Morals (the Good) and Art and Aesthetics (the Beautiful). This differentiation brought powerful benefits in allowing these disentangled fields to be developed independently. But, compounded by the privileging of objective reality, differentiation gradually led to a pathological dissociation and further fragmentation into multiple silos of expertise. In turn, this left us blind to the relationships between these fields and the negative consequences of ignoring these relationships, which are dismissed as mere side effects, externalities and collateral damage.

Modernity's power thus became its destructiveness and has now brought us to the brink, yet postmodern relativism is powerless to effect fundamental change. This highlights the urgent need to devise a sustainable, trans-modern (post-postmodern) culture. But the cultures of the past were grounded in a religion or spiritual tradition. Once this was eroded, art had to substitute for religion in offering spiritual and psychological succour. This was a challenge the first wave of modern masters were able to meet (in large part because they were the last generation properly schooled and grounded in Western classical culture). But it could not be sustained and has led to the vacuity of postmodern conceptual art and architecture – as well as, without an integrative culture to bind them, the progressive segregation of the different kinds of art. Thus architecture is no longer



**3. A key step to modernity was the differentiation of the Big Three of the True (right-hand quadrants), the Good (lower left quadrant) and the Beautiful (upper left quadrant)**  
**4 & 5. Architecture, planning and urbanism, and landscape architecture are treated as three separate fields, but have pulled apart, as in 5, so that what should be a common core, the crucial grounding for sustainability, is neglected**  
**6. Proposed foundation course focusing on what should be the common areas of overlap**  
**7. More evolved version of 6 with engineering available as a resource to be consulted and the regeneration of culture as a constant background theme**



the Mother of the Arts, the frame for and completed by the sculpture and painting that were utterly intrinsic to it. The fragmenting impact of modernity also led to the now too extreme separation of the fields of environmental design and their education: architecture (often taught in an art school); urbanism (particularly planning, where no understanding of architecture might be taught); and landscape architecture (which might be taught in a horticultural school). Yet, as we will see, much of what should be the essential foundations of sustainability must lie in what should be the overlaps between these three major fields of environmental design.

So what might a radically rethought and updated architectural education be like, one adequate to the challenges we must face and that gives sustainability its central role? There is space here for only a few suggestions, although future essays will offer more. To properly integrate sustainability into architectural education, a much-expanded vision of what it entails not only needs to become the core of the course but should also be that of a year-long foundation course shared by students intending to become architects, urban designers and planners, and landscape architects.<sup>3</sup> (Perhaps product designers and engineers should participate too, although this might result in a fragmenting loss of focus.)

This would ground all these in the now generally neglected areas of knowledge and expertise they should share, deepening and broadening their education and creating a common context and mutual understanding facilitating future collaboration. It is a common experience that you learn more about another specialisation through collaborating on a project than from a course of lectures.

Among the subjects studied would be an introductory course on evolution and ecology, which would then lead on to human ecology and the history of human settlements to provide a very necessary context for understanding all forms of environmental design. Allied to this would be a course on the relationships between climate and differing cultural adaptations to it, such as in types of shelter, settlements and agriculture, and the consequences for all these of climate change. Another key subject would be to look at the flows of materials, energy, food and other resources through our globalised world, from extraction through to waste. Although architects are already using more recycled materials, the use and flow of resources is a key subject ripe for radical reappraisal, impacting on all forms of environmental design.

All these courses, with their primarily objective orientation, would provide the necessary expanded context for understanding the challenges in creating

## ‘What is it to be fully human, who in our depths do we really want to be and how can this be brought into alignment with what the earth wants us to be?’

a sustainable culture. But so too would introductions to the more subjective realms of psychology and culture. Starting with the psychology and mechanics of perception, which should inform aesthetic theory and judgement, there would also be introductions to phenomenology, environmental psychology and the psychological need to bring order to our environment, for ritual, the projection of our psyches into space, and so on.

Theories of cultural development, such as Spiral Dynamics (the subject of a future essay), will be introduced and their implications for creating urban environments that serve differing kinds of cultures (such as found in our multicultural cities) and individuals of differing ages and stages of personal development. Other courses would introduce the human need to create meaning (depth psychology) and ways of communicating it (semiotics), as well as criticism and criteria of judgement.

As important as these lecture courses, would be visits, experiential exercises and ongoing debate. A common complaint of architects hiring graduates, as well as of their teachers, is that too many students today think that having seen a building on the internet constitutes knowing it. So students would visit, explore and write about buildings, urban areas and landscapes, experiencing first-hand works of their chosen discipline as well as those of future collaborators. To heighten experience they would be asked to undertake various exercises, such as pretending to stalk in a landscape or urban area, so strengthening peripheral vision and sense of place, or conducting a fast, non-stop verbal description of what is seen, so forcing students to see and feel more and make and articulate finer distinctions as even inert matter becomes more alive around them.

Other exercises would introduce the purposes and processes of design. From the Big Picture vision conferred by the lecture courses, students would grasp that the most elevated purpose of design is to be mankind's way of participating in evolution, using the vast knowledge we have acquired to be guided more by choice than by chance. Ongoing discussions would reappraise the various purposes of each of these fields of environmental design, after the debasing of them by modernity and postmodernity, to inform design and inspire it with the deepest and most ennobling visions. Thus a purpose of architecture is to shape a physical setting in which to unfold into full humanity, as now understood by drawing on insights from sources ranging from depth psychology to ancient spiritual traditions. This too is one of the most ennobling purposes of urban design, in shaping the city that is the crucible in which consciousness and culture are forged and constantly evolve. And landscape architecture is not just to provide a decorative smear to the unused and

unloved leftovers around and between buildings, nor even to only provide for recreation and the regeneration of body and soul in a beautiful setting. It now has many vital ecological functions, protecting biodiversity, providing wildlife refuge and corridors, improving air quality and the microclimate and repairing hydrological cycles.

Probably the most important of these ongoing discussions would be around the entwined themes of what it is to be fully human and what is the good life, who in our depths do we really want to be and how can this be brought into alignment with what the earth wants, or can afford, us to be? These are fundamental questions, the answers to which should inform all environmental design disciplines; but after modernity and postmodernity, we have lost our way when it comes to answering them. In large part this is because these still current mindsets are underpinned by a vision of a dead and meaningless, mechanical universe against which we build a defensive wall of consumerist goods and distract ourselves with addictive behaviour. But if we move beyond postmodernism to embrace science's new vision of a living, creative universe, then we want to disencumber ourselves and engage with and participate in it. And in the background of all this is perhaps the most urgent and difficult challenge of our times, the design of a new global culture, or ecology of cultures, because the present dominant culture has lost the roots in spirit and nature found in pre-modern cultures, which is why it has become pathological and destructive. Yet studies in cosmology, evolution and ecology are introducing, through leading edge science, a spiritual view of the world, as found in the wonderful writings of cosmologist Brian Swimme and eco-theologian Thomas Berry.<sup>4</sup> It is also important to note that none of the above is a purely intellectual issue; they are fundamentally ontological. To grasp them and progress towards realising the visions implied requires personal development. Here schools of environmental design have a lot of catching up to do, not least in employing techniques now widely used in business management and performance coaching.

### Fully human design

Such a common foundation course may seem like an idea whose time has come, a way of starting to get all these disciplines back on track. But it seems very unlikely to happen: is there any university or institution really serious about an education apt to and drawing on the potentials of our time? It doesn't take a cynic to answer no. Without such a foundation course, the ideal would be that everything discussed above would be part of the curriculum for an architectural education – again unlikely. They were outlined mostly to give some flavour of how different an architectural education adequate to the emerging epoch should be. Lack of space precludes discussion of what the whole course might be like, which in any case would be shaped by all sorts of contingencies such as available resources. Like the foundation course, it would benefit from explicitly drawing upon and being shaped by Integral theory, including those aspects yet to be explored in other essays. Yet simply using the quadrants of the AQAL diagram to guide the selection of

**8. An example of a four quadrant architectural curriculum, best understood in conjunction with the AQAL diagram**



|   |   |  |
|---|---|--|
| <p>8</p> <p><i>Psychology</i><br/><i>Intentionality</i></p> <p><b>Delight</b></p> <p><i>Psychology:</i><br/><i>of perception</i><br/><i>of creativity</i><br/><i>Depth psychology</i><br/><i>Developmental psychology</i><br/><i>Phenomenology</i></p> <p><b>Subjective</b></p> <hr/> <p><i>Architectural history (evolution of styles and culture)</i><br/><i>Theories of aesthetics, proportion and propriety</i><br/><i>Semiology</i><br/><i>Symbolism, ritual, myth</i><br/><i>Anthropology</i><br/><i>Cultural studies</i><br/><i>Proxemics</i><br/><i>Hermeneutics</i><br/><i>Cultural development: Spiral Dynamics, multiculturalism</i></p> <p><b>Decorum</b></p> <p><i>Culture</i><br/><i>World view</i></p> | <p><b>Individual</b></p> <hr/> <p><b>Collective</b></p> | <p><i>Biology</i><br/><i>Behaviour</i></p> <p><b>Commodity Function</b></p> <p><i>Ergonomics</i><br/><i>Space standards</i><br/><i>Analysis of brief</i><br/><i>Functional linkages</i><br/><i>Comfort standards (airchanges, light levels)</i><br/><i>Health (chemical and electromagnetic pollution, limited spectrum light)</i><br/><i>Physiology of perception (all senses)</i></p> <p><b>Objective</b></p> <hr/> <p><i>Architectural history (development of technology, economic means etc)</i><br/><i>Environmental history</i><br/><i>Ecology</i><br/><i>Social psychology</i><br/><i>Principles of structures and services</i><br/><i>Computer skills (including predictive and parametric modelling)</i><br/><i>Site management</i><br/><i>Lean and green component manufacture</i><br/><i>Building systems interface</i><br/><i>Systems thinking</i><br/><i>Finance</i><br/><i>Business management</i><br/><i>Professional conduct</i></p> <p><b>Firmness</b></p> <p><i>Systems: technical, social and ecological</i></p> |
|---|---|--|

belongs to this quadrant, enhancing any discussion of aesthetics and how we relate to the built environment.

The Lower Left quadrant is that of Decorum, of culture, its world views and the meanings they confer as well as the subjective dimensions of community. Many contemporary fields of study beloved of postmodernists belong here, but once properly placed in relation to other fields, as the AQAL diagram does, and grounded in Depth Psychology, they cease to become little worlds of their own and so are useful rather than problematic. These include such things as semiotics and hermeneutics, and possibly even, to some degree, Cultural Studies. Other areas of study that belong here and also offer useful insights to architects are anthropology and proxemics, and Depth Psychology with its studies of symbolism, ritual, myth and archetypes. Particularly relevant to our increasingly multicultural world, are such studies of cultural development as Spiral Dynamics. Some aspects of aesthetics also probably belong in this quadrant, such as theories of proportion (although this is debatable) and propriety, as does much of architectural history, particularly that to do with the evolution of styles and the relationship of this with cultural development.

Much of what belongs to the Right-Hand Quadrants is territory modern architects are more familiar and comfortable with, because this is the objective realm of such things as function and construction and such systems as ecology and economics. The Upper Right Quadrant is that of what was once called Commodity, and covers behaviours (as studied by detached observation as in Behaviourism), or as architects refer to it, function – the modern term for commodity. The old category of Firmness applies to this quadrant too, but also to the Lower Right, and many aspects of construction fall under both Right-Hand Quadrants so that it is difficult to place them exactly. Subjects belonging to the Upper Right that should be covered in an architectural curriculum would include such things as ergonomics and space standards, determining and analysing a brief, and determining functional linkages, much of which would be largely learnt in the studio. Probably taught in lectures, as well as researched in technical studies exercises and applied in the studio, using new modes of computer analysis (which properly belong in the Lower Right quadrant), would be the manipulation of all forms of ambient conditions (including lighting, temperature, ventilation, humidity, CO<sub>2</sub> levels and so on) and their impact on use and comfort standards – which would also involve studying the physiology of sense perceptions. An increasingly important topic to deal with here is health impacts of contemporary materials and construction, a truly scary subject on which research has barely started.

The Lower Right quadrant is the realm of systems, such as ecology, economics and finance, sociology and social psychology, all of them important to architecture. Here too would be study of the principles of structures and mechanical services and all the logistics of construction, from sourcing of materials through to their eventual recycling, and the interfacing of a building's various systems. Belonging here also are computer skills, such as predictive and parametric modelling, business

subjects to be studied, the most mundane of applications, would ensure a degree of completeness and coherence, clarifying the relationships between these subjects.

Let some brief comments suffice to give some idea of what a Four Quadrant curriculum might be like. The Upper Left quadrant is realm of what has been called Delight, that of intentionality, psychology, aesthetics and personal experience. There are several contemporary forms of psychology that would have much to contribute here, including developmental psychology (studying the stages through which we develop and mature) and those studies of creativity (offering many insights in how to enhance this) and perception. The latter has much to contribute to aesthetics – understanding Gestalt psychology's insights into perception (such as the preference for verticals and horizontals and perpendicular crossings that minimise the number of angles defined) explains why even if exciting, Parametricism's forms are also fundamentally alienating. Phenomenology also

‘A key idea was that no lecture course would start until the need for it was discovered in the studio and students demanded it, understanding its relevance and feeling motivated’

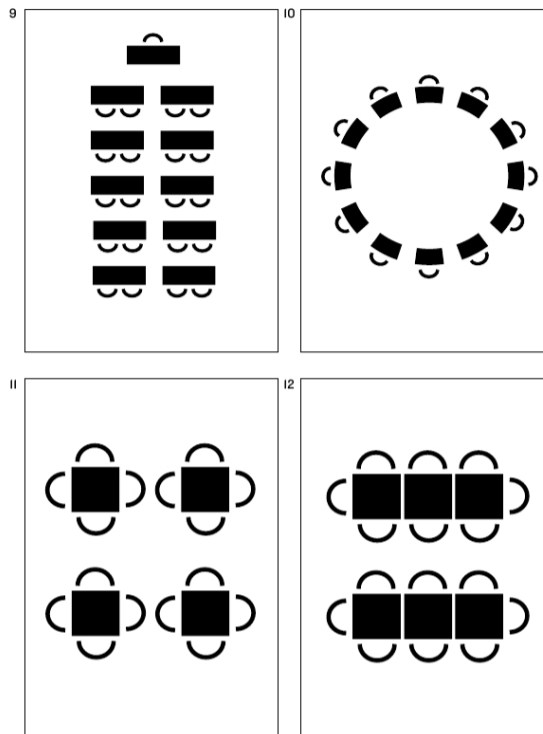
management, legal matters such as professional conduct and so on. Some aspects of architectural history belong in this quadrant, such as the impacts of technological and social developments, as well as environmental history, which offers valuable perspectives in an age of ecological collapse. Sustainability tends to be taught today as a primarily Lower Right concern, with impacts on Upper Right aspects of buildings; but properly understood it is very much an all quadrant affair.

Integral theory’s AQAL diagram provides the perfect matrix for understanding how these courses relate to each other and provide a complete and coherent grounding in the various subjects necessary to be an architect in the emerging epoch. But lectures are only part of any architectural course which, rightly, is dominated by studio work where this more passively acquired intellectual input is tested and synthesised. But in many schools, the lecture courses cover the subjects it is conventionally assumed architects should know, but are not closely tied in with studio work. This often results in a lackadaisical attitude by the students towards the lecture courses, the relevance of which they don’t always grasp. Nor are studio projects devised in deliberate sequence as a structured course giving students an all-round grounding in design. But the key role of architecture in advancing towards sustainability in the emerging epoch suggests the relationship of lectures and studio work, and the nature and sequence of the design exercises, needs radical restructuring.

#### A new paradigm for pedagogy

An instructive precedent was the architectural course devised in the mid-1960s by Roelof Uytendogaardt, a teacher of genius, and only partially implemented at the University of Cape Town when he was first year studio master. A key idea was that no lecture course would start until the need for it was discovered in the studio and students demanded it, now understanding its relevance and motivated to study it. To set the process in motion, the first design project was for a camp on a featureless site.<sup>9</sup> Here the same number of people as made up the class would pursue an unspecified common interest for three weeks, the same time as allocated to the project. As design research, students were to observe how their social interactions, their experience of them and the meanings they ascribed to them, were shaped by the physical environment in which the class was conducted.

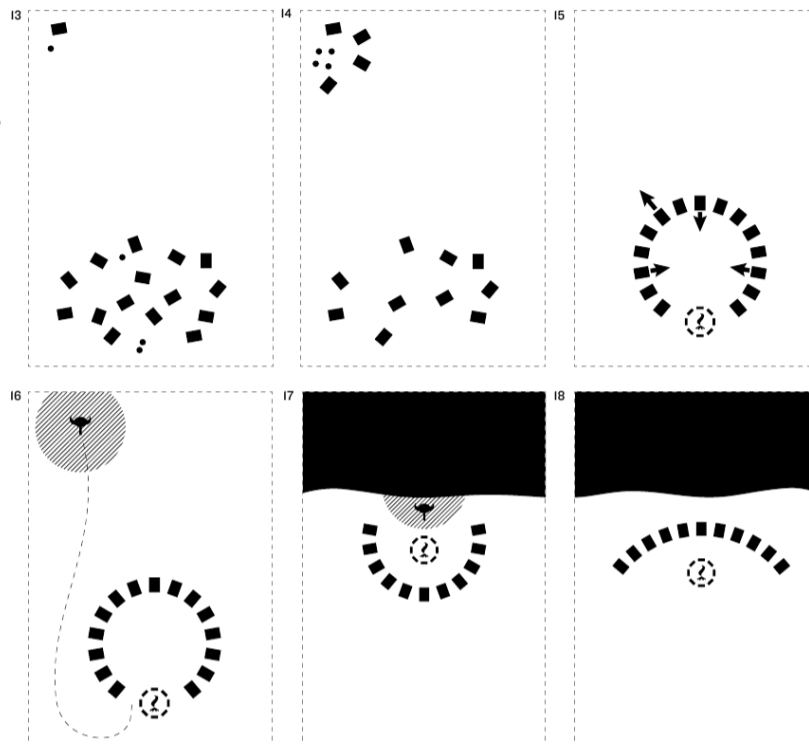
To heighten their awareness of this, the physical settings for study, socialising and so on were to be constantly rearranged. Hence the project would be introduced with the studio masters standing behind a



counter on a raised dais and students in rows behind desks; but the next day the desks would be along one wall and the chairs in a circle with studio masters dispersed among the students; and the day after that everybody would stand around casually in the studio. Similarly, in the cafeteria, the small tables were to be initially separated so that groups of up to four occupied them; then one day the tables would be jammed together so that incipient cliques met each other. Students observed how such things influenced group dynamics, the quality of discussion, how comfortable or ill at ease they felt and so on, and also where else in the building – in corridors, on stairs, in the washrooms – they met and interacted with each other and how these conditioned their exchanges. The point was, students were deriving a design vocabulary from personal experience and the observation of both others and themselves – the latter fostering a degree of self-knowledge as the basis for self-development. But, subtly guided in their discussions by the studio masters, one of the first things discovered was that they had somewhat different observations and interpretations of these interactions. This sparked demand for the first lecture courses, on the mechanics and psychology of perception – which were waiting, already prepared, to be delivered.

Some students’ initial response to designing the camp was that they would let rip their imagination and impress with their ‘creatively’ fanciful shelters. But wouldn’t the time taken for novices with no construction experience to execute them distract from pursuing the common purpose

**9 & 10. Differing layouts of lecture room to experience how these affect group dynamics**  
**11 & 12. Differing layout of tables in cafeteria: at first, 11, small cliques formed, then, 12, these would interact with each other**  
**13-18. Exploring the layout of the campsite**  
**13. Most students at first proposed issuing tents to be pitched at will**  
**14. But someone who retreats seeking solitude can find others joining him/her and spoiling the solitude**  
**15. A fixed circle gives more secure choice as occupants can opt to face out in solitude or inwards into the community**  
**16. The meeting place to pursue the common interest is best set at a distance so camp occupants process there, either individually or in small groups**  
**17, 18. A stretch of water is introduced. Tents can then focus on a portion of the shore and claim it as theirs, 17, or leave its status as was**



for which they had met? So by contrast, most students sought speed and spontaneity and suggested offering sleeping bags or tents to be dispersed as campers wished, so granting what they saw as freedom of choice. But what if one person preferred to be alone and placed his/her tent or sleeping bag in a remote corner of the site, only to find him/herself joined by others, spoiling the solitude and negating the supposed freedom of choice? Yet if the tents were fixed in a circle or portion thereof, a seemingly rigid solution, then the occupants could open the flap towards the centre and be part of the group, or close that and open the other flap to enjoy solitude. Thus one of the first and most profound architectural lessons is learned: that it is fixity and constraint, the seeming removal of some freedoms, that liberates choice and freedom.

Observing how the school setting influenced their interactions, the students then explored where to place such things as the campfire, kitchen, place for pursuing the common purpose, washing facilities and latrines and so on. The campfire – centre of eating and socialising, such as late night storytelling – usually wound up close to the tents, and if these were in the circle, perhaps at their centre. But would that also be the place to pursue the common purpose, or would that devalue it? Eventually most chose to make the meeting place special by setting it at a distance so that campers would process there, in small groups or individually, building anticipation and getting into the proper mood, as if on a mini-pilgrimage. Thus students learn that meaning can be conferred simply

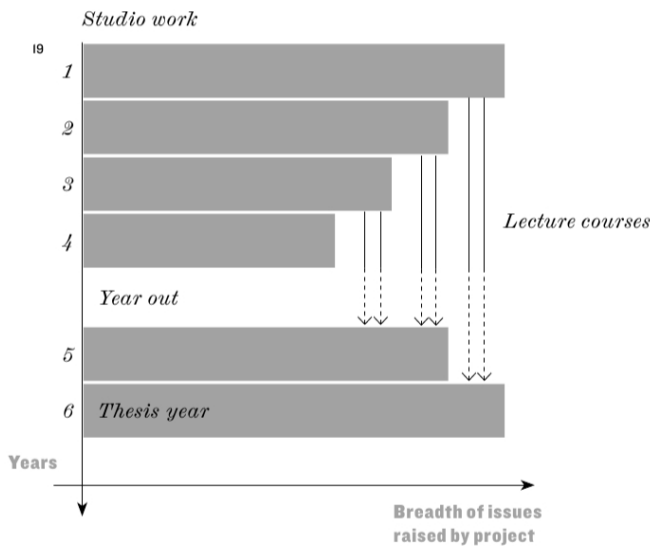
by the spatial relationships and distances between events and nothing more, another profound revelation – and a key to properly understanding the modern free plan such as that of Oscar Niemeyer's project for a yacht club for Rio de Janeiro (AR May 2012, p86). And at this point students, again prompted in discussion led by the studio masters, become curious about architectural parallels, such as in the free plan, and precedent, such as how tribal peoples organise their settlements, and how communal events might have been elevated in status or had sacredness conferred upon them simply by their placing. Thus the call for architectural history lectures, although of a different sort to that usually offered in architectural schools (in this case both of modern architecture and a general history starting with the very origins of architecture). And once the construction of the tents or other shelters was being investigated, came the demand for lectures about materials, and the principles of structure and construction, particularly simple methods of jointing.

So the project and subsequent ones progressed, spinning off lecture courses seemingly at the demand of the students who thus somewhat got the impression they shaped an education tailored exactly to them and so were motivated to make the most of even the lecture courses. Of course this was a deliberately contrived illusion, the nature of the studio discussions and the demands these would precipitate having been carefully choreographed and precisely anticipated by Uytendogaardt. Indeed,

he eventually found himself disappointed that everything worked out so smoothly, just as he had planned, and nobody had rumbled the system. So as students left the final session at the end of the first year, he handed each a lollipop (sucker in South African parlance), a silent *koan* or slap from a Zen master, whose disciples all immediately and shamefacedly got the message.

The careful structuring of studio projects and their relationship to lecture courses was designed to persist through the whole five-year course (interrupted by the year out), but this was never implemented. The idea was that from a seemingly simple project like the camp, which raised a very broad range of issues for discussion and design exploration, the projects would become gradually narrower in focus and spin off more specific and advanced lecture courses until the year out. In the final years

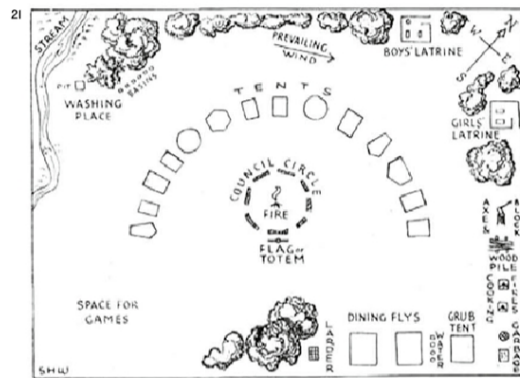
‘The laissez-faire, neo-liberalist approach – what Alvin Boyarsky referred to as the compost heap approach: pile on enough, and heat and steam will emerge – found in several elite schools is inadequate’



leading up to the thesis the projects would then progressively broaden in the range of issues they raised as the lessons of the various lecture courses were drawn on and synthesised in fully developing the design proposals. Of course, in those days architecture was both simpler than now and thought of in simpler terms, and the five-year curriculum could give a pretty comprehensive grounding. That might not be possible any more, hence the divergent emphases of different schools or units which only prepare students in certain aspects of architecture.

No doubt many, particularly those of a postmodern persuasion, will recoil in horror from the notion of such a tightly constructed curriculum as that devised by Uytendogaardt. But architecture is becoming increasingly complex and we face challenging times requiring new kinds and more comprehensive skills and modes of

**19. Diagram by Roelof Uytendogaardt of proposed curriculum with demand for lecture courses initiated by studio projects. The projects in first year would raise a broad range of issues while projects in the subsequent three years would become narrower and more technical in emphasis. In the final two years, the lessons of previous studio work and lectures would be synthesised in projects raising a broadening range of concerns**  
**20 & 21. Illustrations from the 1930s camping manual *Camp and Trail* published by Woodcraft Folk, a British educational children's charity who draw conscious inspiration from Native American organisational traditions to design their pedagogy**



thought. In the face of this, the antithesis of such a structured curriculum, the laissez-faire, neo-liberalist approach – what Alvin Boyarsky referred to as the compost heap approach: pile on enough, and heat and steam will emerge – found in several of what consider themselves the elite schools is almost certainly inadequate. At least the first few years would definitely benefit from being more tightly and thoroughly structured to ensure a proper grounding. Besides, architects are designers and should apply their design skills to more than buildings. Why not to the curriculum?

Yet this draws attention to one of the many other things critical to success as an architect that is not taught in schools – besides that architecture is also a business, and the best architectural practices are often well run as businesses so freeing the architects to perform at their best. This missing factor is that many of the best architects design not only buildings but also their careers – if not in detail, then at least in outline. By having some idea of what they want to achieve, they increase the likelihood of doing so, not least because they spot the opportunities that lead in that direction. Quite a few even deliberately shape the persona they present, including the way they dress and the name they assume. Architects who fail to apply design thinking so broadly tend to be less successful or become academics.<sup>6</sup> The trick is for the designed self not to be phoney, but true to who the person really is and the

fulfilment of their personal potential. There is now a vast amount of theory and technique hitherto unapplied in architectural schools that can facilitate such personal development. These are now relevant for more urgent reasons than ensuring personal success.

Many, including various Integral theorists, attribute our inability to act effectively in progressing to sustainability to a lack of psycho-cultural development. Too many in power, including in education, are stuck at ego- and ethno-centric levels of psycho-cultural development. But we cannot truly understand, empathise with and act effectively to deal with our increasingly global problems, compounded by the complexities of the many kinds of cultures they impact upon and who must collaborate, until more of us reach world-centric levels of understanding and development. Architectural education has always dealt to some degree with the psycho-social development of the student, which together with the honing of judgement is a primary legitimisation for the length of the course. Yet perhaps it is time to draw on some of the knowledge and techniques blocked by postmodernism to deal with this more deliberately. But to understand what is implied involves introducing whole new areas of Integral theory, the subject of another essay.

Also the subject of another essay will be the teaching of design, and how to design, subjects currently often poorly handled in the studio. This is because the best way to teach design is in an apprenticeship situation, by letting the student watch someone who has mastered the skills, who knows how to think with his/her fingers, drawing on both conscious skills and what has become unconscious bodily knowledge, so integrating head, hand and heart. Nevertheless, there is a lot about the processes of design, which tend to be somewhat overlooked in architectural schools, that can be explained fairly clearly. Because this series of essays is coming towards its end, that may have to be an independent essay.

**Peter Buchanan will give a keynote address at the World Architecture Festival in Singapore 3–5 October. [www.worldarchitecturefestival.com](http://www.worldarchitecturefestival.com) Therefore, The Big Rethink will return in the December issue.**

1. Subjects I addressed long ago in 'What is Wrong with Architectural Education? Almost Everything', AR July 1989. Little has changed.
2. I've been railed at by theory professors for daring to pass judgements as to the relative quality of buildings. What are these people doing teaching architecture?
3. This idea was in part prompted by 'Trouble in Paradise', by Michael Sorokin, *Architectural Record*, August 2009. Reprinted in Michael Sorokin, *All Over the Map*, Verso, 2011.
4. From the vast literature of this sort now available, let a few titles suffice: *The Universe Story* by Brian Swimme and Thomas Berry, HarperCollins, 1994; *The Dream of the Earth*, Sierra Club Books, 2006 and *The Great Work*, Harmony/Bell Tower, 2000, both by Thomas Berry.
5. As I remember it, the idea of the project came from a similar exercise set by Peter Pragnell at the University of Toronto. Although I was only a student then, Uytendogaardt discussed his evolving theories with me and I helped write up some of the ideas.
6. When I have taught master classes to professors, part of the last day is often devoted to exercises exploring such matters and the general response has been deep regret that they did not engage in such matters as students.





I. The abstract grid, drained of all meaning, perfectly symbolises modernity and the Orange StriveDrive meme of Spiral Dynamics. This evolutionary level is committed to progress through technology and and rational thinking

# THE BIG RETHINK PART 10: SPIRAL DYNAMICS AND CULTURE

As a key theory underscoring the still unfolding narrative of human evolution, Spiral Dynamics examines the complex interaction of culture and society, so that by considering how we have lived and, crucially, how we might live, we can become more fully engaged both with each other and the world

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**AR DECEMBER 2012 PP 91-101**

The last several decades have seen the emergence, across a number of fields, of modes of developmental thinking whereby species and eco-systems, people and cultures, and even consciousness are seen to evolve through identifiable developmental stages. This evolution through differentiated stages marks developmental thinking as different to modernity's simpler, more purely linear, notion of progress. It also sorely offends postmodern taboos against rankings and hierarchy, which has probably slowed the spread and impact of developmental models to date, including its influence on architectural and urban thinking. Yet the evidence from empirical research supporting these proliferating developmental schema continues to mount, and for many their adoption is a key characteristic of 21st-century, trans-modern modes of thought, including Integral theory.

More generally, the last half century or so has seen the increasing adoption of – or at least advocacy for, rather than actual application of – ecological modes of analysis, sometimes referred to as joined-up thinking. These seek to understand phenomena in terms of their wider web of relationships, including the many dimensions of their multiple contexts – a contribution of the best of postmodern thinking. More recently, this ecological perspective is being increasingly complemented by an evolutionary one. This extends far beyond its Darwinian origins in biology to include cosmology and geology through to the human realms of history and technology,

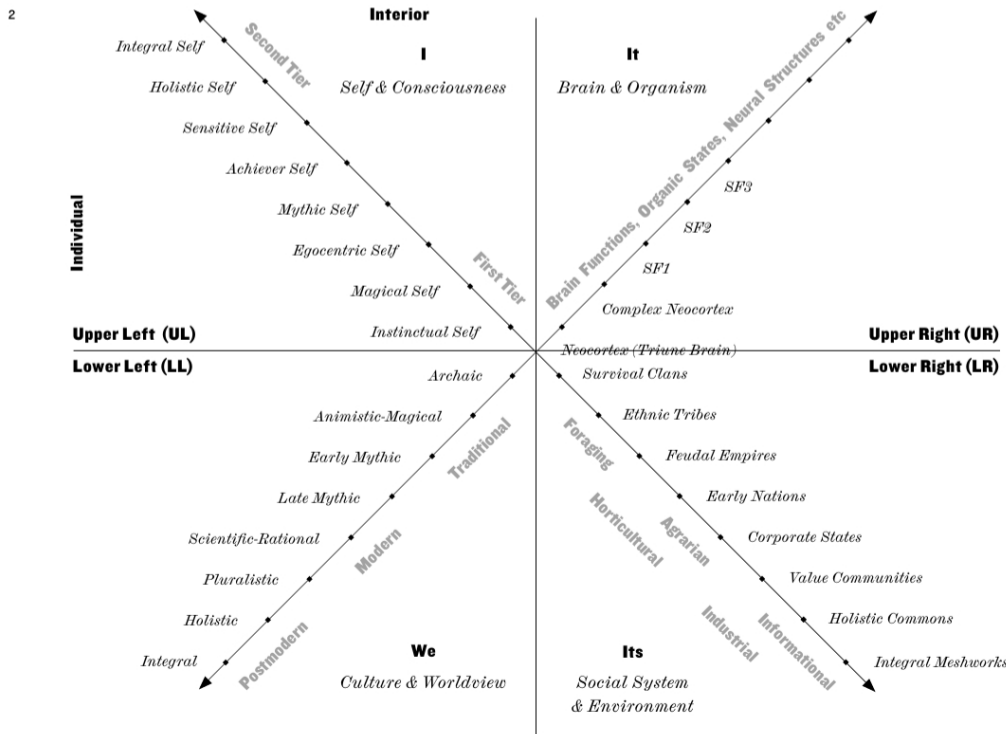
culture and psychology as well as modes of thought and meaning.<sup>1</sup> In crude terms, our use of the quadrants of the AQAL diagram in earlier essays in this series, is a form of joined-up or ecological thinking, while evolutionary thinking introduces us to the levels.

**Revisiting the AQAL matrix**

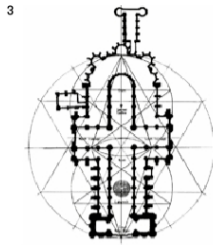
Before continuing our discussion, it is as well to recap the bare bones of the AQAL (All Quadrant, All Level) diagram, particularly for new readers who have only recently started to follow these Campaign essays. The AQAL diagram provides a matrix in which all fields of knowledge can be plotted to show clearly the relationship of these fields one to another so that they can be drawn upon not only independently but also usefully integrated. Moreover, any organism, or collective of organisms, and all manmade systems manifest simultaneously in all four quadrants. These are defined by a pair of cross axes: the upper part of the vertical axis marking the realm of the individual, and its lower part that of the collective; left of this vertical axis, the horizontal axis marks the interior or subjective realm, and right of this vertical is the exterior or objective realm.

The Right Hand quadrants, the realm of the sciences and nature, are referred to as monological, because knowable by detached observation alone; the Left Hand quadrants are dialogical, because knowable only by interrogating the experiencing, meaning-making subject/s.

**2. The All Quadrant All Level (AQAL) diagram devised by Ken Wilber and central to Integral theory**  
**3. Analysis of some aspects of how the plan of Chartres Cathedral is composed in accord with sacred geometry**







The Upper Left (UL) quadrant is thus the subjective realm of the I or self, of personal experience, psychology and intentionality. The Lower Left (LL) quadrant is thus the inter-subjective realm of We or culture, of worldview and meaning. The Upper Right (UR) quadrant is thus that of the objective realm of It, of biology, form and behaviour (action visible to the detached observer) and the Lower Right (LR) is the inter-objective realm of Its, of all systems: ecological and economic, sociological and technological, and so on.

Bisecting each quadrant are diagonals with the levels marked at regular intervals, rising progressively with distance from the crossing of the axes. These levels are organised holarchically, each level a holon that is whole in itself yet part of the holon on the next level up. So in the UR quadrant, an atom is whole that is part of a molecule, that is a whole and part of an organism, and so on. Also crucial is that a level of development in any quadrant is matched by a corresponding level of development in each of the other quadrants. Thus, for instance, increasing neurological complexity (UR quadrant) is matched by increasing psychological sophistication (UL quadrant), cultural development (LL quadrant) and social organisation (LR quadrant).

Using the quadrants as we have done in the earlier essays may have brought more completeness to our deliberations than characterises reductive modern thought. It also serves as a useful easy check to see what areas of knowledge and action have been overlooked during such deliberations, particularly as modern thinking tended to ignore the Left-Hand quadrants, most especially the Lower Left. But to focus merely on the quadrants is to perpetuate modern 'flatland' thinking that robs discussion of both the depths and the dynamism, and thus an even greater degree of completeness, that comes from drawing on the notion of levels, to which this essay is a very sketchy introduction. (Besides Quadrants and Levels, the AQUAL diagram also charts what are termed Lines; but, important as these are, they will remain outside the scope of these introductory essays.)

It is the levels that chart evolutionary and developmental progression, thus placing phenomena in an expanded context. Ken Wilber's apposite analogy is that to ascend the levels is like climbing a ladder, each rung up offering a different and broader perspective and greater depth of understanding, which includes all that gained on the lower rungs. More than that, though, the levels place phenomena in a much larger temporal context than do the

**'The last half of the century has seen the increasing adoption – or at least advocacy for rather than actual application of – ecological modes of analysis, sometimes referred to as joined up thinking'**

quadrants because they reveal the evolutionary and historic past from which something has emerged and suggest the future towards which it is likely progressing. Implied here is not only dynamism, but also direction, a controversial notion much resisted by doctrinaire materialist Modernists for whom anything that hints at teleology is taboo. And yet any dispassionate look at evolution does suggest direction – towards higher levels of complexity and order, of consciousness and interconnectedness. Besides, as we shall see, using the levels deepens and broadens our understanding of architecture, not least by providing a yet greater degree of completeness than afforded by using the quadrants alone.

#### **Architecture's pragmatic and esoteric roots**

Contemporary developmental schema particularly relevant to architecture have grown and evolved from several roots. But, before mentioning some of these, it is pertinent to remember that the training of architects (or rather their pre-modern equivalents) in many historic cultures, including Christian Europe through the medieval period and well into the modern era, was concerned not only with mastery of such pragmatic matters as construction; it also had an esoteric or occult component that was developmental in nature. Thus the medieval training of master masons, which inspired what became freemasonry, was concerned with the progressive psycho-spiritual development of the architect-initiate through levels known as degrees. The architect-initiate could then make use of sacred geometry – with its rules of proportion, number and form – and various forms of sacred or occult iconography to not only give depth to his architecture but also help people relate to the buildings at a deeper level, even if only subliminally, and so serve as a spur to their psycho-spiritual development. Similar notions guided the training of architects in other religious traditions, such as the Sufis.

Indeed, as explained in an earlier essay in this series, the very wellsprings of architecture lie as much in the creation of a physical setting that facilitated the development of people as in sheltering them. One such wellspring was in the choreography of ritual, in deploying a set of actions in different spatial locations so as to intensify the experience of them and take people into altered states and/or undeveloped parts of the psyche. Another, very similar source is the segregation of differing activities into separate spaces or rooms – shaped, lit and so on to enhance those activities – not only for functional convenience but so that activities could be experienced more intensely as part of the ongoing elaboration of culture, and of ourselves as complex cultured creatures. So not only styles but also the spatial deployment of activities differ with each cultural epoch charted by the levels in the Lower Left quadrant.

A key assumption behind these *Campaign* essays is that we are in a period of epochal transition and that the successful negotiation of this transition will entail profound cultural transformation such as constitutes a step-change elevation to the next cultural level. Moreover, to achieve this will require drawing on the various new modes of thought that have emerged in recent decades and

## ‘By applying the conscious mind alone to architecture we lost the once effortlessly unconscious art of making highly satisfying architecture and cities’

that architects have too long ignored. In relation to our discussion here, a key precedent to many contemporary forms of developmental thinking are the writings of philosopher Jean Gebser (1905-73), particularly his book *The Ever-Present Origin* (published in German in various versions from 1949 to '53 and only appearing in English in 1985), which is prominent in the bibliography of books by many of today's leading-edge thinkers.

Gebser charted the development of the sequence of what he termed ‘structures of human consciousness’. These started with the Archaic structure when early humans or proto-humans still experienced themselves as completely part of, and in no way separate from, the world around. This was followed by the Magic structure and the beginnings of symbolic thinking, although the symbol did not yet represent something but instead was thought to actually be that something. Then came the Mythic structure in which stories and myths gave structure to a consciousness that was progressively separating itself from the world around. This separation became complete with the progressive emergence, from the times of the beginning of civilisation as we know it onwards, of the Mental structure, characterised by its use of logic and the emergence of philosophy. The Mental structure later entered what Gebser called its deficient form, the Rational structure, with the beginnings of modernity with its reductionist materialism – and the many benefits and downsides charted in earlier essays. He saw us now entering the Integral structure that both transcends the previous structures and, unlike them, adopts several points of view, including those of the previous structures of consciousness. It was Gebser's use of the term Integral, as well as that of Indian philosopher-sage Sri Aurobindo, that led to its adoption by Ken Wilber for Integral theory.

Another crucial antecedent to Integral theory's developmental schema, and from where too some of its terminology is taken, are the studies of the cognitive development of children by psychologist Jean Piaget (1896-1980). Since then there has been a proliferation of developmental schema, particularly those by psychologists, several of whom have influenced Integral theory or are now associated with it. Among others, these include the theories of Jane Loevinger (1918-2008) on ego development and those of Lawrence Kohlberg (1927-87, a follower of Piaget) on stages of moral development. Contemporary developmental psychologists closely associated with and influencing the continuing development of Integral theory include Robert Kegan and Susanne Cook-Greuter. Ken Wilber has charted all these

developmental schema together and shown that – although their terminology differs, as do the number of levels differentiated – they are strongly correlated.

Levels are discussed in relation to architecture in Part Two of the book *Integral Sustainable Design*<sup>2</sup> by Mark DeKay, a very important work with much invaluable content that should already have become one of the key architectural handbooks of our time. But it is not a particularly easy or pleasurable read. And despite its already considerable length (450 pages) some of it is still too sketchily developed with many potentially promising themes listed in tables without adequate further explanation. We must thus look forward to an expanded and more developed edition, which will be bound to be a must-read and must-own volume for all architects and students. Here we touch upon only a few of the ideas in relation to levels, elaborating some of them in rather different ways to the book, which readers are strongly encouraged to consult also.

### Characterising cultural epochs

DeKay discusses levels in relation to four epochs: Traditional (pre-modern), Modern, Postmodern and Integral. (The first three of these are categories used by some market researchers, although postmodernists are given another name, such as Cultural Creatives.)<sup>3</sup> He then gives examples for each quadrant of the shifts in understanding of a particular term in relation to each of these levels. But first he tabulates the changes at each level in what we would currently term the practice of architecture. Thus in the Traditional era, design and building were executed within ‘Guild Traditions’, the Modern era is that of ‘Independent Professionalism’, Postmodernity is characterised by ‘Pluralistic Practices’ and the Integral era will be that of ‘Responsive Networks’.

Although we can guess what is meant by these terms, they are not adequately explained and elaborated upon. Thus Guild Traditions built very much in response to the immediate local conditions of the site using local materials and reworking traditional typologies. This would inevitably result in a sense of embeddedness, harmony and organic unity commensurate with the Great Chain of Being that constituted the Premodern worldview. But in the Modern era architecture became an independent profession, pursuing a rational approach to solve problems *de novo* without relying on traditional typologies and abandoning as redundant recognisable rhetorical motifs derived from the past, along with all ornament. This, together with the correlated worldview that subscribed to the notion of an objective reality, is what caused the world to fragment into unrelated objects to which we cannot relate either. By applying the conscious mind alone to architecture we lost the once effortlessly unconscious art of making highly satisfying architecture and cities. Pluralistic Practices suggests that the monoculture of simple consensual certainties underscoring the modern professional's approach to architecture is replaced by the multiple narratives, theories and approaches of postmodernity. Responsive Networks suggests a re-grounding of architecture in the dynamic and living networks that make up our world.

**4. Table from *Integral Sustainable Design* by Mark DeKay gives examples from each quadrant of architectural concerns pertinent to levels, in this case cultural epochs**

The book then discusses an aspect of each quadrant in relation to each of the four levels. So in the UL quadrant DeKay tabulates the different ways that, as he sees it, the experience of architecture is mediated at each level. Although I have much sympathy for what he has formulated, I do not entirely agree with it and so omit further discussion. For the LL quadrant he discusses the various ways Nature is understood at each cultural level (and so is a cultural artefact, hence the capitalised N). In the Traditional era he describes Nature as ‘managed’, not a particularly satisfactory term, although the point he makes about Nature (or at least the land) as being husbanded as a sacred trust to preserve and enhance its bounty for future generations is an important one. This is particularly so as it contrasts profoundly with the Modern view of ‘Nature Used’, as a resource to be exploited (and severely damaged through monoculture, chemical fertilisers and so on) with little thought for future generations. The Postmodern era is characterised as ‘Nature Saved’, which expresses the view of Nature as a victim of modernity’s extractive ethos and of the preservation ethic that is emerging as a reaction to this. The Integral attitude is described as ‘Nature United’ and draws attention to what at first seems one of the most mindboggling – and even, to many, such as deep ecologists, offensive – notions in Integral theory: this is

that Nature is embedded in culture in a holarchic relationship. Thus for the Traditionalist, culture is embedded in Nature, while for the Modernist, Nature and culture are differentiated. For the Postmodernist, Nature and culture are either dissociated and separate (the radical deconstructivist view) or culture is again embedded in Nature (the web of life systems view). But for the Integralist, Nature is embedded in culture, which, although entirely dependent on Nature, belongs to a higher and more inclusive level. The Noosphere transcends and includes the Biosphere – mindboggling but irrefutable.

For the UR quadrant the different attitudes to technology are discussed in relation to each level, from the ‘Embedded Practices’ of Traditional, through ‘Building Science’ of Modernity and Cyclic Analogues of Postmodernity to ‘Responsive Structures’ of Integral. And in the LR quadrant the systems discussed range from the Tacit Systems of the Traditionalist through Logical and Complex systems of the Modernist and Postmodernist, respectively, to the Living Systems of the Integralist. These discussions are too rich and important to be summarised and like much else in the book take the discussion of sustainable design to an unprecedented level of inclusiveness and rigour. Anybody interested in the subject, and that should be all architects and students, is urged to read the book.

|   | <b>Interior Perspectives</b>  |  | <b>Exterior Perspectives</b>  |  |
|---|---|--|---|--|
| <b>Complexity level</b>                                       | Experiences (UL)<br>self, intentions and consciousness  | Cultures (LL)<br>worldview and meaning   | Behaviours (UR)<br>parts and performance  | Systems (LR)<br>social and environmental   |
| <b>Level 4<br/>INTEGRAL<br/>Transformative<br/>Networking</b> | Self-Meditation<br>• Evolutionary and ecological aesthetics<br>• Care for whole systems, including people and Nature<br>• Experience ecological awareness | Nature United<br>• Holarchy: Nature embedded in culture<br>• Shared pattern languages<br>• Sustainable development   | Responsive structures<br>• Multi-level technology options<br>• Cradle to cradle materials cycles<br>• Biomimicry                              | Living Systems<br>• Living buildings/Ecomimicry<br>• Regenerative design<br>• Holarchic contexts: bioregion and ecosystems |
| <b>Level 3<br/>POSTMODERN<br/>Pluralistic Practices</b>       | Contextual Meditation<br>• Process aesthetics<br>• Care for sharing resources and interconnecting with Nature<br>• Experience natural change              | Nature Saved<br>• Protecting nature from culture (ie, habitat protection)<br>• Green design ethics<br>• Green eclecticism and Neo-regionalism  | Cyclic Analogues<br>• Healthy buildings<br>• Ecological impacts of buildings and cities<br>• Renewable energy design and production           | Complex Systems<br>• Solar/Ecotech buildings<br>• Green historic precedents<br>• Landscape as context                      |
| <b>Level 2<br/>MODERN<br/>Independent<br/>Professionalism</b> | Intellectual Meditation<br>• Visual and conceptual aesthetics<br>• Care for future resource supplies and experiences<br>• Experience natural change       | Nature Used<br>• Nature as a resource for/in service to culture<br>• Objective views (ie, picture window)<br>• Buildings as green machines   | Building Science<br>• Resource efficiency (energy, materials, water, etc)<br>• Climatic design<br>• Green rating systems (LEED, Green Globes) | Logical Systems<br>• Organic architecture<br>• Green fabrication/ industrialisation<br>• Site as context                   |
| <b>Level 1<br/>TRADITIONAL<br/>Guild Traditions</b>           | Sensory Mediation<br>• Felt force aesthetics<br>• Care for stewarding Creation<br>• Experience natural phenomena and contrast                             | Nature Managed<br>• Culture and nature are oppositional and/or merged<br>• Self-sufficiency/off-the-grid/back-to-the-land<br>• Culture and Nature collapsed (the Garden, Neo-romantic) | Embedded Practices<br>• Guild based techniques<br>• Visible force logics<br>• Trial and error design improvements                             | Tacit Systems<br>• Classical and vernacular<br>• History as context<br>• Pre-industrial form responses/ types              |

Also powerfully pertinent to architects and urban designers working on large-scale urban projects and housing developments, the subject of the last two essays in this series and towards which this one is a stepping stone, are the insights provided by Spiral Dynamics. This is a theory of cultural development through levels (LL quadrant) with inevitable correlates in the psychological development of individuals (UL quadrant). Among other reasons Spiral Dynamics is so useful is that it recognises that, although the current era falls within the waning tail end of the modern epoch and the transitional one of postmodernity, the population of most modern countries is spread across a considerably wider and richer range of co-existing levels of cultural development. It thus provides, in a way that is invaluable to designers and policy makers, a much deepened understanding of the world views and values of the members of all the subgroups of society, so that these can be recognised and properly catered for, while also facilitating mobility through such cultural levels.

#### Origins of Spiral Dynamics

Spiral Dynamics grew out of the work of Clare Graves (1914-86), a professor of psychology who proposed a Level Theory of Personality in 1966. This was further developed by his protégé Don Beck, working with Chris Cowan, into what has become known as Spiral Dynamics in the book of that name,<sup>4</sup> which again readers are encouraged to study as it is so much richer than the following too-brief synopsis of some themes. As the name implies, Spiral Dynamics – a theory that meshes exactly with Integral theory and the AQAL diagram<sup>5</sup> – charts the development of cultures through a rising, widening spiral of increasing complexity, not least because each culture envelops those preceding it as healthy resources to be called upon if situations demand it. The cultural levels – or valueMEMES, now more usually simply called memes – are colour-coded (which takes many some time to get used to, but after a while feels quite natural) and oscillate between those that prioritise the individual and those that emphasise the collective. A key assumption of Spiral Dynamics is that it is not possible for a culture or individual to skip a level of development and that all memes must be passed through, even if only relatively fleetingly. Also, just as in biology ontogeny (the growth of an individual) recapitulates phylogeny (the evolution of its species), so with Spiral Dynamics as the human child grows up and matures into adulthood it recapitulates the development through the memes. Along with the notion of memes, which immeasurably enriches our understanding of cultural dynamics, this recapitulation by each developing individual is hugely useful to inform the design of housing and urban areas, but has so far been little researched and theorised.

The first of the memes is Beige, also referred to as SurvivalSense, and corresponds with Gebser's Archaic structure, in which there is little sense of self as small bands cooperating to ensure basic survival and action is guided largely by instinct. At times of extreme shortages and threat, humans might still retreat to this level, correlated with that of the helpless new-born infant.

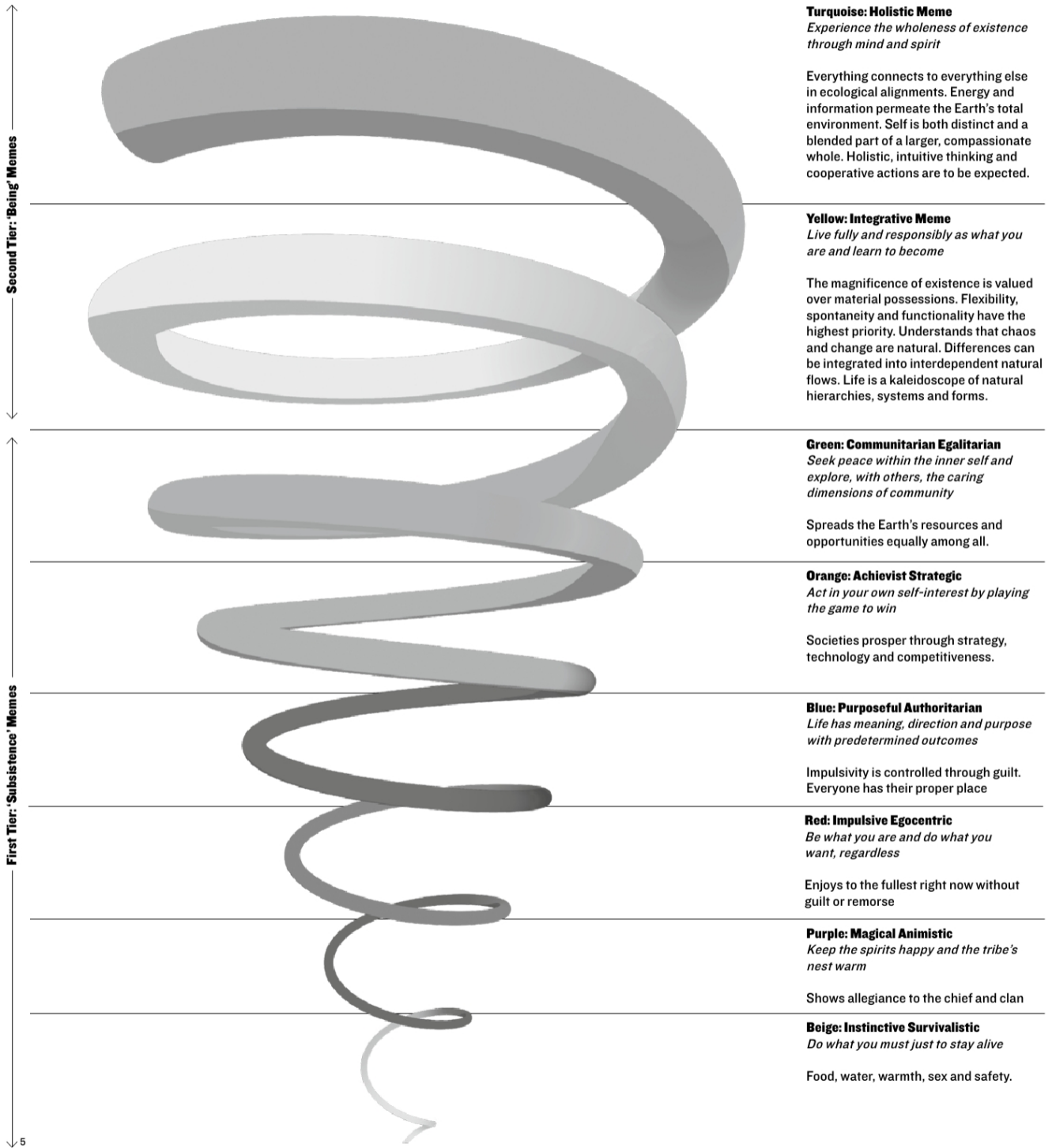
‘Spiral Dynamics charts the development of cultures through a rising, widening spiral of increasing complexity, because each culture envelops those preceding it’

Although such bands might seek safety and shelter in caves and under overhangs, this is a pre-architectural level. The next meme is Purple, that of the tribe and KinSpirits, and Gebser's Magic structure, in which thinking is animistic and magical, attributing powers to sacred and symbolic objects and starting to observe the cycles of seasons, customs and rites of passage. The communitarian, clannish Purple meme is seen by some as living in harmony with nature, while others say the tribe lives in fear of nature whose spirits have to be constantly propitiated. In architectural terms settlements typically show little, if any, differentiation in the size and status of dwellings, which may be communal.

With the Egocentric Red meme, that of the PowerGods, and Gebser's Mythic structure, we return to an emphasis on the individual, on strength and self-expression. Here we move from magic to machismo, to the adulation of heroes and the elevation of war lords, and eventually to the divine rights of kings and feudalism. The architectural manifestation might start with an enlarged or central chief's hut and eventually lead on to the dominant castle or palace in a walled town or city. In child development, the Red meme is reflected in the spirit of physical adventure, when the child explores his or her own physical capacities and the world around. This is particularly poorly catered for in the modern city, where excessively cautious Health and Safety regulations make it difficult for children to explore and stretch their physical capacities in tree climbing, rough and tumble and so on, and where it is considered unsafe for children to roam and explore the city, let alone just walk to school. The Red meme thus manifests later and pathologically in gang culture.

The next meme to arise is Blue, of TruthForce or the Purposeful way, that values stability and the order arising from strong codes of conduct in which individuality is subsumed to the pursuit of larger causes or truths. In particular, this meme is associated with monotheistic Religions of the Book – Judaism, Christianity and Islam, as well as Confucianism – with righteous living and sacrifice of the self to the Way and deferred rewards. Architecturally this meme is distinguished by the dominant religious buildings that eclipse, or at least equal, the grandeur of secular buildings such as palaces. Although liberal intellectuals, dogmatic scientists and postmodernists tend to look down upon and disregard the Blue meme, it still has an important socialising role to play for the developing child, and it is little wonder that the route out of Red meme gang culture is so often through evangelical Christianity or other authoritarian Blue meme institutions.

**5. Colour-coded spiral of Spiral Dynamics as developed by Don Beck and Chris Cowan from the work of Clare Graves. Note how the memes oscillate between self and community centred and how the lower six memes form the First Tier of Subsistence memes. Achieving sustainability requires that more people reach the Second Tier 'Being' memes. Source: Spiral Dynamics model in 'The Never-Ending Upward Quest', an interview with Don Beck in *What is Enlightenment* magazine, no 22, Fall/Winter 2002**



Modernity arrives with the Strategic Orange meme of StriveDrive that emphasises self-reliant, success-oriented and competitive individuals, committed to the notion of progress, and to science, technology and rational thinking as means of achieving the good life of material abundance. The increasingly meaningless abstract grid, which underlies all the plans of JNL Durand (1760-1834) and then dominates the gridded plans and facades of corporate Modernism, is the apt architectural manifestation, just as the associated city becomes a mere chess board of economic opportunity. Postmodernity follows with the Relativistic Green meme of the HumanBond that rejects dogma and divisiveness in favour of empathy and sensitivity, and the pursuit of consensus and harmony. This is also the meme of political correctness and the inability to prioritise and act effectively, of impotence in the face of mounting global problems, as well as of endless meetings seeking the opinions and input of all. The pluralism of Postmodern architecture is exactly apt to this meme. The 'caring and sharing' psychological character associated with the Green is one that respects everyone's opinion, and every theory or concept, as equally valuable - until one's own is questioned and the tendency is to regress to a narcissistic Red: 'who are you to question me?'

#### 'Subsistence' versus 'Being' memes

These first six memes constitute what is called the First Tier of 'Subsistence' memes. Each was a healthy response to the life conditions of the time in which the meme emerged and all of the memes continue to exist today, both in cultures and subcultures, or as a resource in the psyches of individuals. For instance, there are times when it is entirely healthy for someone from a higher meme to regress to Red assertiveness. Although the Red meme is also found there in gang culture and some extremes of nationalism and religious fundamentalism, Blue, Orange and Green remain the dominant memes in North America and Europe, with Blue more pronounced in the United States than in most of Europe, and Green more pronounced in Northern Europe. A major problem today when coordinated action is so urgently needed is that each of these memes only really understands its own worldview, which is considered the only legitimate one. Other memes, even if tolerated, are seen as essentially wrong. Hence Blue meme fundamentalists, very much a minority group within the meme, regress to Red because they are threatened by Orange selfish individualism and appalled at the moral laxity of hyper-relativist Green.

Compounding the resultant problems of communication and achieving consensus, each meme is underpinned not just by sometimes contrasting values, but this is reflected in distinctly differing, if sometimes seeming subtly so, use of language. Furthermore, all these First Tier memes are either egocentric or ethnocentric, and not as yet world-centric, so progress towards such things as global peace, equity and stability, as well as sustainability, is extremely difficult while most people are stuck in First Tier memes.

Fortunately a Second Tier of world-centric 'Being' memes is emerging, if both dangerously late and under-represented. Although they constitute only a very tiny



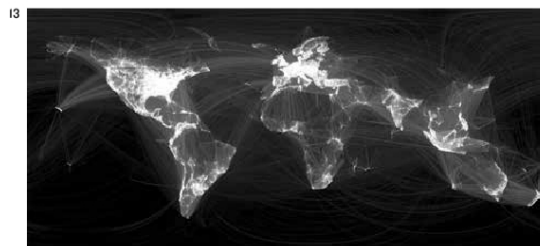
The memes summarised  
**6. Purple: KinSpirit** meme of magical thinking epitomised by handprints sprayed on a cave wall  
**7. Red: PowerGods** meme of might is conveyed by a dominant castle from the feudal Middle Ages  
**8. Blue: TruthForce** meme typified by the Sacro Convento monastery and church of St Francis that dominates Assisi, Italy  
**9. Orange: StriveDrive** meme of modern rationality  
**10. Green: HumanBond** meme characterised by Herman Hertzberger's Centraal Beheer  
**11. Yellow: FlexFlow** meme underscores the Eastgate Centre, Harare, Zimbabwe which biomimetically emulates the ventilation 'strategy' ...  
**12. ... of a termite's nest**  
**13. Turquoise: GlobalView** meme of the Global Village shown by the interlinkages of Facebook friends



‘With Second Tier memes, the clockwork universe has been replaced by the evolving, living creative universe that evokes reverence and the urge to be a responsible participant and agent of its unfolding’

proportion of the world’s population, the first two have already been identified and tentatively described. Initiating the Second Tier is the Yellow, FlexFlow or Systemic meme that is grounded in understanding and accepting the inevitability of nature’s flows, cycles and regenerative capacities, and which wants to open up to ‘experience the fullness of living on an Earth of such diversity in multiple dimensions’. This is followed by the Turquoise, GlobalView or Holistic meme, where there is not only an understanding of the dynamic, evolutionary unfolding of nature and culture but you become part of this larger, conscious, spiritual whole where everything is interconnected as a single dynamic organism with its own collective mind. With these memes Newton’s clockwork, meaningless and purposeless universe has been replaced by the evolving, living and creative universe that evokes reverence, and the urge to be a responsible participant and agent of its unfolding. Consistent with this view, sustainability is seen not in terms of constraints and sacrifices but as an inspiring vision of a much more purposeful and fulfilling life. Significantly, psychometric testing shows that Second Tier memes are without the persistent anxieties and fears that characterise the First Tier ones. Now there is speculation that the next, Coral meme is beginning to emerge, but it still too soon to say much about it.

Further key characteristics of Second Tier memes are not only that they are world-centric, with both the necessary ‘big picture’ overview and temperament to solve urgent global problems such as progressing towards sustainability, but that those at these levels are what are known as SpiralWizards. What is meant by this term is that, in contrast to First Tier memes, such people are not trapped in the worldview of their own meme but, rather, can both appreciate the worldviews of other memes and also communicate in language appropriate to its narrower worldview based on other fundamental values. Thus when communicating with the Red meme, with its preference for instant gratification, ‘what’s in it for you’ will be stressed in strong simple language. But with the Blue meme, and its tendency to delayed gratification, duty and honour would be emphasised along with tradition, propriety and righteousness. With the materialist Orange meme, discussion would be about competitive advantage, better profits and productivity, quoting experts and scientific evidence. And with the Green meme, gentle language would be used with imagery from nature, and



‘The rich insights of Spiral Dynamics help designers understand how to better serve any of the memes, so making for more satisfied and more stable societies’

belonging, sharing and harmony would be stressed. These characteristics and communication skills allow the Second Tier memes to deal much more effectively with the complex and urgent problems that overwhelm the intellectual and character resources of First Tier memes.

Devising ways to speed the development of people up to the Second Tier memes should obviously be a priority of everyone engaged in creative pursuits, such as creating video games or television series, as well as of personal coaches and therapists. Even more obviously, it should also be a primary priority of education, particularly that of tertiary education, and in particular that of those who are to be environmental designers of various sorts. But the dominance in academe of the Green meme with its postmodern hyper-relativist ethos continues to be a major block to such progress, for reasons discussed in the essay

on education (AR October 2012). It could also be, that just as each meme is a healthy response to the life conditions in which it arose (but may become problematic when those life conditions change) as well as a healthy resource to be called up by higher memes, advance to the Second Tier memes will be helped by rebuilding some foundations in the First Tier. Although Integral thinkers are rightly wary of regression to lower levels that are mistaken for higher levels, what they call the ‘Pre-/Trans Fallacy’, Second Tier reverence for an evolving nature will probably be aided by the knowingly cultivated resurrection of a Purple meme (Magical sensibility) and Red meme (Mythic one). In the same way, advancing out of Green meme relativism might be helped by the recovery of a bit of Blue meme discipline.

Thus the power and usefulness of Spiral Dynamics lie in much more than helping progress to higher memes to help achieve sustainability and so on. Its rich insights help designers understand how to better serve any of the memes, so making for more satisfied and more stable societies. I remember once in Africa being shown housing designed by Orange meme technocrats for people who retained strong Purple meme tribal roots. Despite its conveniences and comfort, it did not suit its inhabitants, for whom there were no suitably formed and located outdoor communal living areas, nor places for the ritual slaughter of animals and so on. An argument then polarised over whether the housing should be designed to be ‘aspirational’, encouraging inhabitants to adopt modern urban living patterns, or be closely tailored to tribal ways.

**14. Table from Spiral Dynamics: Mastering Values, Leadership and Change by Don Edward Beck and Christopher Cowan assigning political and economic mechanisms to each of the eight memes in Spiral Dynamics**  
**15. A second table uses a single phase and evocative quote to give visceral meaning to the memes**

| Meme      | Concept of governance   | Political form  | Economy  |
|-----------|---|---|--|
| Beige     | No concept of governance  | Band  | Little exchange. Eat when hungry. Few possessions  |
| Purple    | What ‘our people’ decide to do. Announced by the chief and guided by elders and spirits | Tribes: clans, councils and lineage connections                     | Mutual reciprocity and barter. Chief distributes based on need through kinship               |
| Red       | Whatever the Big Boss says it is. ‘Power to the people’ means to Boss and chosen few    | Empire: dictatorial perhaps ‘corrupt’ autocratic strong-arm tactics | Feudal distribution system where the rich elites get richer, the poor get poorer             |
| Blue      | Justice and fairness for the right, good people who follow rules and traditions         | Authoritarian: one-party rule government control                    | Basic standard of living will be raised through hard work, discipline and savings            |
| Orange    | Give-and-take pluralistic politics within a check-and-balance game of economics         | Enterprise: multi-party states, bills of rights                     | Free market-driven process where the ‘invisible hand’ of economy sets pay, price, perks      |
| Green     | Everybody shares equally in making consensus decisions to care for ‘we the people’      | Communitarian: social democracy, equal rights/results               | Communally-based distribution meets human needs before any benefit from excess or profit     |
| Yellow    | Process of integrating the majority of interests in expediting flows up the Spiral      | Integrated structures: stratified systems in Spiral intelligence    | Simultaneous value-added moves throughout Spiral for higher quality of being to next steps   |
| Turquoise | Macro management of all life forms toward common good in response to macro problems     | Holistic: whole-earth networks and interconnections                 | Earth’s resources and learning distributed by need, not want, so all can survive with enough |



The latter, it was argued, would be ‘patronising’ and also inhibit residents from changing their lifestyles in their own time, as well as soon becoming obsolete because unsuited to future generations. But the insight of Spiral Dynamics is that to design for either of these poles exclusively would be unsatisfactory, not least because it is very unlikely the inhabitant will make the leap directly from Purple to Orange meme. Instead the housing should have been designed to suit the Purple and Orange memes, and all those in between, so as to allow the residents to develop as they chose and at their own pace.<sup>6</sup> Spiral Dynamics is also proving invaluable in unlocking highly conflicted situations, where perhaps several different memes consider they have the right to use a piece of land, say, but each meme has a very different view of what use it should be put to. In such cases, a skilled Spiral Wizard can intervene so that the memes start to understand and respect each other and eventually a solution can be found that works for everybody.

As should be obvious, Spiral Dynamics offers profound insights to guide urban design and large-scale architectural projects in complex, multicultural (multi-meme) societies. Yet the experience of some of those using it is that it has to be used with caution, and can provoke difficult misunderstandings. Asserting that Spiral Dynamics sees all memes as healthy and life sustaining, and apt to the conditions in which they arose and which may still persist, can be to no avail. Once people realise they have been categorised in a system of levels in which

they are not at the top, they might feel demeaned, become uncooperative or argue vehemently to prove they are of a higher level meme. There are also contexts in which extremely bizarre conversations can be overheard that make no sense at all, until you realise people are trying to prove they do not belong to a particular meme, usually Green. And there are those who object to their religion being classified as Blue meme, rather than an exalted higher meme, and are particularly threatened by the notion that to move into a new epoch in which achieving sustainability becomes feasible involves redefining for our times, drawing on all the knowledge now available, what it is to be fully human. The answer to this is complex, not least because to be fully human involves including all memes within the psyche, but also because although many of the major religions arose with the Blue meme they all include strains of mystics, thinkers and writers within them at all subsequent, higher memes. A perfect example was the Passionist priest, cultural historian and eco-theologian Thomas Berry (1914-2009), who definitely belonged to a Second Tier meme, most probably Turquoise, as did the Jesuit priest, palaeontologist and philosopher who inspired him, Pierre Teilhard de Chardin (1881-1955). And it was Thomas Berry who argued most passionately and cogently that achieving sustainability involves redefining what it is to be fully human.<sup>7</sup> The two final essays in this series will give a small insight into some of the implications of this for the design of cities and urban areas.

|                  |                  |   |
|------------------|------------------|---|
| <b>Beige</b>     | The Bush         | ‘Just making it through the day and night’  |
| <b>Purple</b>    | Enchanted Forest | ‘... ghosties and ghoulies and long-leggedy beasties and things that go bump in the night ...’      |
| <b>Red</b>       | Jungle           | ‘Make my day!’  |
| <b>Blue</b>      | Cathedral        | ‘Theirs not to reason why, theirs but to do and die. Into the valley of death rode the Six Hundred’ |
| <b>Orange</b>    | Marketplace      | ‘Better things for better living through technology’  |
| <b>Green</b>     | Commune          | ‘Everything (and everyone) is beautiful, in (his or her or its) own way’                            |
| <b>Yellow</b>    | Natural Habitat  | ‘So much to learn and explore, so little time’  |
| <b>Turquoise</b> | Global Village   | ‘Fine-tuning the music of the spheres’  |

1. Recent publications include *Evolutionaries: Unlocking the Spiritual and Cultural Potential of Science's Greatest Idea* by Carter Phipps, Harper Perennial, 2012, and *Evolution's Purpose: an Integral Interpretation of the Scientific Story of our Origins*, by Steve McIntosh, Select Books, 2012.  
2. *Integral Sustainable Design: Transformative Perspectives* by Mark DeKay, Earthscan, 2011.

3. *The Cultural Creatives: How 50 Million People are Changing the World* by Paul H Ray and Sherry Ruth Anderson, Harmony Books, 2000. Here the population of the USA is classified as Traditionalist or Conservative, Modernist or Progressive, and Cultural Creatives whom the authors say are creating an Integral or Transmodern culture. But as they use the term, it is closer to Postmodernity than what Wilber means by

Integral, a term many are now using with slightly different meanings.  
4. *Spiral Dynamics: Mastering Values, Leadership and Change* by Don Edward Beck and Christopher C Cowan, Blackwell, 1996.  
5. See *A Theory of Everything: an Integral Vision for Business, Politics, Science and Spirituality* by Ken Wilber, Shambhala, 2000.  
6. Somewhat similar thinking informed the

advice given by some members of the Spiral Dynamics community to the USA prior to the invasion of Iraq, but it was disastrously ignored. The argument offered was that prior to Saddam Hussein, Iraq had been largely Blue meme with an emerging Orange meme. But under Hussein, although it remained strongly Blue it also regressed to the Red meme of warlords and Purple tribalism. In such

circumstances it would be impossible to impose Orange-Green democracy without passing through a healthy Blue, and largely theocratic stage. Instead of alienating the mullahs, the Americans should have worked with them to keep the country stable and allow a smoother transition towards modernity and democracy.  
7. *The Great Work: Our Way into the Future* by Thomas Berry, Harmony Books, 2000.





# THE BIG RETHINK PART II: URBAN DESIGN

The fundamental purpose of urban design is to provide a framework to guide the development of the citizen. As this AR campaign reaches its conclusion, the penultimate essay attacks the City of Doing found in modernity and calls for a return to the spatial and social richness of the City of Being — necessary for the flourishing of humanity in the 21st century

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In the largest-ever wave of human migration, vast numbers all over the developing world are flooding from countryside to city. Most of humanity is now urbanised as new settlements, some expanding into vast megacities, mushroom rapidly – and around them sprawling slums provide the initial foothold in the transition from peasant to urbanite. Many of these new cities, like the newer parts of old ones, are dismal aggregations of sweatshop factories and crowded residential buildings of stacked hutch-like homes. But, like the even less salubrious slums, these offer escape from the grinding poverty of the countryside, with its lack of education and healthcare. The first generations entering these cities and slums willingly sacrifice their lives to give their children the education and opportunities they never had and to support dependents in the countryside. And despite the slums' decrepit and unhealthy conditions, they do in a sense 'work': people progressively upgrade their homes, or move on, as they can afford to; and the slums are hotbeds of small-scale entrepreneurship and creativity. Indeed it is well-intended interventions, such as construction of state-funded new housing, that tend to fail. Slum dwellers cannot afford the rents and implicit lifestyle of the new housing, whose leases secretly fall to the better off to be sublet for profit.

Seemingly somewhat contrary is the ongoing trend in developed countries for cities to focus on improving their open spaces and quality of life. Influential examples are the transformation of Barcelona, initiated by Oriol Bohigas in the 1980s as advisor on urban affairs to two consecutive mayors, and the Slow City (Cittaslow) movement originating in Italy. Such developments are characteristic of wealthier countries with relatively stable or even declining populations. Besides improving the quality of life in cities – making them better places for leisurely enjoyment, so less stressed and in various ways healthier – the spreading Slow City movement also emphasises enhancing local characteristics and culture, including regional food and cuisine. It thus resists the homogenising impact of globalisation. Yet precisely because of this it also makes a city more attractive to skills and investment in our globalised world, where cities as much as countries compete for these economic essentials, and key assets are a city's quality of life and individuality of character.

The most important and influential of current developments goes further. This is the Transition Towns movement now spreading rapidly through the towns and cities of much of the world. Its primary emphasis is on building local resilience, and so sustainability, through a wide range of community and environmental initiatives. Although there is much to be learnt from this movement, it is tangential to the focus of this essay. But it is strange how few architects participate in the movement and that when mentioned in architectural schools, even those within a very active Transition Town, neither students nor staff tend to be aware of this. Part of the problem seems to be architects' reluctance to dismount their professional pedestal and muck in as equals with ordinary folk more knowledgeable and committed than themselves.

Much about the future may be impossible to predict, not least because of rapid technical innovation and,

2



**1. (Previous page) final version of abandoned masterplan for railway lands north of St Pancras and King's Cross stations in London by Foster + Partners with the Space Syntax consultancy. Organised around a clearly configured armature of streets and open spaces, it combines the grandeur of the city as cultural artefact with the viability of city as organism**  
**2. Rising rapidly all over the developing world are cities of tall towers and surrounding slums**

particularly, the continuing exponential increase in computing power in accordance with Moore's Law. How many of today's gadgets and the way they have affected daily life could have been envisioned a couple of decades ago? But other assumptions about the future seem pretty safe bets, including those underlying this series of essays, not only because they are founded on discernible trends, but even more so because they are urgently necessary to resolving a wide range of dangerously pressing issues. The most threatening of these, as earlier essays have argued, are endemic to modernity. And resolving them would require, among other things, counterbalancing modernity's too exclusive focus on the quantitative and objective with attention also to the qualitative and subjective, including the desire to live in accord with personal values and aspirations.

Without this, for reasons also argued in earlier essays, progress towards sustainability will remain elusive. Hence trends like the Slow City and Transition Towns agenda, as well as the sort of urban design advocated in this essay, are certain to prove germane to the exploding cities of the developed world, to which all such concerns currently seem utterly alien. Rural people arriving in the cities might willingly sacrifice themselves for dependents and future generations; but their children and following generations will inevitably have, and want to realise, very different aspirations. Nor will being able to afford consumer goodies and distracting entertainment persuade them to compromise their ideals. They will want lives and

work of dignity, offering meaning and personal fulfilment – what the city always promised, but delivered to only a minority, and will soon be deemed essential by most. So the challenges facing these mushrooming cities are much more than the overwhelming current concerns of number and quantity, such as housing and employment for their burgeoning populations, feeding them and disposing of wastes and emissions. Difficult as these are to achieve, they are conceptually easier to entertain than dealing with such psycho-cultural challenges as conceiving of cities that offer lifestyles and work of dignity, meaning and fulfilment in line with very varied individual notions of purpose, identity and personal destiny.

In the light of all this, the current assumption of more and more of us living in cities and mega-cities seems less than inevitable. Besides, in times like these when we are undergoing massive and pivotal historic change, it is as likely for some trends to reverse as to continue. For instance, many analysts and commentators have been warning of problems of future food supply and security. Our current systems are heavily dependent on oil for farm machinery and transport, fertilisers and pesticides. Even though Peak Oil no longer seems the looming challenge many assumed until recently, our energy-intensive agriculture is problematic for, among other things, the emissions produced, the poisoning of land and water, the loss of biodiversity and the un-nutritious food produced. Its unviability and the need to offer millions dignified and meaningful work suggests there may be a return to the land, to small-scale labour-intensive farming, to regenerating and living in harmony with the earth and its daily and seasonal cycles, to producing local nutritious food and leaving a long-term legacy for one's descendants. After all, the poverty presently associated with such farming has been brought about by the corporations that

‘Trends like the Slow City and Transition Towns agenda, as well as the sort of urban design advocated in this essay, are certain to prove germane to the exploding cities of the developed world, to which all such concerns currently seem utterly alien’

are trashing the planet to maximise profits by driving down prices and feeding us highly processed, unhealthy food. What is being suggested here is not the end of cities, but rather that the future might lie with a range of differing kinds and sizes of settlements, some no doubt of a sort yet to be conceived. After all, thanks to the Internet and various forms of energy-efficient public and private transport, combining the best of urban and rural life is now perfectly possible.

Besides, although global population is projected to continue to grow until mid-century, when it will reach between nine and 10 billion, some analysts now say it will not only plateau but then start to dwindle. Wherever women have become educated, population has stabilised and in some countries declined as birth rates fall below replacement levels. This is a pattern, it is argued, that is bound to be repeated globally. Yet it could be that declining birth rates are a consequence not only of female education but also of mothers having to work in our neo-liberal economies. Countries with good childcare provision, like Iceland, see less of a drop in birth rates. Anyway, the likelihood is that the population pressures of the present and near future may be relatively short term. From an evolutionary perspective, this population bulge could be seen as a way to further pressurise humankind to make the next jump in its own evolution – from modernity to trans-modernity, from wanting to conquer or suppress nature to seeking symbiosis with it, crucial steps towards sustainability. So, much of the squalid urban fabric built this millennium may soon come down, both because of declining populations and so as to create more liveable cities better suited to future aspirations and the true purposes of cities – something the design of these mushrooming cities maybe should already acknowledge.

The challenge of sustainability will increasingly influence urban planning and design, as it does already in the advocacy for the Compact City – dense with mixed-use neighbourhoods to encourage walking, lessen the need to commute and make public transport feasible – and prioritising construction on brownfield rather than greenfield sites. Computer modelling and use of suitable planting can lead to improved microclimates: by channelling cooling breezes and excluding gusty downdraughts, for instance; by planting roofs to shade them and aid transpiration; by using deciduous plants for summer shading of streets and facades; and so on. Besides improving external microclimates, such measures reduce loading on mechanical equipment within buildings or help to eliminate it entirely. These and other pragmatic measures are widely known and discussed, and so need no elaboration in these few pages. Nor do such similarly

**3. Climate as a determinant of design: a narrow shady street that channels breezes in Foster + Partners' design for Masdar City, Abu Dhabi**



significant ones for saving and recycling water, enhancing biodiversity and providing refuge for wildlife and corridors for its movement.

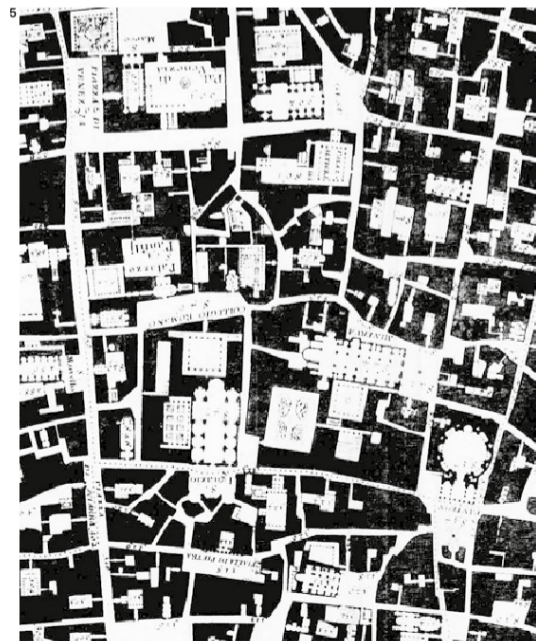
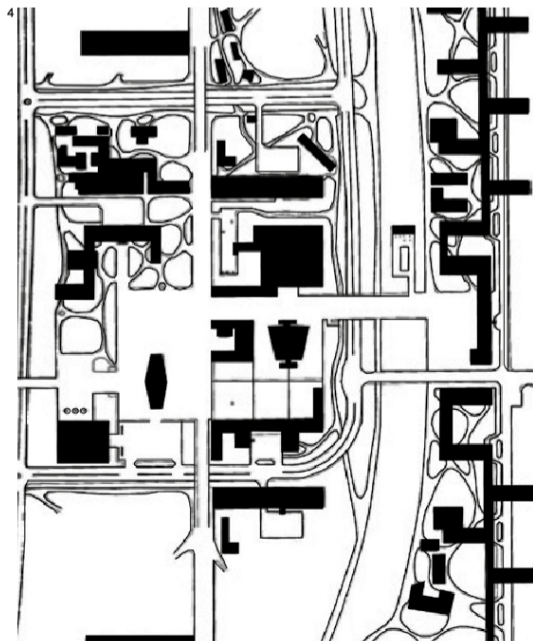
Another important factor beginning to receive attention in urban design discussion is human health, and not only by maintaining cleaner air and water and minimising the many environmental toxins ranging from vehicle exhausts to off-gassed chemicals from buildings. The epidemic of obesity and associated diabetes are due partly to the processed foods with which corporations swamp supermarkets and fast food outlets, but also because in the contemporary city, hours are wasted commuting long distances rather than walking or cycling in pleasant conditions. Another contributory factor to many diseases is increasingly understood to be inflammation, often compounded by the solitary lifestyles, loneliness and lack of community characterised by modern city life and exacerbated by its design. These are issues we will return to in next month's essay.

Two other developments already raised in an earlier essay will also in time impact profoundly the life and design of urban areas. First is the ongoing emergence of what Daniel Pink has labelled the Conceptual Age.<sup>4</sup> Second is progress towards what Jeremy Rifkin refers to as the Third Industrial Revolution<sup>5</sup> (TIR) – if politicians can be persuaded to stop fighting to preserve the corporate behemoths of the Second Industrial Revolution (SIR) and the privileges of those at the top of their pyramidal command structures, all at the expense of most of us and the emerging TIR. Pink notes how following the migration of rote manual labour (factory work) from the developed to the developing world, and so the transition from the Industrial to the Information Age,

rote non-manual or intellectual (linear sequential, left-brain) work is now following: call centres, accounts, even legal advice and medical diagnostics. Now, as wages in these countries and transport costs increase, some manufacturing is returning to the post-industrial developed world. Nevertheless, in our progression from the Information to the Conceptual Age, our cities are refocusing their economies on creativity, culture and caring (all drawing on right-brain capacities of empathy, pattern recognition and so on) – caring because required by our ageing populations, and culture to cater for the long post-retirement portion of the lives of an educated citizenry. This suggests cities combining the buzz of the very best contemporary cities with the virtues of the Slow City.

**Redefining purpose**

Behind all these essays, as already explicitly stated and argued in them, are key assumptions. Central to these is that in this pivotal moment in history several epochs of differing duration are drawing to a more or less simultaneous close, in particular 4-500 years of modernity along with its terminal, meltdown phase of postmodernity. The emergence of the Conceptual Age and TIR are part of this larger transition. Thus the times demand that much be radically rethought, right down to such basics as the fundamental purposes of things. This is especially true of architecture and urbanism because the Modernist conceptions of their purposes, along with the associated vision of what constitutes the good life they are to frame, are so desperately impoverished. In contrast to their too-exclusive emphasis on the objective, the Right-Hand Quadrants of the AQUAL diagram, it is time to



**City of Doing and City of Being**  
**4. Le Corbusier's masterplan for St Dié consists of object buildings dispersed in landscaped open space – a city fragmented into differing things done in different places**  
**5. The Nolli plan of Rome shows a city of contiguous fabric, with the open space as the figure against the ground of buildings, a city in which you are immersed and exposed**

‘Certainly the city is a place of trade and manufacture, residence and recreation, education and welfare. But the quintessential and most elevated purpose of the city is as the crucible in which culture, creativity and consciousness continually evolve’

re-emphasise the many dimensions of human subjectivity, the Left-Hand Quadrants, and to reground architecture and urbanism in these too. Their fundamental purposes need redefining in terms of their deepest, originating human impulses to be as inspiring, ennobling and encompassing as possible so as to inspire urgently needed change.

Among the most memorably taunting of the graffiti slogans of Paris '68 was 'Métro, Boulot, Dodo', life reduced to a meaningless, relentless round of commuting, work and sleep. Terrifyingly, this is an exact and fair summary of the Functional City of modern town planning as promulgated by the Athens Charter: urban settlements of dispersed zones for work, housing and recreation connected by circulation-only transport routes. This is human life reduced to a mere productive economic unit, its pointlessness to be compensated for by the addictive distractions of consumerism and entertainment. Indeed, the underlying ethos of such planning was a weird mixture of socialism and consumerism, seeking a balanced allocation of requisite facilities: one playground per so many houses; one primary school per multiple of that many houses; and so on. Town-planning manuals of the mid-20th century exemplify this dismal approach exactly and in many parts of the world towns and cities were laid out like this. The insidious legacy of this thinking continues, if often more subtly.

This modern Functionalist City is what I described in an AR essay of a few years back as the City of Doing, as opposed to the City of Being.<sup>3</sup> It is a city shaped only by the seemingly rational, objective concerns of the Right-Hand Quadrants. At its not-infrequent extreme, it is a city of freestanding mono-functional object buildings dispersed in mono-functional zones and to which access is gained by movement-only channels lacking all the social dimensions of the traditional street – what in a much earlier AR essay<sup>4</sup> I described as the 'wiring diagram city'. This is a 'city' in which not only is urban fabric fragmented, but so is civic life and the psyche of the citizens. In it life breaks down into discrete and discontinuous roles dispersed between different locations (home, workplace, sports field) requiring different modes of behaviour (parent, employee, athlete or fan) all isolated in a conceptual and spatial void, through which you travel in the encapsulated anonymity of car or public transport. In such a city nobody is known in their entirety, the reductionist and mechanistic conception of the layout resulting in the avoidance of community entanglements and chance encounters, with their complexities and contradictions that provoke self-reflection, so leading to self-knowledge and psychological maturation.

Certainly the city is a place of trade and manufacture, residence and recreation, education and healthcare, and so on – the things the city of modern planning provided for. But the quintessential and most elevated purpose of the city is as the crucible in which culture, creativity and consciousness continually evolve. Consistent with this view, some archaeologists now speculate that the initial origins of the city are not as a place of trade but of large religious gatherings, and that it was the need to feed these that provided the impetus to produce agricultural surplus. The city remains the best, but not only, place to become fully developed as a human by today's understandings of what that means, and where tomorrow's understandings of what that will be are being forged. To do this, the city must cater to the very different needs and aspirations of its citizens through all ages and stages of life, from dependent infant and then exploring child through to adulthood and families to old age. Adding yet further complexity to this is that the city is now home to many cultures, to some of which it is a melting pot while others wish to retain their particular traditions and lifestyles. It is in helping to understand these diverse world views and their underpinning values, as well as in how best to accommodate and communicate with these groups, that disciplines like Spiral Dynamics are proving invaluable to architects and urbanists – no matter how much their schema of developmental levels is offensive to the postmodern mindset.

Hence the fundamental purpose of urban design is to provide a framework (spatial, functional, circulatory, economic, legal etc) to best guide the development of the citizen as well as the city or urban area. It is about the interdependencies and mutual development to fulfil the latent potentials of citizen and city by elaborating as richly and coherently as possible the many different places of the city and so also of the lived experience of its inhabitants. It is an art of space, time and change or maturation. Time here includes the cycles of day and season, the lifespan of citizens as they grow and mature. Time also includes the long unknown future in which cities and culture evolve and change as is healthy and inevitable, and in which buildings will come and go while the city nevertheless retains much of its unique character and identity. As with our redefinition of the purpose of architecture in an earlier essay, this returns to the centre of design consideration our full humanity, from where it was displaced and trivialised by elevating Functionalism, the quantifiable and the objective, at the expense of qualitative realms of the cultural, experiential and psychological. A city of such reinvigorated purpose would be rich in experiences and things to do and explore, and through this develop your personal interests and capacities, as you are socialised and develop empathy in interaction with community and other cultures. Such thoughts confirm how impoverished is much modern and contemporary architecture and urbanism. Yet we have become accustomed to a world of compact and mutely rectangular pieces of electronic equipment of extreme functionality and user-friendliness. If only more buildings and urban design could emulate this instead of indulging in whizzy forms that deliver next to nothing.

6



### Development of urban design

Although the legacy of modern planning still lingers on, its weaknesses were soon obvious to some. In the 1950s this led in the USA to the formation of urban design as a discipline that would act as a bridge between the abstractions of planning and the individual buildings of architecture, providing some context for the latter to respond to and embed themselves in. The first urban design course anywhere was initiated by Josep Lluís Sert when Dean at Harvard. But the approach most germane to our argument here, which will be expanded upon later in this essay, was that taught by Professor David Crane as the Civic Design Program at the University of Pennsylvania in the late 1950s and 1960s. Although many of the best urban designers studied under Crane or ex-students of his, this approach and its legacy have been too soon forgotten, perhaps in part because Crane published little. Complementary to Crane's teaching, and hugely influential as a critique of Modernist planning, was Jane Jacobs' *The Death and Life of Great American Cities* of 1961 and, to a lesser degree, the later *The Uses of Disorder* by Richard Sennett of 1970, which still deserves wider attention by architects. Both these books are largely about the being and becoming dimensions of urbanism, as was much needed then and still is today.

Jacobs' book helped fuel the backlash against modern planning and urban redevelopment among the many who were appalled at the destruction of historic buildings and neighbourhoods. This led to the conservation movement and contributed to Postmodernism, which offered cogent if too-narrow critiques of modern architecture and planning, decrying abstract object buildings for their lack of relationship to context, history and even the street wall. These themes were taken up in Europe by the postmodern Neo-Rationalists who advocated returning to the traditional typologies of street, square and urban block. And their architecture, even if somewhat abstracted, was also based on and evoked traditional typologies so as to,

supposedly, be rooted in and carry forward the past. Together these debates – if not the often ghastly architecture that resulted – definitely had a beneficial impact and brought to the work of many architects a new sensitivity to history, context and civic responsibilities, leading to the belated maturity of some late-modern architecture.

Another significant development was the publication of *A Pattern Language* by Christopher Alexander et al. A book packed with ideas and wisdom, it certainly has its weaknesses, particularly the constructional patterns. Architects are also put off by the implied return to craft construction of a rather crude sort, and the retro formal language. But it is very much a book about the City of Being and Becoming, of richly articulated and varied places that will nourish and develop the psyche and a richly vibrant community life, and in which even buildings and urban spaces convey a sense of life, almost as beings in themselves. It is a book whose time has yet to come, particularly as it plays an important role for times of profound cultural change by sifting and condensing into a usable formula the wisdom of the past so that it can be carried forward to influence the next era.

A very different, and superficially almost antithetical, development is the emergence and increasing use of the analytic, computer-exploiting techniques of Space Syntax.<sup>5</sup> This is a set of narrowly Right-Hand Quadrant techniques that provide a powerful predictive tool both for analysis prior to design and for checking proposals as they are being developed. Although immensely useful, Space Syntax lacks the breadth and attention to all the Left-Hand Quadrants concerns of the David Crane approach. Besides, Crane had developed strikingly similar graphic techniques for analysing movement patterns that, if lacking the precision of Space Syntaxes computer-dependent methods, are not only far less narrow but also help designers to gain a deep feeling for the forces at work around and within the area under consideration.

**6. World Squares for All, a remodelling of London's Trafalgar and Parliament Squares and Whitehall which links them, by Foster + Partners with Space Syntax as consultants.**

**Trafalgar Square, the classical centre of the ex-Empire, with architecture derived ultimately from the Roman imperium, is now made pedestrian accessible with new stairs up the pedestrianised street in front of the National Gallery**





### Shortcomings of current urban design

A problem with much urban design is that it is still infected with modern, Functionalist thinking – too limited to the Right-Hand Quadrants. This is particularly obvious in schemes of blanket zoning and mono-functional components, such as traffic-only streets and single function buildings – masterplans of a sort still being produced. To oversimplify to clarify a point, let's contrast two opposed approaches to urban design. One prioritises zoning, and the allocation of functions and facilities in predetermined ratios, served by transport links. The other shapes movement and public space into a spatial armature made up of many different kinds of places (streets, alleys, squares, parks etc) articulating a range of qualitatively different locations, each suited to a range of functions. Compared with the former, this approach is more flexible, both in allowing choice in the kinds of buildings erected initially and for these to be rebuilt over time while the spatial armature ensures some continuity of character and identity. If the former has its roots in the modern City of Doing, the latter tends towards the City of Being, the

**7. South Kensington's Exhibition Road shows scant regard to context**  
**8. Masterplan for whole World Squares scheme with Trafalgar Square to north and interlocking green spaces around Parliament Square resembling an English cathedral close**



model to which historic cities conformed.

The difference between these approaches can be found in what at first may seem similar enterprises. Contrasting examples are Mayor Ken Livingstone's project, initiated by his advisor Richard Rogers, to furnish London with a series of new public spaces, and Foster + Partners' pre-Livingstone and only partially implemented scheme, World Squares for All.<sup>8</sup> The first of these creates trendily designed spaces with little regard for context, or making meaningful connections with the past, such as the repaved Exhibition Road in South Kensington; except at its southern end, this lacks the adjacent uses and dense hinterland to bring it properly to life. Although the best known, this is by no means the most misguidedly conceived of these spaces.

World Squares for All, designed with analytical input and advice from the Space Syntax consultancy and traffic engineers, is very different. It draws on careful study of context to draw together into a new whole two of London's major public spaces, and makes these more pedestrian-accessible by closing streets on one side of each to vehicular traffic. Equally important is that the scheme intensifies the contrasts, symbolic meanings and connections to history of both spaces. Stone-paved Trafalgar Square is Classical (faced by the Neo-Classical National Gallery, St Martins-in-the-Fields, Canada House and the cod Cape Dutch Classical of South Africa House) and adorned with statues of military heroes, as befitting the centre of what was Britain's Empire. In complete contrast, the area around Parliament Square was to be a softly green and leafy sequence of interlinking spaces, redolent of that peculiarly English urban form, the cathedral close, and flanked by the Gothic Westminster Abbey and St Margaret's Church and the Neo-Gothic Houses of Parliament. Connecting these centres of Empire and England is the refurbished Whitehall, whose slight curve obscures one from the other, with the Privy Garden as an enticing mid-point visible from both. Foster also proposed that these spaces be linked by further upgraded pedestrian connections to other monuments in central London as part of his concern with 'wayfinding', helping visitors to orient and find their way around. The whole scheme therefore is about connections, not only spatial and pedestrian but also to history, thus attending to the cultural dimensions of the Right-Hand Quadrants. Sadly Livingstone and his team failed to grasp this and asked other designers to hard-landscape only the central space of Parliament Square, which his successor Boris Johnson rightly scotched. Although this does not apply to World Squares, it seems that a weakness of much current urban design is that it is undertaken by architects untrained

**'That urban design is taught only very cursorily if at all in architectural schools – or is replaced by superficial exercises in 'mapping' and so on, or offered only as an elective or masters course – is a scandal'**

in, or without a deep understanding of, urban design. Such schemes often look orderly and well-organised at first glance, but closer inspection reveals no deeper 'structuring' logic. One weakness is an essential lack of understanding of how movement, its density of flow and character, generates adjacent uses (particularly retail) and provides the framework that animates and articulates the scheme and ties it into its context. This becomes apparent when it is impossible, from study of the movement network, to predict the location of land uses (functions) and relative land values. Missing too seems an understanding of the many temporal dimensions urban design must deal with. Besides the cycles of the day, there is phased implementation that should generate its own momentum towards completion. And then the various physical elements each have different lifecycles: major ones such as boulevards and parks that give the primary order and identity to an urban area last centuries; minor streets and lanes might be adjusted over decades; and buildings come and go in various cycles. Good urban design is thus not only spatial, it must also be highly strategic. It is thus an art of tersely understated synthesis, yet has also to be suggestive enough to both invest a scheme with character and to elicit from architects a rich array of appropriate responses over time. This capacity to allow yet condition change is a hallmark of good urban design, something that often only the trained and experienced eye can judge.

Currently fashionable approaches such as parametric urbanism and landscape urbanism exhibit all the above flaws. To reintroduce landscaping and nature into the city as fairly dominant elements is for many reasons admirable – benefiting bio-diversity and wildlife, controlling flood waters, tempering the climate, providing a recreational environment for a range of outdoor pursuits and sport, and so on. But as with Parametricist schemes, most urban landscape ones fail for their lack of the urban dimension, such as how movement generates land uses and how the movement network can be articulated to create a variety of locations that are qualitatively different just by virtue of their location in that net, prior to any further elaboration. The roads in such schemes may wiggle, the blocks may distort in blobby forms, but many of these schemes lack essential variety, each location being boringly much the same as any other.

#### Methodology

That urban design is taught only very cursorily if at all in architectural schools – or is replaced by superficial exercises in 'mapping' and so on, or offered only as an elective or masters course – is a scandal. This may reflect a shortage of the requisite skills to teach it, particularly in the studio, and is apparently also yet another dire consequence of the Research Assessment Exercises: these undervalue design as something woolly and un-academic, leading to the erosion of spatial urban design in favour of the a-spatial abstractions of sociologically oriented planning. A thorough grounding in urban design undoubtedly makes for better architects, more alert to the wider responsibilities and impacts of their designs, and better able to analyse the needs and potentials of



**9. An example of an urban-landscape masterplan: 'Deep Ground' plan for Longgang in China by GroundLab and Plasma Studio in collaboration. Despite the wiggly roads and distorted blocks, the configuration of movement and green space system provides little inherent diversity of character and location**

the surrounding area that the building should address and capitalise upon. Moreover, any training in urban design would better prepare architects to undertake large-scale projects, as well as to appreciate a good urban design scheme when confronted by it and help understand how to respond to it architecturally.

Another benefit is that familiarity with urban design would make architects more aware and disciplined as designers generally. Urban design operates on a larger spatial canvas than architecture and must consider longer time periods in which it involves and impacts upon major capital investments. Design is thus an iterative process involving wide-ranging research and following a rigorously disciplined sequence.

The architectural design process may start from many points simultaneously, including working from the general, such as context, down to the particular, and vice versa, thinking about suitable materials and their detailing and working upwards. Often a better understanding of the problem and what the architect should be striving to achieve only emerges during design.

**'A city is both a cultural artefact, consciously and wilfully shaped by humankind, yet also a living organism unconsciously shaped by its own internal metabolic forces'**

By contrast, urban design tends to proceed from the general to the particular, starting with research and analysis. Then before design starts, or after only tentative exploratory forays to test potentials, clearly stated goals are formulated to guide design, and against which to check whether the design will deliver. This discipline is essential to achieving a terse yet immensely inclusive synthesis whose understated forms are nevertheless pregnant with many potentials for responding to and elaborating upon what are usually only subtly suggestive cues crafted by the urban designer.

The particular approach briefly sketched here described as if for redeveloping or reworking an existing urban area to be part of a 21st-century City of Being, derives from that created and taught by David Crane and his colleagues more than half a century ago. It is one of those now-forgotten developments worth resurrecting, carrying forward and updating as part of the necessary Big Rethink. It recognises that a city is both a cultural artefact, consciously and wilfully shaped by humankind, yet also a living organism unconsciously shaped by its own internal metabolic forces. From the former comes much of a city's grandeur and identity, from its boulevards and urban set pieces of squares and monuments – although sometimes topography contributes too, as in extreme examples such as Cape Town and Rio de Janeiro. From the latter, as an organism, comes a city's viability, vitality and resilience. Designers need to keep the former in mind, that the city is a cultural artefact, and part of the initial research – particularly if undertaken by foreign consultants – may sometimes include study of the local culture and customs. If a large-scale project, research might also start with investigating the natural features and forces that partially shaped both these and the city – topography, geology, hydrology, climate, ecology and so on, as well as the interdependencies of the city and its bio-regional hinterland.

More usually analysis will concentrate on understanding the organic dimensions of the city, a process which often includes charting its historical development (so explaining many of its particular quirks) and understanding the area to be masterplanned in relation to this history. It is particularly important to understand the movement system, the lifeblood that both serves and generates the land uses and much of the character and identity of the city. Crane developed a graphic technique for abstracting and so clarifying the role of each component of the movement network, giving much the same information as Space Syntax. But his technique also indicated something of the particular nature of each element, not only the intensity of movement it channelled but its character as, say, a 'through way' or 'activity street' such as that flanked by retail. As with Space Syntax, this technique also ensures that the eventual design is seamlessly stitched into the surrounding city, and perhaps extends and brings to fruition latent potentials it uncovers there. Also very important are the fine-scale surveys of land use, land value and building condition. After a period of studying

#### Checklist of some urban design criteria, particularly applicable to the 'capital web':

|                                    |   |
|------------------------------------|---|
| <b>Context</b>                     | <i>A prime shaper of urban design is the larger context, to which it must connect but also provide for some of what it lacks, making the most of the various opportunities this may present</i>   |
| <b>Configuration</b>               | <i>Urban design is the art of creating a richly configured armature or 'capital web', of movement and green space systems interwoven to create as many qualitatively different places and locations as possible</i>   |
| <b>Change</b>                      | <i>This armature is designed to persist over time yet allow the elements adjacent it to keep changing, while it both retains a certain consistency of character and identity, and itself changes – through, say, increased intensity of use, resurfacing and gradual acquisition of monuments</i>   |
| <b>Continuity/connection</b>       | <i>The armature both extends elements in the surrounding city into the site – so that the scheme is an intrinsic part of the city, not a disconnected island within it – and ensures these continuities over time. A major role for urban design today is to connect up again the fabric of the city fragmented by modernity and also to forge new connections with nature as a multi-functional resource and for spiritual succour</i> |
| <b>Character</b>                   | <i>The armature or capital web is designed not only for function and flexibility but also to confer memorable character and identity, which may enhance quality of life and confer a competitive advantage over other cities in attracting skills and investment</i>  |
| <b>Ceremonial/civitas</b>          | <i>A function of the city, overlooked by the Functional City, is to host various kinds of ceremonies of differing size, as enhanced in places of suitable civic character</i>   |
| <b>Choice</b>                      | <i>A richly configured armature or capital web creates choice between a variety of kinds of places, which can each host various functions and afford a range of experiences and interpretations as to their meanings. This is a fundamental purpose of the city</i>   |
| <b>Contrast</b>                    | <i>This is most easily created by designing in as many contrasts as possible, between such things as: big and small; busily noisy and quiet; hard surfaced and verdantly shady; openly overlooked and private refuge; and so on</i>   |
| <b>Comprehensiveness</b>           | <i>Urban design strives to provide as wide a range of functions and experiences as is appropriate, recognising all the different ages and stages in people's lives that it must host, along with the various cultures and customs characteristic of today's cities</i>  |
| <b>Coherence/comprehensibility</b> | <i>To orient people and be best used, an urban design needs to be 'legible', easily read and remembered in its geometric configuration and internal logic</i>   |
| <b>Cues</b>                        | <i>Crucial to the art of urban design is ensuring the armature, though understated to enhance long-term flexibility, also be subtly suggestive of how architects might respond to and complete it</i>   |
| <b>Community</b>                   | <i>Modern architecture and urban design tend to undervalue and be unsupportive of community, which remains essential for such things as fully socialising children and helping adults achieve self-knowledge and psychological maturity</i>   |
| <b>Conflict and contradiction</b>  | <i>A great benefit of community is that the inevitable conflicts and contradictions encountered erode the 'pure' or fantasy sense of identity that can be a consequence of modern-city life as lived fragmented between and encapsulated in the independent protocols of the City of Doing</i>  |
| <b>Culture and customs</b>         | <i>Certain once-local cultural traditions are becoming global, particularly the Mediterranean lifestyle of alfresco dining in public and so on. Yet cultural traditions – of decorum, privacy, gender roles etc – can be major determinants of urban form, particularly of the shaping of the public realm and its uses</i>   |
| <b>Climate</b>                     | <i>Along with microclimate – and its modulation by topography (as, say, in night-time temperature inversion) – can be a major determinant of the armature's design, affecting width and orientation of spaces, degree of shading and admission of sun and so on</i>   |

the movement diagrams, along with aerial photographs, you develop a remarkably vivid feeling for the life of the city-organism, almost as if watching a slowed-down amoeba under a microscope. You can see how it is changing and why, which bits are healthy and which are blighted, and get a good sense of what is required to regenerate a blighted area, such as channelling movement through or away from it. A key aspect of urban design is learning how to work with these metabolic forces, letting some continue or even encouraging them, and redirecting others, perhaps by subtly manipulating their momentum.

To complement this Right Quadrant approach, various exercises can be undertaken to get insight into the subjective experience and perceptions of the locals as well as of their problems and aspirations – the Left Quadrants. These are often facilitated using a wide range of procedures developed since the days of Crane's programme but fairly widely used in workshops and meetings such as those of Transition Towns. What is important and meaningful to the locals is often markedly different to what the detached professionals might assume. Inevitably, different age groups have different perceptions and desires, and in our multicultural cities the contrasts between what different cultures value can be striking. This phase tends to produce invaluable knowledge, and also initiates the participation of members of the local community in order to better serve them and help them acquire a sense of ownership.

Once all this research is well under way, and there is a good understanding of the objective pressures and potentials as well as the subjective concerns of the community, the urban design team can start to consider what form their intervention might take. As the initial step, goals are carefully formulated: both general goals for the whole project and others for each of its subcomponents, such as the street system, planted open spaces, positioning of public facilities and so on. These are then presented to and discussed with locals, municipal officials and members of the business community to further elaborate, revise and refine them. Again this is one of the key participatory phases of the process that sometimes leads to considerable reorientation in the ideas and intentions of the professionals. Only after this does design begin in earnest.

The primary focus of design is on what Crane called the Capital Web, a valuable term that has fallen out of use. The closest contemporary equivalent is armature, but this seems to mean somewhat different things to different designers. The capital web encompasses the total public realm – the streets, squares, parks, public buildings and public transport systems – all things paid for and used by the public. The elements on which design attention

*'The city remains the best, but not only, place to become fully developed as a human by today's understanding of what that means, and where tomorrow's understandings of what that will be are being forged'*

is initially focused are the movement and green space networks. In what has become almost a norm, the green space network of parks and other planted spaces tends to be elaborated wherever possible into an alternative system for moving around, independent of and interwoven with the main movement system of streets and pavements.

The aim is to configure the capital web into as richly varied a system as possible and appropriate. This is done by teasing apart the movement and green space systems into subcomponents (each a place in its own right), creating hierarchies of different size, character and intensity of use (through, say, boulevard, street, residential road, lane etc and, say, large park, sports fields, greenway, pocket park, playground etc) and then interweaving these to create a complex yet coherent framework of many kinds of public places. Where these cross are points of intensity and potential encounter, a whole range of qualitatively differentiated locations suggestive of and suited – functionally, experientially and even symbolically – to various kinds of uses, which can each find their appropriate place. (Each place, though, might be suited to a relatively limited range of uses: hence a site axially located at the end of a main street may be suited to ceremonially civic, religious or community use.) It is this framework or armature that invests legibility, identity and choice and that persists through time with buildings being built and demolished around it, while it too changes somewhat yet ensures some recognisable continuity of visual and experiential character.

The art of urban design goes further than configuring a framework of many diverse places and locations: it also has to give subtle cues as to how architecture can respond to, complete, enhance and give meaning to this richly varied public realm. Of course, many architects don't respond to such cues, whether because they are diehard Modernists concerned only with the internal workings of their mutely abstract object-buildings, or because they equate being avant-garde with deliberately breaking rules. So part of an urban design might be a set of guidelines to be complied with. These might restrict to a limited range the functional types of buildings to be built in certain areas, stipulate plot ratios, cornice heights and that the buildings should follow the back-of-pavement for a percentage of its frontage. Besides visual and spatial reasons, there are other advantages to such guidelines, in that they might ensure a match between the capacities of the various forms of infrastructure and the loadings imposed by the buildings. And sometimes guidelines go much further in stipulating cladding materials, percentage of window to wall, ground floor arcades and so on. Until architects acquire a more mature and expanded design ethos, which values the city at least as much as their own building, that seems fair enough.

#### **The example of Auch**

Looking for illustrations for this essay turned up a number of perfectly decent urban design schemes that nevertheless don't demonstrate the full richness an

**10, 11. Auch in south-west France has an armature of interlinked urban spaces of varying spatial and functional character and mood endowing this little city with a public realm as richly diverse as that of a metropolis and which has remained visible over the centuries**  
**10. Plan of city centre**  
**11. Busy square seen from town hall steps opening into the market square whose splay-sided foreshortening draws the cathedral forward**



approach such as this can result in. An ideal that often comes to mind is the compact historic centre of Auch in south-west France. Within a small area it has an extraordinary range of quite different interlocking spaces, each very aptly related to the civic buildings that face it, and that together offer a very full panoply of the experiences urban life has to offer. Prominent in the plan of the city centre are two squares of more or less the same shape and size centred on circular pools of identical size. One square, alongside the cathedral and where the medieval cloister once was, overlooks a steep slope and grand stair down to the River Gers and the countryside beyond. It is shady, quiet and contemplative, showing how the essential character of a place can persist through even dramatic change. A murmuring water spout is the fountain in the middle of the large pool, making just enough sound to enhance the sense of quietness. The other square is 19th century and a traffic gyratory on the main vehicular route through town. Here the fountain is a boisterously splashing affair to assert its presence above the traffic noise. The square is flanked by cafés, a fine hotel and the town hall that confronts, across this square and the long splay-sided market square, the main facade of the cathedral, this relationship made possible by the skewed alignment of the two squares. A smaller splay-sided square directly off the market square sets off what is the library at its end while steps up from the gyratory square lead to a long esplanade shaded by rows of plane trees and on clear days offers views of the Pyrenees. The long axis of the esplanade is marked by a wider gap in the rows of trees that seems to continue into the arched doorway of the courthouse.<sup>7</sup>

And so on, and so on in a richly configured network of places of strikingly different character exactly apt in form and experiential quality to their use and location, an aptness matched by the forms and decorum of the civic institutions that face the squares and the institution facing them across yet another square. What an ideal to keep in mind as we start to regenerate our cities to their full human purpose through urban design.



- 1 River Gers
- 2 quiet square (ex-cloister)
- 3 cathedral
- 4 covered markets
- 5 main shopping street
- 6 market square
- 7 library
- 8 town hall
- 9 esplanade
- 10 law court

1. Pink, Daniel, *A Whole New Mind: How to Thrive in the New Conceptual Age*, Cyan Books, London, 2005. See essay in footnote 3.  
 2. Rifkin, Jeremy, *The Third Industrial Revolution: How Lateral Power is Transforming Energy, the Economy and the World*, Palgrave Macmillan, New York, 2011. See also review of this book by Peter Buchanan in AR January 2012.  
 3. Peter Buchanan, *From Doing to Being*, AR October 2006.  
 4. Peter Buchanan, *What City? A Plea for Place in the Public Realm*, AR November 1988.  
 5. For an extended and easily grasped explanation of the techniques and uses of Space Syntax see *Space Syntax and Urban Design* by Peter Buchanan in *Norman Foster Works Volume 3*, Prestel, 2007.  
 6. For more detailed discussion of World Squares for All see Peter Buchanan's essay in *Norman Foster: Works Volume 6*, Prestel, 2013.  
 7. For an extended description and discussion of Auch see *Auch: Organs of the Body Politic* by Peter Buchanan, AR July 1987.

**The concluding Big Rethink essay will draw together the ideas put forward over the last year into a proposal for a new, 21st-century neighbourhood**



# THE BIG RETHINK CONCLUDES NEIGHBOURHOOD AS THE EXPANSION OF THE HOME

Drawing on the lessons of the series, the final part of the Big Rethink proposes a new kind of prototypical neighbourhood that expresses a more resonant connection with all aspects of the human condition and suggests a genuinely enriching approach to individual and communal life

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After a hiatus, this essay returns to and concludes the Big Rethink campaign.<sup>1</sup> It extends and adds detail to the discussion of urban design, the subject of the penultimate essay, to bring the whole series down to earth by elaborating a more concrete, if still somewhat abstracted, vision of some design implications of the ideas discussed in the series. The focus is on the neighbourhood, in part because progress towards a true sustainability, and its concomitant way of life, cannot be delivered only by buildings, let alone individual ones. Besides, a theme of this series is that sustainability cannot be achieved by attending only to such objective issues as technology and ecology, critically important though these are. Equally necessary is attention to the subjective, psycho-cultural factors in devising a vision of a sustainable way of life sufficiently enticing to inspire impetus towards its realisation. Such a vision of a deeply satisfying way of life in an environment offering an extraordinarily rich choice of non-commercial activities and experiences – in which its residents grow up, mature and age in the embrace of community and nature – cannot be realised at a scale smaller than the neighbourhood. Progress to genuine sustainability thus requires replacing the alienating environment bequeathed by modernity, to which we could not relate and that impeded our relationships with others and ourselves, with one (here, the neighbourhood) in which we once again feel at home in the world.

Another key assumption underlying this series is that we are in the throes of epochal transition. And it is vitally necessary for environmental design practitioners to understand and participate in this transition, by furthering and helping to shape it, if we are adequately to address the near overwhelming challenges of our time. The confusions characterising much of the current architectural scene, and the inadequacy of our attempts to progress to sustainability, stem from not fully grasping the nature of the changes that are afoot. These essays have mostly focused on the implications of the waning of the modern era, which started with the Renaissance and was consolidated by the Enlightenment, and of Postmodernism, modernity's repressed flip side that emerged to further its terminal meltdown. The implications of just this transition, and the increasingly obvious inadequacies of the sort of thinking bequeathed to us by both modernity and postmodernity, are vast enough to have preoccupied us. But in fact, as already discussed in the second essay (AR February 2012) several epochs of much longer and differing duration are closing, extending right up to the ending of the current, Cenozoic geological era that started 66 million years ago. This is giving way to what some have termed the Anthropocene age, recognising the huge impact humans are having on the planet, and others the Eozzoic era,<sup>2</sup> in optimistic anticipation that we might yet learn to live in harmony with the planet – our only chance of long-term survival.

This vastly expanded perspective is also germane to any discussion of sustainability because, as we shall see, the challenging questions provoked are not only about what must we do to, say, bring about the Eozzoic era. Equally, we have to raise the question (to many the much more daunting, if also exciting one) of who must we become,

or be, to realise and live in this new manner. Again, the apt scale to evoke an implementable vision of what this might imply, along with some of the complexities involved, is that of the neighbourhood. Several thinkers have posited that the transition necessary to achieving true sustainability must be of similar order to that between hunter-gatherer nomadism and agricultural (and eventually urban) settlement. These thinkers have also noted how for 150,000 years of tribal nomadism we lived in relative harmony with the planet which we treated with reverence as our home; moreover, the 10,000 years since have been, in evolutionary terms, a very short period. Thus the modern era, with its extractive and destructive ways supercharged by industrial technology and colonialism (which continue in updated forms in the quest for food and scarce resources by major manufacturing nations), has been a mere blink of the eye. And yet, our contemporary mode of living on the planet seems to most to be normal, simply and inevitably the way things are. The argument here is not to revert to tribalism; such bands were as homogeneous in make-up as our societies are heterogeneous. But instead of merely dismissing them as primitive, we might yet learn much from this long and successful phase of our historical evolution – not least about the importance of inclusive communities and an intimate relationship with nature – that might help us to shape a more sane and deeply satisfying new way of life.

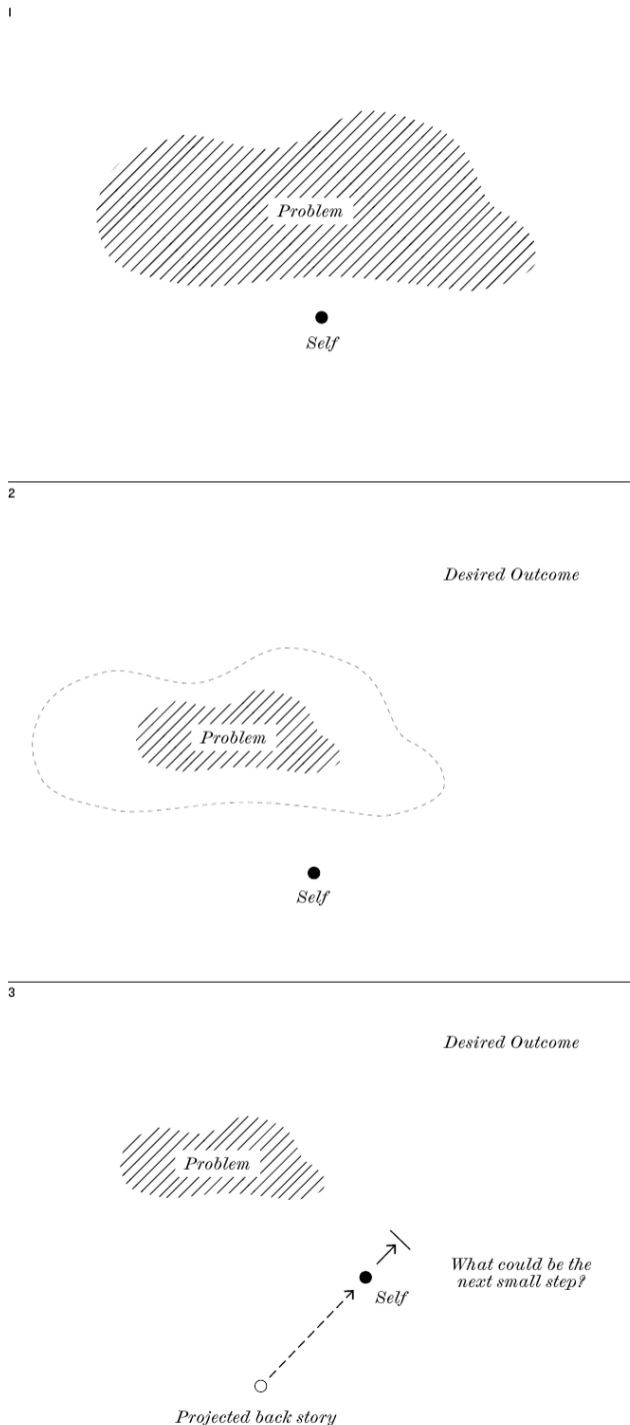
A thinker I've only just discovered, and whose ideas resonate with much of what has been discussed in these essays, is Tony Fry. In *Becoming Human by Design*<sup>3</sup> he mentions how during 150,000 years of nomadism we dwelt in the world, treating the whole world as our home. But when climate change led us to settle the Fertile Crescent, initiating 10,000 years of settlement, this mode of 'being-in-the-world' ended, giving way to 'making a world within the world', home now restricted to only those parts we settled. As Fry says, this 'instigated those processes that were eventually to lead to contemporary ... unsustainability, with the emergent prospect of mass homelessness'. The Enlightenment then intensified the process of what Fry calls Unsettlement that climaxes in the current crisis. This pungent characterisation resonates strongly with the equally evocative diagrams by Richard Tarnas shown in the second of these essays.<sup>4</sup>

Thus to move forward to sustainability requires much more than knowing what to do, our current limited approach that draws on only the objective Left-Hand Quadrants of the AQAL diagram. This merely makes things – buildings, products, energy generation and so on – less unsustainable. Instead, true sustainability entails nothing less than transforming ourselves into who we must become, by attending to the Right-Hand Quadrants also, to achieve the next stage of our evolution. For Fry, the way to achieve this transformation is what he calls 'ontological design', the third driver of human evolution along with biology and social history. Fry argues convincingly that ontological design is intrinsic to the process by which we became human: we make things with purposive intent (designed artefacts) that help us act on or in the world, and which then persist to change us. Although not quite the same idea as presented in earlier essays in this series, it tallies with

### **I-3. Conceptual model of how to provoke change successfully**

**1. Concentration only on the problems to be confronted, leading to overwhelm and stuckness**  
**2. Formulating an enticing desired outcome makes that a focus of attention so that the problem seems to shrink. But this is not yet enough to guarantee change**  
**3. To generate momentum, elaborate the back story showing how you have already been moving to the desired outcome, and then ask: what small step will move me further towards that goal?**





two key ideas found there. First, that it was through the spatial deployment of activities and the choreography of their relationships – through architecture and ritual, the ways in which we project our psyches into space to better explore and elaborate them, as well as intensify the experience and meaning of activities – that we created ourselves as complex cultured beings. Second, that design should now be understood as mankind’s mode of purposively participating in evolution, both mankind’s and that of the planet.

Such elevated views of the essential purposes of architecture and design have yet to be widely acknowledged – understandably, perhaps, after Modernism’s disastrously reductionist and determinist attempts at social engineering. Yet they encapsulate precisely architecture’s most essential and ennobling purpose. Recognition of this leads to adopting the evolutionary/developmental perspective that characterises so much leading-edge 21st-century thought. It also entails embracing the Left-Hand Quadrants of the AQAL diagram, as well as the Right-Hand Quadrants to furnish an inspiring vision of an environment and lifestyle that encourages us to unfold into full humanity, according to current understandings as to what that might mean.

**Initiating change**

Creating such an inspiring vision is part of a potentially effective model for initiating change that is widely used in psychotherapy and business management. This recognises that what keeps us stuck and unable to act effectively is an overly exclusive concentration on the challenges and problems we face – the almost exclusive subject of environmentalist rhetoric – which can then become depressingly and disempoweringly overwhelming. So we should also formulate an enticing vision of where we might get to, and of what life would become like, in the process of resolving these problems. This not only provides a powerful positive motive and forward momentum but also the problems’ looming presence would seem to shrink and move aside in our mind so that we could see and concentrate also on the desired outcome. Yet this envisaged outcome may not appeal to all, particularly if it includes a level of community engagement that runs counter to the aloof hyper-individualism of our times. Yet such psychological ‘resistance’ can also be seen as positive, as proof that the proposed changes do not fall short of what is required to bring about real transformation and, moreover, what we actually want, even long for.

To overcome such resistance and impel action it is necessary to call attention to, or just imagine, a ‘back story’ that indicates how we are already progressing towards the envisioned outcome. (Part of our back story is elaborated in the next section of this essay.) The key question then becomes: what is the next small step that will advance us to the desired goal? Because they are more obviously feasible, small steps are much more likely to inspire action than a dauntingly large step that might provoke the inertia of resistance. More than that, small steps are also likely to set in motion positive feedback effects that continue and amplify the forward momentum. By contrast, large, initially destabilising and possibly

difficult-to-implement interventions tend to unleash dampening negative feedback effects of various sorts. So massive change can be initiated in a piecemeal fashion by, say, building part of a neighbourhood, a perfectly feasible proposition with the potential to inspire widespread emulation.

Before focusing on the neighbourhood and its residential buildings, it is useful to note how discussion of them would differ from that about either urban design (although a successful neighbourhood probably exemplifies sound urban design principles) or such contemporary manifestations as the housing estate or residential development. These distinctions also clarify the aptness of the neighbourhood as a closing topic for this series. An urban design masterplan may be completed by buildings, but it primarily shapes the open spaces of the public realm and is future-oriented, providing a framework within which buildings will come and go. Considered in any meaningful sense, the neighbourhood must include the buildings as utterly intrinsic to it, as well as the past of those buildings and of the spaces between them, both of which would be pregnant with the memories and meanings that have attached to them over time. The housing estate or residential development is generally considered without such dimensions: it is merely where the home is located, and, in the apt terminology of writer and activist Lieven de Cauter, this home is a secure 'capsule' for the cocooned nuclear family whose members come and go enclosed in vehicular 'capsules', thus remote and protected from neighbourhood and neighbours.<sup>9</sup>

By contrast, any real neighbourhood is an extension of, even an intrinsic part of, the home; it is not somewhere you merely pass through going to and from home but is the environment and community within which adults meet and slowly bond and where children play, grow up and are socialised. Hence the neighbourhood is a place where we not only reside but also to which we belong: it is part of our identity and intrinsic to who we are, so providing essential psychological and existential grounding. Such Left-Hand Quadrant concerns are extraneous to the way a housing estate is usually conceived. The real neighbourhood is thus an essential aspect of what the previous essay called the City of Being, and is near-impossible to recreate with the modern, reductively functionalist thinking and design approach that produced the modern City of Doing, of destinations dispersed in a relative void.

#### **Regeneration of the neighbourhood**

Significantly, some of the same forces undermining the City of Doing are provoking the regeneration of neighbourhoods. Many complain that the computer is increasing the atomisation of society and the erosion of immediate community, with adults and children spending more time online and even preferring to meet others only in cyberspace. But although there is truth in this, it is also a one-sided view. Such online communities are certainly not real communities in which a diverse range of people are brought into prolonged and unavoidable contact so that each has a largely unedited view of the other. Instead, special interest groups are where you meet only the

like-minded in circumstances of your choice – including anonymity or as a fictitious persona. Yet there is also evidence that online communities increase the desire for face-to-face contact and even for real community, beyond such phenomena as flash mobs. Certainly a longing for community seems part of the contemporary zeitgeist.

Besides, the computer and the Internet have led to ever more people working from home, at least part of the time. So it is not only children and house parents who are home during the day, but also those who once enjoyed the social life associated with work. So besides local shops reopening to serve these people, so too are coffee shops and other places to meet and hang out – the so-called 'Starbucks effect'. A complementary development is that people are realising how unsustainable is suburban life, particularly with time and energy wasted in long commutes and the house parent wasting yet more time and fuel chauffeuring children to distant schools, shopping malls and sports facilities. They are also missing the vitality, choice and community of the old neighbourhoods. So, in the USA especially, people are now moving back into city centres and reviving old mixed-use neighbourhoods. Both working from home and the return to old neighbourhoods are resulting in what some Americans refer to as 'The Return of Main Street'.

This revitalisation of the vibrant, mixed-use neighbourhood, and the creation of their contemporary equivalents, marries well with other topical agendas. Such neighbourhoods, particularly those dense enough for efficient public transport and with pleasant and lively streets that encourage walking, are intrinsic to the mixed-use neighbourhoods of the Compact City advocated for being less unsustainable than dispersed cities of monofunctional urban areas. They are also consistent with the Slow City movement, which seeks to enhance the conviviality of cities as well as of the Transition Town movement, which extends such concerns to a wide range of strategies to increase the resilience of towns and urban areas to better face forthcoming challenges.

The modern City of Doing, with its fragmented fabric and dispersed destinations, promised convenience at the expense of such things as community, sense of place and belonging – all things the modern mindset tended to see as constraining freedom, which it valued above all. Despite the freedoms and unprecedented wealth enjoyed by many within the City of Doing, surveys suggest its lifestyle has not brought the happiness that comes with the deep satisfactions of a meaningful life with connections to community and place. This is because it prioritises standard of living over quality of life. Life encapsulated and cocooned in the isolated home (whether in tower block or suburb) and private car is not now seen by sociologists or psychologists as the best setting for raising children, nor for adults to flower into full maturity. Besides, it has a brittle fragility, dependent on supply chains and services that are easily disrupted, and offers neither the comforts nor resiliency of neighbourhood networks. It is a lifestyle unresponsive of both physical and mental health, nor of the self-knowledge that leads to emotional maturity and deep happiness. As argued in an earlier essay, self-knowledge depends on being fully

known in all one's roles by others, something the fragmented City of Doing expressly inhibits.

Sedentary work and dependency on time-wasting commuting, whether by private or public transport, has led to an epidemic of obesity and such associated health problems as diabetes, hypertension and heart trouble. It is now also recognised that a common causal factor in many of today's chronic diseases – such as hypertension and heart disease, cancer and others – is inflammation. And several studies suggest that, among other factors, a major cause of inflammation is living alone (or without other adults), and especially with the stresses that go with having no one to divulge problems to and share worries with. But the fragmented way of life and atomised society that have led to solitude and a sense of exclusion are almost intrinsic to the design of modern buildings and cities. These bring other social problems too, in that some of the lonely and those who feel themselves to be not included, and who have not developed the emotional intelligence and conversational skills that aid social inclusion, develop various forms of predatory behaviour. These justify further capsularisation – such as gated communities, driving children to school and so on – fuelling further atomisation and erosion of the neighbourhood values and virtues that we now realise are vital to physical, mental and social health. The resulting problems are particularly acute for children who cannot indulge the spirit of adventure (associated with the Red Meme phase of Spiral Dynamics,<sup>6</sup> so manifesting later in such pathological forms as gang culture) by freely roaming the city<sup>7</sup> or immersing themselves in nature, especially meadows, wild woods, streams and so on, resulting in what is now referred to as 'nature deficit disorder'.<sup>8</sup>

Everything discussed so far reinforces the premise that the design of the neighbourhood, whether a new one or the regeneration of an old one, is an obviously apt place to initiate the broad range of changes necessary to progress to sustainability. The manageable scale and phased implementation permits experiment, with the later stages refined or revised according to feedback in response to the earlier stages. Much of human life takes place here, and the scale is sufficient to shape an environment in which people may enjoy richly varied lives. The challenge is to ensure these do not overly tax the planet's resources and regenerative capacities, while also being deeply satisfying because enmeshed in multiple webs of meaningful, life enhancing connection – a fundamental key to sustainability.

#### **Preliminaries to design**

However, as argued earlier in this series, envisioning and realising a sustainable civilisation is not only the great collective enterprise of our times, but one to which all creative and responsible people should contribute, not just architects. It involves far more than shaping a new environment: also new economics and politics, lifestyles and social rituals, culture and underpinning collective myths. To describe a prototypical neighbourhood of the near future somewhat contradicts this argument for the importance of collective initiative. What follows is intended to prompt such discussion. Besides, as an abstract

prototype, it ignores such specifics as local context, culture and climate, which would all be major determinants of any implemented design. Moreover, as argued in an earlier essay, the future will probably see a wide range of types of settlement, perhaps as some return to the land pursuing a small-scale mixed and labour-intensive – rather than energy-intensive – farming. The model described here is only one possibility, a dense urban settlement chosen to prove that richness of experience, community interaction and pervasive contact with nature is possible even at such an extreme. Furthermore, the focus is only on the psycho-social dimensions (the Left-Hand Quadrants) of neighbourhood and residential design. Ignored are most of the objective, technical issues (the Right-Hand Quadrants) such as energy-efficient heating and ventilation, handling of sewage and waste and so on. Although obviously vitally important, these are increasingly well understood and publicised, and subject to much promising innovation. What is intended here is to counterbalance a too-exclusive focus on such concerns, both for completeness and to elaborate a more enticing vision such as might inspire at least partial emulation in real schemes.

Clearly then, the design of the first few of such neighbourhoods would not be entrusted immediately to architects. Instead design would be preceded by extensive research by experts – including depth and evolution psychologists, sociologists and anthropologists – as well as laypeople. The quest would be for the insights necessary to elaborate a sustainable lifestyle and culture and its concomitant environment – sustainable because people would be so deeply satisfied psychically from living in harmony with the planet and its people, nature and human nature, that they spurn pointless consumption. The research would draw on both the best of our human sciences and yet also dredge our sweetest and deepest of dreams that promise enchantment and fulfilment. Some of the questions pursued would be: What do we really want? What would make us truly fulfilled and happy? Who would we have to become to live such a life? And is that what the planet and evolution would want for us too? These are not such easy questions to answer. Our expectations have been warped by materialist modern values and, most especially, by today's advertising that uses the best of psychology's insights to undermine our sense of adequacy so as to sell us products that promise to alleviate this. In the face of this, among the best tests as to what will bring fulfilment and meaning is to imagine reassessing life from your deathbed. What would matter now? What truly brought happiness? Almost certainly it would not be consumerism, but instead connection, with people and places, and making a lasting contribution to them. Ask people when they were happiest, say on holiday, and they are unlikely to talk about some expensive five-star vacation but rather remember camping on a beach. The point is that deep happiness and satisfaction need not cost the earth, financially or literally in terms of the eco-damage wrought.

From this research, questioning and discussion, would be distilled the briefs for urban designers and architects. But before design starts a set of goals would have to be formulated to guide and test design, only a few of the more all-embracing ones likely to be proposed being mentioned

## THEORY

here. This too would be a collective participatory exercise, with agreement on the goals reached before design proceeds, and then continuing refinement of the goals from feedback in response to completion of early phases. As a major aspect of creating a setting for a sustainable lifestyle, the environment and the social dynamics this shapes will be designed to encourage residents to discover, explore and grow into their full potential, as that is currently understood but has as yet to become possible for much of society to achieve. This requires an environment offering a great richness of opportunity for, and choices of, experience and social encounter such as will stimulate and stretch the person and bring self-knowledge. Both the neighbourhood masterplan and the residential blocks would contribute to this.

As such the neighbourhood and its housing would be designed to support all ages and stages of human development. This would extend from dependent infant and exploring child playing in safety, to the teenager roaming further afield but still in safety, to the varied lives of working adults and parents, and on up to the retired and elderly, and even the dying. Although there would be no compulsion to stay within the neighbourhood, it would also be possible to live your whole life within the same community by moving between its various dwelling types, even within a single block. Despite that option, many would probably move for work or when marrying, although some expect a sustainable society to involve less mobility than today's.

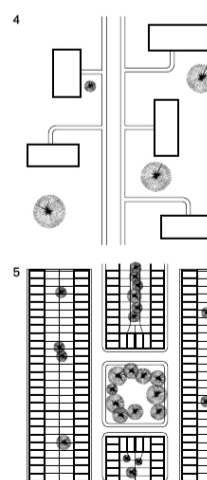
### Reconnecting with nature

As important as accommodating all ages and stages, the design would seek to connect, or reconnect, our fragmented society in which children are unaware of much of the adult world, such as what their parents really do at work, and the aged are largely excluded and banished to care homes. It would also reconnect people with nature and heighten their awareness of its cycles, moods and forces. Abundant vegetation would not only provide shade, freshen the air, temper micro-climates and provide food but also contribute to biodiversity, both in the range of plant species and also in supporting insects and wildlife, as well as in creating continuous corridors for their movements. Design would foster an intimate relationship with plants and also with pond and perhaps stream life. And the reverence for nature would be reflected in the total lack of residual space, as is characteristically found around so many modern buildings, where pathetically disguised by cosmetic landscaping and potentially indicative of modernity's disregard for our earth. Such a concern will extend to designing to minimise undue disruption of slowly established plant life and the wasteful destruction of resources invested in construction. So despite being designed to shape maximum variety of every sort, the masterplan and buildings will also be designed for longevity and flexibility. The housing blocks, for instance, will be built to generous space standards so that, while the street facades and structural frames will last many generations, the interiors can be rearranged as required.

Part of what gives a neighbourhood its identity is a sense of boundary, which may be indistinctly defined, and a core focus of commercial and communal uses. But here discussion is limited to only a portion of the neighbourhood and a particular aspect of it. As discussed in the penultimate essay about urban design, a key skill is to tease out into as diverse a hierarchy as possible the movement and open space systems and then interweave these to achieve the maximum richness of kinds and intensities of activity, and sorts of location and experience. Among the greatest blunders in modern planning and urban design was the Corbusian tower in a park serviced by a vehicle-only road, or Hilberseimer-type slab blocks aligned only for optimal orientation. Both approaches are dismally impoverished, with what is qualitatively only one kind of open space. Contrast these with parts of historic London such as Georgian Bloomsbury or, even better, the late-Victorian stucco terraces around Ladbroke Grove. Here the streets are social spaces framed by the flanking buildings and animated by elements (entrances, railings, windows) suggesting human scale and habitation, and the pavements are paved with handsome flagstones. In some places there are small front gardens, and always larger rear ones, which in the Ladbroke Grove area surround a shared communal garden. There are also squares with grass and trees, some still fenced for resident-only use, and nearby are the large parks. There is thus a range of kinds of outdoor space for residents to use, a minimum of three kinds in Bloomsbury and in Ladbroke Grove five or six.

A characteristic of our times is the enormous range of choice we are offered in almost everything but public urban space within new developments. But good urban design can shape a considerable range of open spaces, hard and soft, and interweave them to elaborate a rich range of experiences and potential encounters between the people using them. Our hypothetical masterplan demonstrates this. A major element in this is a broad boulevard flanked by shops, restaurants, banks and so on, which is also a public transit route for buses or trams. This boulevard passes under a limited access highway and rapid transit system with a station at their crossing. Here there is also a major square flanked by large commercial and civic buildings. Branching off the boulevard are quiet residential streets, alternatively vehicular with pedestrian pavements and a pedestrian- and bicycle-only greenway. Where the latter meet the boulevard they widen to create a small square onto which corner cafés extend, and here and there along their length they widen into smaller squares furnished to suit the aged and toddlers. Crossing these and parallel to the boulevard is a broader greenway that connects a series of larger shaded squares onto which open various communal facilities. And further away from the boulevard is a broad linear park in which such facilities as primary schools and swimming pools are sited. These lead to a large metropolitan park that extends at right angles to the boulevard and contains secondary schools, major cultural facilities such as museums and a variety of landscaping treatments including forests and meadows. Within the variegated grid these define are courtyard housing blocks, updated versions of a familiar

**4. Archetypal modern layout of blocks in unframed amorphous landscaping, with only one kind of outdoor space**  
**5. Typical historic London layout of streets formed by terraced housing with private back gardens and shared squares, so the result is three qualitatively different forms of open space. In some parts of London there are also small front gardens and communal gardens beyond the back garden, giving five kinds of outdoor spaces**  
**6. Abstract masterplan of proposed prototypical neighbourhood showing how movement and open space systems are each elaborated into as rich a hierarchy as possible and then interwoven to create maximum diversity of places, locations and opportunities for encounter. Here are a dozen qualitatively different kinds of open space. Masterplan by Phineas Harper from rough sketches by Peter Buchanan**

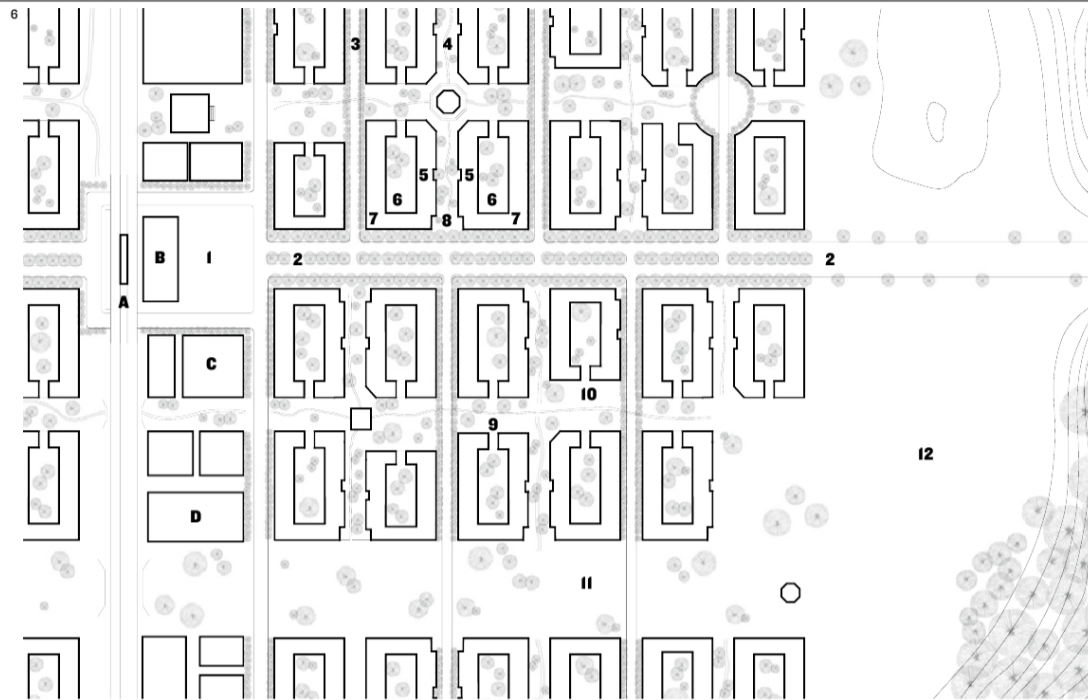


**OPEN SPACES**

- 1 civic square
- 2 boulevard
- 3 vehicular street
- 4 pedestrian greenway
- 5 old people and toddler area
- 6 central court
- 7 roof
- 8 outdoor extension of cafes
- 9 broader greenway
- 10 extensions to communal dining, creches etc
- 11 linear park
- 12 metropolitan park

**INFRASTRUCTURE**

- A station on rapid transit
- B civic building
- C cinemas, supermarkets etc
- D light industry, warehousing and other large buildings such as hospitals, schools etc



European type. As well as the landscaped central court, the roofs of these are used for a wide range of functions. All in all there are at least 12 kinds of qualitatively different open space, all suited to different activities, so shaping a richly diverse urban environment.

**Residential block**

The typical residential block in this hypothetical layout is an elongated rectangle with a central courtyard. The one described stretches between the boulevard along one narrow end and a park or broad greenway along its other narrow end. The long sides are flanked by a vehicular street and a pedestrian and bicycle greenway respectively. On the bottom two levels facing the boulevard and long sides, between the entrances to the housing above, is commercial and work space, for shops and restaurants along the broad boulevard pavement, and for office and professional suites, art and craft studios and workshops on the long sides. These could also be used as live-work units, and behind them are parking, storage and service spaces. On these lower levels the corners of the boulevard front are indented to create shady outdoor areas as extensions to corner cafés and bistros. Above these lower floors, the housing has sheer masonry facades facing outwards, capped by a cornice and articulated by both punched and projecting bay windows. These latter, like exposed columns, cornice and projecting canopies on the lower levels, are designed to interlock inside and outside spaces and are composed to form physiognomic patterns that together animate the public realm they face and help to invest these outdoor spaces with the sense of place so

missing in the modern city. The inner face of the housing is very different, a lively composition of conservatories and balconies that extend each dwelling unit out to overlook and be seen from the court. These elements, all delicately spindly and festooned in vegetation that invades the conservatories to forge intimate daily contact between residents and plants, some of them fruit bearing, cascade downwards and outwards to the floor of the court raised half a level above the street.

The bottom four floors of housing are two layers of duplex maisonettes for families. The lower of these are deeper in plan and larger, with their own private gardens set a few steps down from their living areas and ringing the central communal garden that is set another few steps lower. The maisonettes above these have broad balconies. Jutting forward from each maisonette, the conservatories extend the kitchen and dining areas to command views of the central garden as well as internally of the living areas and up to the bedroom floors. So children, whether in home, private garden or balcony, or communal garden are under constant casual surveillance by parents and other adults. They can also safely make their way independently to their parents' place of business, whether this is in the home or oriented to the street, where it can be accessed from the entrance hall to the housing – and also to the crèche and communal facilities under the housing on the narrow side away from the balcony, as well as up to the roof. Access from these areas to the outside is electronically controlled by video-answerphone and swipe card to prevent egress by small children and unauthorised entry by strangers – a safeguard still required following

the exclusions of the modern city.

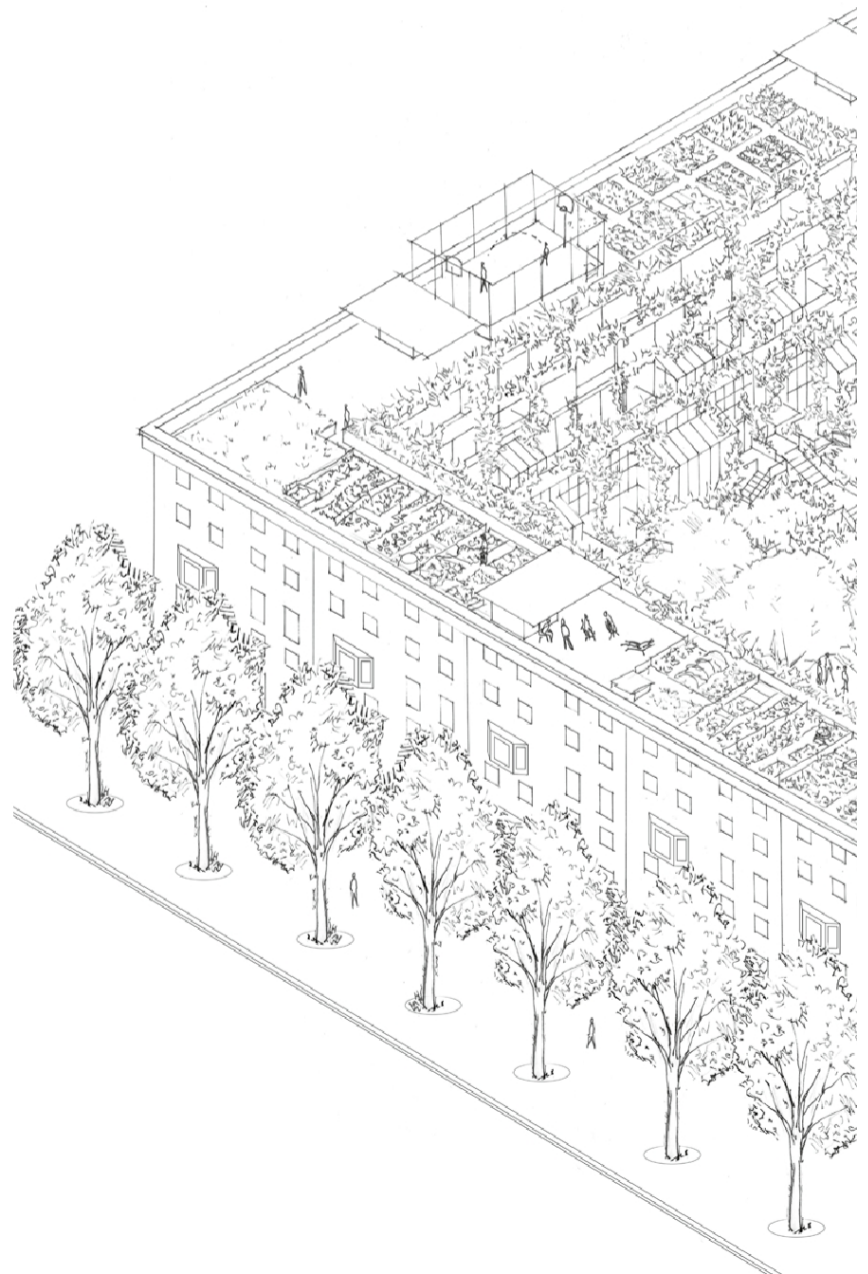
Besides the crèche, the communal facilities on the courtyard level may include a well-equipped DIY workshop, gym, launderette and certainly a kitchen and a community hall cum dining room where, when so inclined, residents can cook and eat together, have parties and meetings and so on. Also on this level along the middle of the side facing the pedestrian greenway would be small flats for the aged with a shared common room. This both opens onto a central court and has a balcony overlooking a small square between the old people's portion of two adjacent housing blocks, where aged neighbours may meet. The aged are thus not banished but a highly visible part of the community who can be regularly visited by their adult offspring and grandchildren, even when dying in the hospice portion of their unit. Children are thus aware of all the cycles and passages of life, as they always were until recently.

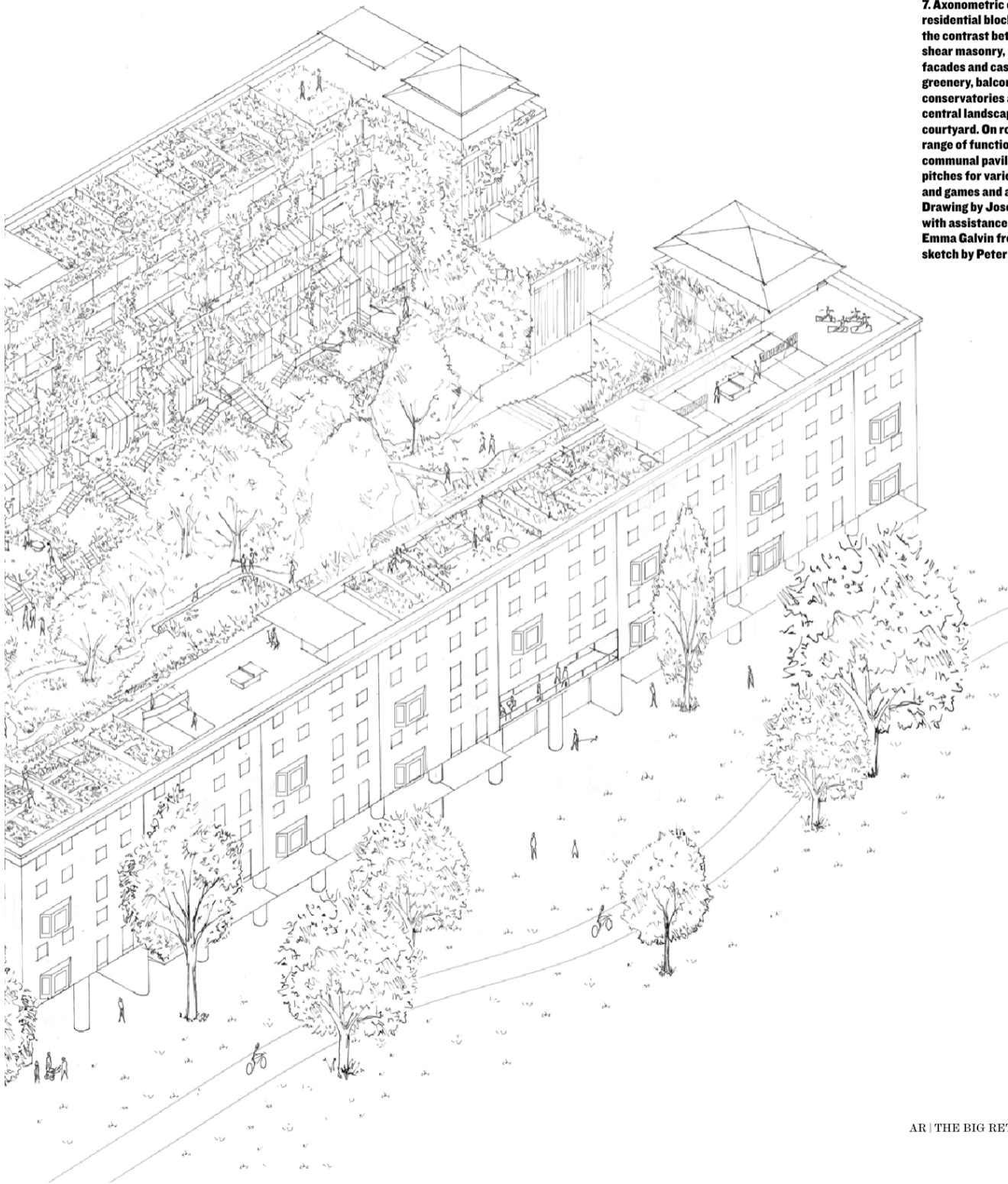
The central garden on the floor of the courtyard is landscaped both for visual appeal and to host a wide variety of uses, particularly aimed at younger children and the elderly. There is a playground with sand pit and splash pool and a meandering paved path. Although this path twists and turns and ramps through changes in level to pass various elements of interest, it forms a complete loop to be enjoyed by toddlers on trikes and the less mobile or wheelchair-bound disabled and elderly. Along this route would be shady bowers – with benches and tables for quiet pursuits like picnics, chess and reading – and a sundial, less for telling time than to mark the sun's ever-changing cycles.

On the levels above the two layers of maisonettes are smaller dwelling units, mainly for singles and couples without or no longer living with children. On the level directly below the roof are small flats, some perhaps for short-term lets such as for students, that are accessed from a broad gallery that overlooks the central garden and connects the heads of all the stair halls to those few that extend up to the roof. The roof is the block's other main outdoor space, more varied and intense in use than the central garden below in the court. Here there would be mini-allotments in raised beds as well as greenhouses for vegetables, fruit and cut flowers and a tank for farmed fresh-water fish and water chestnuts, as well as perhaps hutches for pets. There would also be barbecue facilities and courts for volleyball, badminton and similar sports. And there would be a large and some small pavilions, their forms a contemporary equivalent of the *chhatris* that grace the roofs of Mughal architecture, with roofs shaped with an extrovert perimeter projecting beyond the columns, between which the roof defines a more inwardly-focused centre. The large pavilion would be for parties and such things as communal yoga and tai chi – perhaps at sunrise and sunset – and the smaller ones for more intimate pursuits such as quiet conversation, reading or working on your laptop. Also up here might be a small observatory with telescope as well as recliners for sunbathing and sleeping under the stars – still a common rooftop activity in many parts of the world.

Everybody in such a block thus has many opportunities for casual encounters and other forms of meetings with

‘As a major aspect of creating a setting for a sustainable lifestyle, the environment and the social dynamics this shapes will be designed to encourage residents to discover, explore and grow into their full potential, as that is currently understood but has as yet to become possible for much of society to achieve’





**7. Axonometric of residential block showing the contrast between shear masonry, urban facades and cascading greenery, balconies and conservatories around central landscaped courtyard. On roof are a range of functions from communal pavilions to pitches for various sports and games and allotments. Drawing by Joseph Davis with assistance from Emma Galvin from rough sketch by Peter Buchanan**

their neighbours as well as to participate in community-forming activities like shared meals and rituals – like sunrise yoga sessions. Such encounters are the glue of true community, in which everybody is seen and known in several differing roles and activities. And it is only by being constantly exposed to and properly known by others that people cannot live out some fantasy identity and so get properly to know themselves. There are also encouragements to be alert to the cycles of nature and the cosmos and engage intimately with plant life and nature's creatures. In short, residents are offered many ways to connect with each other and the larger world around, including the neighbourhood and all that it too has to offer.

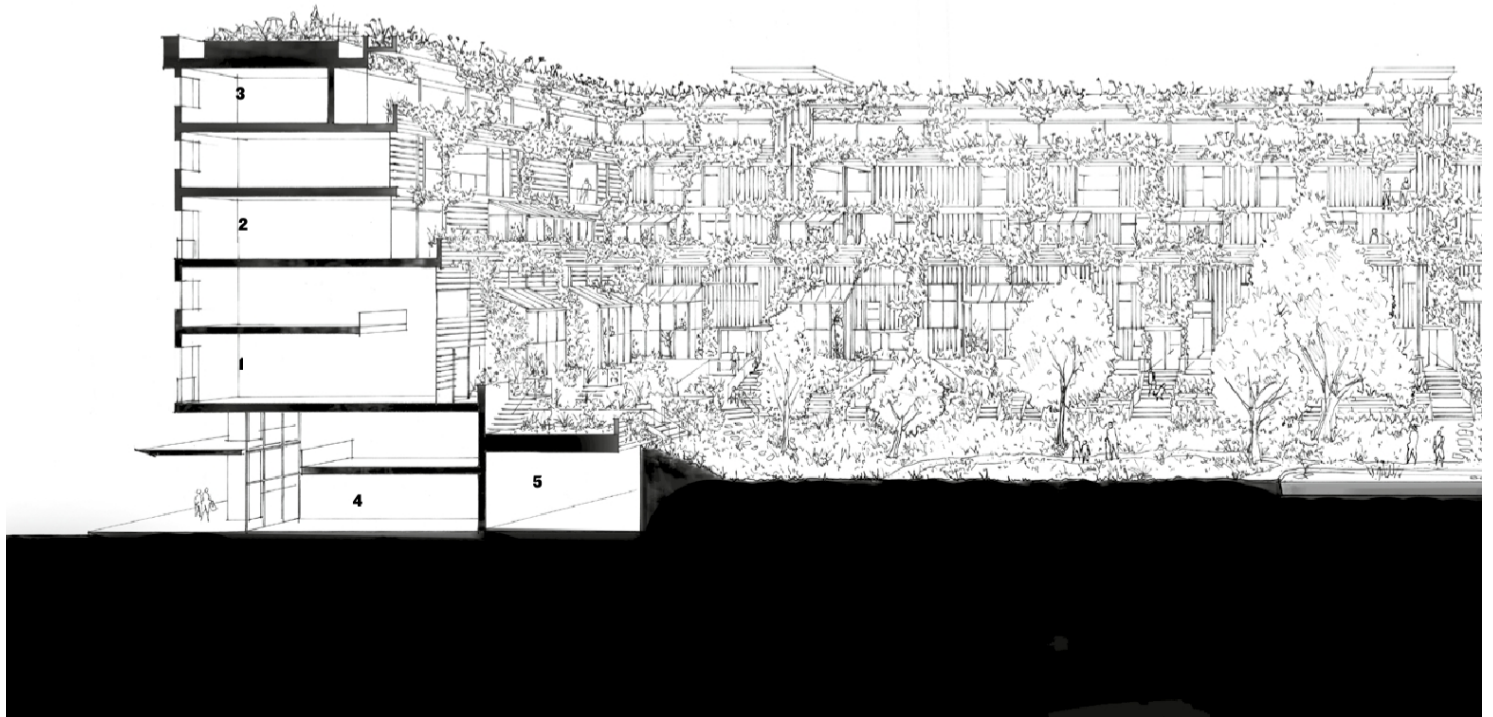
Each dwelling, for instance, has an urban face overlooking a street or greenway that is part of, and leads to the rest of, the neighbourhood and city beyond, with all their facilities. Yet these dwellings open out to and engage with an abundant nature as mediated through the hierarchy of planted balcony and conservatory, private garden, semi-private communal courtyard and rooftop gardens as well as greenways leading to linear and then metropolitan parks. These last forms of green space are in turn part of a continuous network of such spaces that provide another means for people (and wildlife) to move through the city as an alternative to the paved streets and spaces. And wherever these systems cross are further opportunities for casual encounter. Within this richly articulated realm, everybody – man and woman, young and old, adult and child – has a great choice of things to do and explore, potential lifestyles to shape and people to meet, all of which must contribute to discovering and

stretching the self. Compared with what is possible in most urban areas today, children can lead especially adventurous lives, playing and exploring freely yet in safety. Old people are not banished but can drop in on or be visited by younger friends and relatives whenever both parties have time to spare. And once dead, they need not be forgotten either: a low wall in the central garden might have a low wall with niches in which their ashes may be placed, if they wish to add visibly to the accumulated memories that are part of a neighbourhood's identity.

#### Conclusion

Such a scheme, both the neighbourhood masterplan and the residential block, is to be judged less for its form and visual appeal, which could nevertheless be considerable, but for the lifestyles made possible and the rich variety and satisfactions of the experiences offered. To best understand what is proposed, imagine living there, or even for just parts of what might be a typical day. Consistent with the themes of reconnecting with nature, you might rise early and greet the rising sun with yoga in your conservatory or as part of a group in a rooftop pavilion. Breakfast might be at least partially harvested from plants in the rooftop allotments or conservatory, before children drop down into the central court and meet friends with whom they walk to school along one of the vehicle-free greenways. You might later jog along the same route and exercise on the equipment placed sporadically along the route. Later in the day you might be working in your ground level studio or home office when the children pop in to exchange tales about how the day has gone, before they go up to attend the allotment on

1. This was always planned as a 12-essay series, spread across 2012. But unavoidable factors have disrupted the sequence. Also, some of the 12 originally planned themes expanded into two essays, so other themes have been omitted. Future essays may return to these, particularly as some coincide with requests from readers to address that subject. For instance, there have been numerous requests to write something about how to design, or how to teach design, a theme I will happily address.
2. Brian Swimme and Thomas Berry, *The Universe Story: From the Primordial Flaring Forth to the Ecozoic Era, A Celebration of the Unfolding of the Cosmos*, Harper, San Francisco, 1992.
3. Tony Fry, *Becoming Human by Design*, Berg, London, 2012.
4. *Farewell to Modernism – and Modernity Too*, AR February 2012.





‘The neighbourhood is a place where we not only reside but also to which we belong; it is part of our identity and intrinsic to who we are, so providing essential psychological and existential grounding’

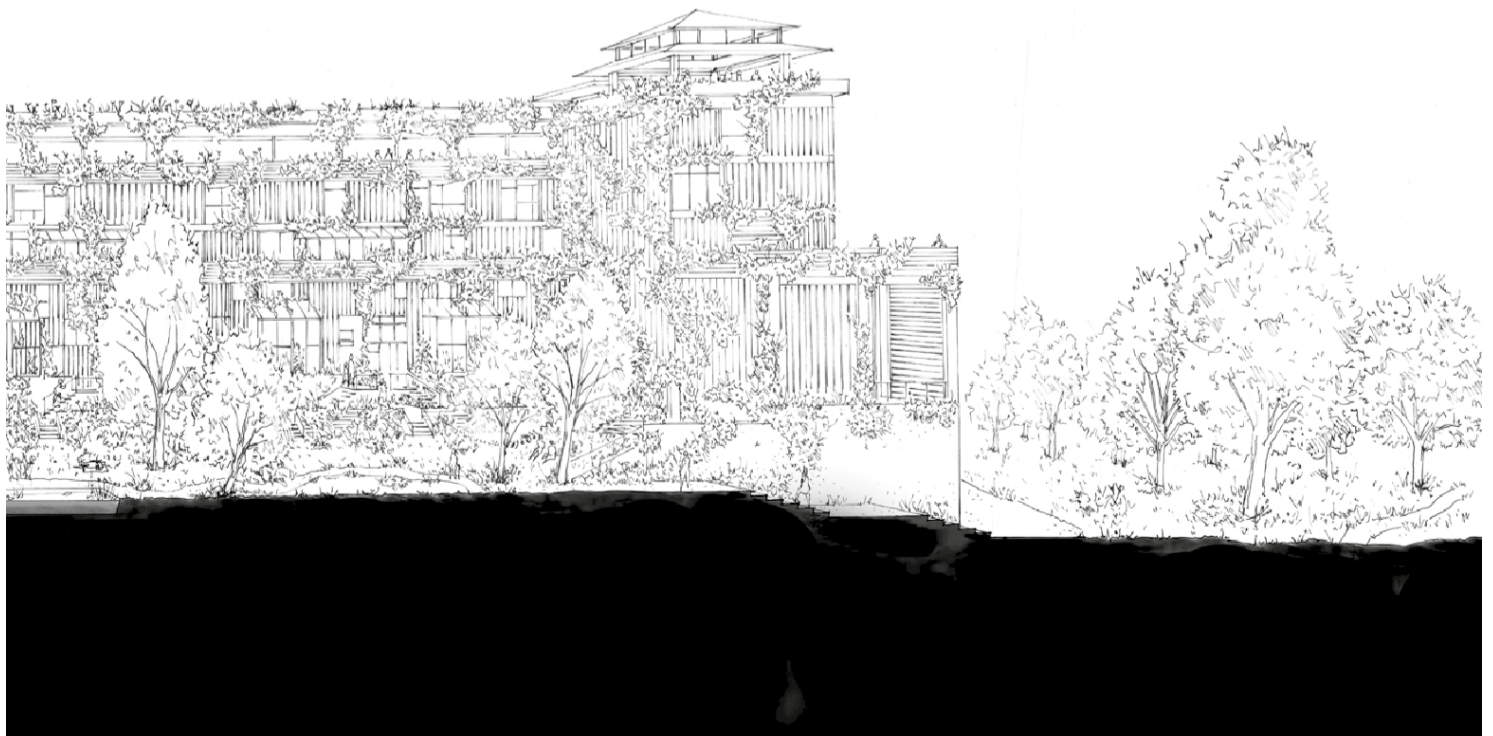
**8. Sectional perspective of residential courtyard block with its verdant interior Drawing by Joseph Davis from rough sketch by Peter Buchanan**

- 1 duplex maisonette with private garden
- 2 maisonettes or flats with balconies
- 3 small flats and broad access gallery
- 4 work and retail units
- 5 storage and parking
- 6 communal facilities
- 7 rooftop pavilions

the roof. Otherwise they might drop in to see their elderly grandmother and her friends in the old-age suite of rooms or make something in the communal workshop. And in the evening, if you don't feel like cooking you can join others sharing a meal in the communal kitchen or have a barbecue on the roof, enjoying and benefiting from the interactions of a larger group such as were once provided by the extended family and tight traditional communities. This might then be followed by examining the constellations through the rooftop telescope or enjoying the communal hot tub up there before bedding down for the night under the stars.

Is this a sufficiently seductive yet sane vision to entice change, or is it one that provokes horror because of the constant interaction with others? Both the former reaction and, for reasons already argued, the latter one of defensive resistance could be seen as endorsing the effectiveness of such a scheme as a stepping stone towards sustainability, a crucible from which a new sustaining and sustainable culture might emerge. Whether or not this is true, the point is that it illustrates an alternative to the current fashions for theory and sculptural shape making – and the confusions, obfuscations and evasions of responsibility that go with them. Instead we can return to the centre of architectural concern the celebration of our humanity so that we can once again relate to and feel at home, expanding into our full potential by thoroughly engaging with a diverse community of others the many forms of nurture, including of the imagination, offered by nature.

5. Lieven De Caeter, *The Capsular Civilisation: On the City in the Age of Fear*, NAI Publishers, Rotterdam, 2004.
6. See the 10th essay in this series: *Spiral Dynamics and Culture*, AR December 2012.
7. Studies in the 1990s by Mayer Hillman (Senior Fellow Emeritus at the Institute of Policy Studies, University of Westminster) suggest that within a generation the range over which children freely roamed dropped to a ninth of what it had been.
8. Richard Louv, *Last Child in the Woods: Saving Children from Nature Deficit Disorder*, Algonquin Books, New York, 2005.





# THE BIG RETHINK REVISITED BECOMING EARTHLINGS

Reflecting on *The Big Rethink* series of essays, the campaign author argues for a new culture to emerge that integrates understandings of ecology, evolution and identity to engender a sense of humanity's being at home in the world

**AR NOVEMBER 2014 PP 91-103**

Episodes mentioned in feedback to *The Big Rethink* (TBR) series include: the comparison of villas Fallet and Savoye by Le Corbusier (before and after adopting that name) in the second essay (TBR 2, AR January 2012); the diagrams by Richard Tarnas charting the changing, perceived relationships of self and world (TBR 3, AR February 2012); and the contrast of the Cities of Doing and Being (TBR 11, AR March 2013). Many were surprised to consider that an Arts and Crafts house might be more germane to our times and the quest for sustainability than a Purist villa. Others found poignant the Tarnas diagrams charting our declining sense, over the millennia, of confident identification with the world around. And highlighting the contrasts between the City of Doing and Being illuminated for many key but overlooked differences between modern and traditional cities.

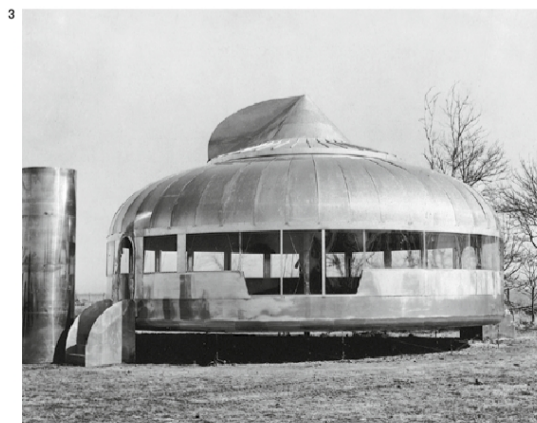
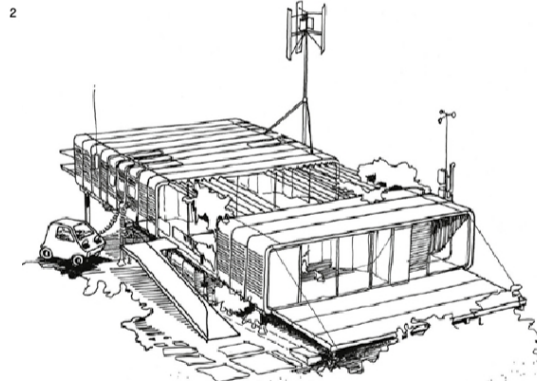
Common to these episodes is the loss of the feeling of being at home in the world, without which the pursuit of sustainability will prove an elusive chimera. This essay (which in parts assumes familiarity with the earlier essays) revisits and links these episodes by exploring, through psychological insights bequeathed by modernity (yet often ignored by architects), what they reveal about our individual and collective sense of identity. It argues these must change if we are successfully to confront major environmental challenges. These are intractable precisely because our attempted solutions fail to recognise, and address at the apt level, the role played by our sense of identity: how we, largely subconsciously, understand our relationships with the world. In psychologically informed parlance, we pursue lower level solutions to what are higher level problems, and so are doomed to fail.

**1. (Previous page) the repetitive slab-block typology of Ludwig Hilberseimer's Vertical City, 1924**  
**2. Richard Rogers' Zip Up House, a kit of parts that offers flexibility but again is a suburban solution**  
**3. Buckminster Fuller's 1946 Wichita House hovers above the ground and is essentially anti-urban**

Much of this essay, then, deals with the subjective realms of psychology and culture, their equally subjective underpinnings in sense of identity, and the often subliminal beliefs reinforcing that identity. All this is axiomatically not amenable to objective proof, so die-hard Modernists might be inclined to dismiss much of the argument. The question to ask then is: would designing as if what is said were true, or even entertaining that possibility, result in better architecture – that which is richer and more resonant, that better enhances life and our cities, and is easier to relate to and more likely to advance the quest for sustainability? It would be difficult, and extremely perverse, to say no.

### Being at home in the world

House and home are often not synonymous today. Houses, for many, are largely investments, somewhere to live before trading up. So families grow up without the deep roots bestowed by a stable home, particularly one passed down through the generations; and by undermining any sense of rooted belonging, this inevitably impacts people's notions of self and identity. And instead of adapting the house to the family's particularities, it will be remodelled to enhance resale value. But as the glossies show, contemporary houses and domestic interiors are



‘There are still those who buy the Bucky Fuller and Banham line that lightweight – or seemingly lightweight – buildings are materially efficient and gentle in environmental impacts’

pristine displays and status symbols rather than for living in; they are particularly hostile to the messy vitality of children. This applies equally to: the frigidly minimalist, prohibiting clutter or rearrangement; dwellings crammed with *objets d'art* or whatever; and to much in between that is equally inhibiting of spontaneity and ease. These examples are, of course, indulgences of the developed world; yet they affect aspirations everywhere. But for much of the developing world a safe and stable home is a dream for their children to achieve while they worry about their shacks being cleaned out by gangsters or demolished by the authorities.

But let's start exploring the sense of being at home in and belonging to the world by commenting on a strand of quintessentially modern domestic projects once taken seriously, and still with admirers. Its apotheosis is in Reyner Banham's 1965 essay 'A Home is not a House'<sup>1</sup> which noted that a contemporary house contains a plethora of mechanical and electronic equipment, enough alone to provide the house with much of its structural support. Thus an updated conflation of hearth (hot air and air-con outlets) and 'entertainment centre' (tv, hifi etc), would be the central focus of the 'unhouse' (Banham's term), a bit of kit rather than architecture. In suitable weather, enclosure would consist only of blown curtains of tempered air, and otherwise of a transparent inflated bubble, leaving the occupants tantalisingly close to, yet frustratingly out of touch with, the semi-natural setting. Privacy would be provided by landscaping – hedges, berms and so on. This is an extreme form of what TBR 2 referred to as picnicking or camping on the land, rather than settling into it, the supposedly gentle engagement with the natural world is in fact a vulnerably brittle form of energy-intensive, technologically dependent hubris. That Banham's proposal ever seemed clever and prescient, and now only puerile to most of us, clearly indicates how much we and the world have changed. Yet arguably, prominently displaying all this gubbins draws attention to, and makes us aware of, our dependency on them – and so is better than their increasingly pervasive invisibility.

Key precedents to such proposals are Buckminster Fuller's Dymaxion House, developed in the 1930s and '40s, and his Wichita House designed to be built using the postwar spare capacity of an aircraft factory. Both houses hover above their sites – the Dymaxion suspended from its central mast, the Wichita capped by its rotating wind cowl – their hexagonal or circular plans again suiting them only for suburbia. Fundamentally anti-urban, their internal arrangements tightly circumscribe the activities and life within. Less well-known, offering flexibility in size and use and contemporaneous with Banham's 'unhouse', is Richard Rogers' panellised Zip Up House on stilts above a sloping site, leaving a dank and useless space below.

**4. François Dallegret's illustration to Reyner Banham's essay 'A Home is not a House' with humans as aliens quarantined in a precariously perched bubble from where they can look out on but remain uncontaminated by nature**

Another anti-urban solution, it ignores the tenet that sustainability implies treasuring every bit of land, leaving none merely left over and unsuitable to people and plants – or as a smear of cosmetic landscaping.

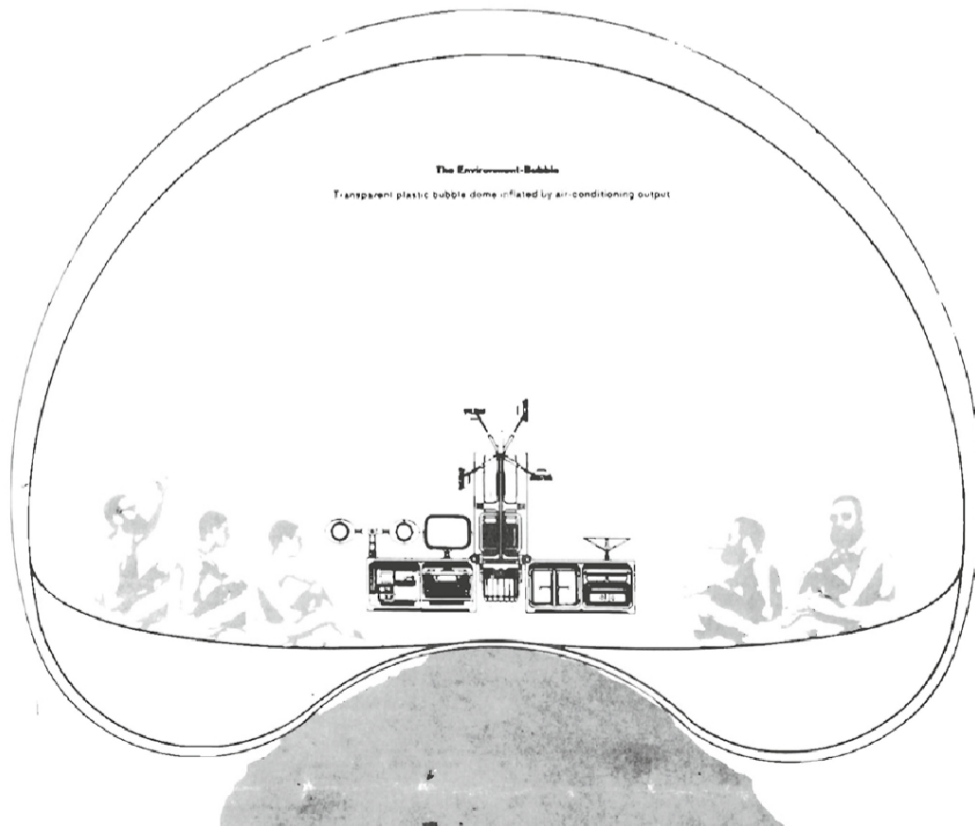
These examples remind us that modern architecture and its furnishings were partly inspired by the mobile equipment and prefab buildings used by armies and colonial administrators, from which evolved some famous modern holiday houses. (Bucky even proposed using bomb craters for the foundations for helicoptered-in Dymaxion Houses.) Conquest and control are among the many dark and still unacknowledged shadows at the heart of modernity, contributing to its inherent unsustainability and other downsides, not least the sense that we and our works never quite belong – the central theme of this essay.

This strand of domestic design was, of course, given impetus by Le Corbusier's dictum that 'the house is a machine for living in', as exemplified by the elevated and partially prefab houses for the workers on the 'Radiant Farm' project and the apartment plans of 13sqm per person shown in the book *The Radiant City*. In the latter particularly, fixed or heavier elements are constrained in size and place while the remaining space is subdivided by sliding doors for flexibility. The 'machine for living in' also informs in varying degrees the designs of his Purist Villas.

Technically primitive compared with the projects mentioned, the best of these exceed being mere machines for living in, not least in the poetic lyricism of their choreographed spatial solutions and their many-levelled allusions. This is further evidence that, as asserted in TBR 3 (AR February 2012), Corb was no mere modern architect but one of that small band of Modernist masters who represented the third wave of anti- or post-modernity in the broad inclusiveness and depth of their concerns.

All this is especially true of Villa Savoye (1928-31), a weekend retreat celebrating fluid physical freedom and spatial flow along with omnipresent sun and sky. But it also alludes to and inverts such precedents as Palladio's Villa Rotonda, its four faces similarly addressing the horizons, but without projecting stairs to engage the site. Instead, consistent with the machine-age inspiration of ocean liners and aircraft, it floats disengaged above its site to be entered from below, through the recessive ground floor. A ramp replaces the central hall, rendering the spaces dynamically centrifugal rather than statically centripetal, with the crowning cupola now fragmented into curving walls (one enclosing a solarium) drawing down rather than swelling into the sky. Replacing the Villa Rotonda's statues of gods on the entablature, the residents are put on show through the near-continuous horizontal

4



**5&6. Le Corbusier's Villa Savoye floats free and disengaged from its site like a temporarily moored ocean liner or space ship. It opens up to the sun from above and focuses outward views on the distant horizon**



slot displaying them as a living classical frieze. Elevating a wealthy cosmopolitan elite to the status of gods, it perfectly exemplifies the hubris underpinning modernity.

For decades, architects and critics were oblivious to these historical references, which for Le Corbusier were for those with 'the eyes to see', yet which for him also embedded the villa, if not in its setting, within the long march of history from which he was assumed to have broken free. Hence for most, if Savoye alluded to culture, it was as Banham postulated, as a large sculptural Cubist still life, a fruit bowl raised to display its contents. And there are still those who buy the Bucky Fuller and Banham line that lightweight – or (more usually, on including foundations) seemingly lightweight – buildings are materially efficient and gentle in environmental impacts, so precedent for green design. But, as TBR 2 argued, this is an obsolete and far too narrow notion of efficiency, and once total life-cycle costing is factored in, such a claim is revealed as utterly fatuous.

TBR 2 implied that more pertinent as a model of sustainability might be the Villa Fallet (1906-7), built when the architect was still Charles-Édouard Jeanneret. (This polarised comparison of Savoye and Fallet is to advance an argument, and does not imply they represent an either/or choice. It is possible and desirable to combine the virtues of both, of modern freedom and traditional embeddedness, as Frank Lloyd Wright and others – including Le Corbusier – so often proved.) In contrast to Savoye's abstract, if still allusive, forms and limited palette of finishes, the architect devised his own regionalist, fir tree-derived iconography for the

Villa Fallet and retained the rich material palette of the times. With these, the villa elicits multiple relationships with its residents and its larger setting of pine forests while also linking sky and earth. Moreover, it was designed as a cultural artefact weaving a rich web of connections and interrelationships with and between occupants and setting, and cementing connections with the past it has evolved from and the future to which it steps forward.

Savoye promised liberation from such constraints to serve a life lived in the present moment. Typically of modern architecture, it was deemed a purely functional device (Le Corbusier, of course, secretly knew better), subservient to its occupants (in contrast to the more elevated mediatory status of a cultural artefact) and of value only while in use. But TBR 6 (AR June 2012) argued that it was precisely in devaluing culture, and a building's role as cultural artefact (so rendering obsolete the baggage of communicative rhetoric, iconography and other forms of symbolism), that architecture ceased to

**'What is announced to those who can see afresh by all the autistic self-contained and detached forms of the International Style, by the dark – or reflective-glazed air-conditioned boxes and towers, by aggressively posturing Brutalism or its suave high-tech progeny, by today's blobby icons and Parametricism?'**



**7. Charles-Édouard Jeanneret's Villa Fallet is rooted in place, pulling the earth up to form its rusticated base and guiding the rain and snow from the sky down to earth, while its fir tree-derived ornament connects it to the nearby forests**

be a crucial mediator between, and connector with, these vastly larger temporal and spatial realms, as well as deeper levels of our psyches. Without recovering this cultural dimension, and returning to architecture the full complexities implied in being cultural artefacts, progress to a sustainable civilisation (rather than merely erecting individual energy-efficient buildings) will be curtailed.

So a theme running through *The Big Rethink* essays is that sustainability is more than an objective issue only – that is, confined to the Right Hand Quadrants of Integral theory's All Quadrants, All Levels (AQAL) diagram (TBR 3). As such, solutions must go beyond the purely objective means of technology and ecology and so on, as relevant and helpful as these are. Contributing massively to unsustainability too are such psycho-cultural issues (belonging to the AQAL's Left Hand Quadrants) as the mindset that prioritises the objective, and ignores the disruptive dissatisfactions accruing from neglecting the subjective realms. These lead fairly directly to the various forms of addiction (not only to drugs and alcohol, but shopping, TV and other forms of distraction, and even our over-dependence on fossil fuels) that depth psychologists understand to be a prime characteristic of our times.<sup>3</sup>

The exaggerated emphasis on the objective is a central pathology of the Orange meme of Spiral Dynamics (TBR 10: 'Spiral Dynamics and Culture', AR October 2012), whose memes are among the most powerful determinants of our sense of self, our identities. Orange is the meme of modernity with its mechanistic materialist science (that is still dominant although dated) and selfishly competitive materialist ethos (climaxing in

corporate-sponsored neoliberalism), and everything else we are so familiar with. Along with the prodigious benefits Orange delivered, these have now brought us to the brink of disaster. Yet, as earlier essays argued, proposed solutions to the many and massive problems – which we now recognise are the downsides of modernity and the Orange meme – still conform to their associated mindsets, particularly in seeking objectively rational and technical solutions only. They are thus doomed to failure.

Progress towards sustainability requires also the contribution of the Green meme of postmodernity, despite its disempowering hyper-relativism, for its collaborative ethos and the introduction of a wider range of perspectives beyond modernity's narrow purview. But most particularly, it requires transcending the First Tier of 'Subsistence' memes so that more of us advance to the Yellow, and preferably Turquoise too, 'Being' memes of the Second Tier. These give us the integrative big picture perspective and flexibility of perception and thinking, as well as an understanding and feeling for the many dynamic flows that feed evolution and ecology, personal and cultural development, all so necessary to inform a comprehensive and inspiring enough vision to move us towards sustainability. (Cultivating the Second Tier should now be a prime goal of tertiary education, but isn't.)

Such was the argument of the earlier essay on Spiral Dynamics. Here we complement rather than contradict this argument by examining confusions stemming from ideas and actions informed from inappropriate psychological levels – rather than the cultural ones these entwine with.<sup>3</sup> These confusions seriously cripple progress



**8. The typical modern office block ignores its setting while those inside might as well be below the sea or on a planet with a noxious atmosphere**  
**9. The four quadrants of the All Quadrants, All Levels (AQAL) diagram**

to sustainability, and lie behind many other intractable contemporary problems, including the continuing fragmentation of urban fabric. For immediate insight into this matter, imagine putting aside the blinkers of modernity (its conditioned habits of seeing and aesthetic prejudices) so as to see afresh: what, then, do the floating forms of Savoye and the other disengaged houses strongly suggest? Or equally, what is announced to those who can see afresh by all the autistic self-contained and detached forms of the International Style, by the dark – or reflective-glazed air-conditioned boxes and towers, by aggressively posturing Brutalism or its suave high-tech progeny, by today's blobby icons and Parametricism, and so much else that won't deign to defer and nestle into place?

Attempting to transcend place and history, uncontaminated by context, culture and climate, these buildings come across as alien invaders, foreign intruders that blatantly refuse to belong. Like the disengaged houses we started with, these all resemble barely settled UFOs, or aircraft and liners that have temporarily touched land. Consider the typical hermetically sealed air-conditioned office tower: those inside, particularly that majority far from the windows, might as well be submerged below the sea, or on a hostile planet with a poisonous atmosphere. This then, writ large, is our attitude towards our gloriously paradisiacal planet and the marvellous buildings and cities left by history. It is this attitude, and the underlying sense of identity it reflects, that concerns us here because it is not only a major source of the unsustainability of modernity, but also the reason ordinary people find so much of it alienating and unlovable.

If to a disinterested and clear-eyed observer it is obvious these buildings simply do not, nor even care

‘Consider the typical hermetically sealed air-conditioned office tower: to those inside they might as well be submerged below the sea, or on a hostile planet with a poisonous atmosphere’

to, belong, then what does this tell us – apart from confirming the modern mindset as a bubble of denial, aloof from its consequences in human exploitation, environmental degradation and so on? They reflect the (usually subliminal and unarticulated) feeling that humankind doesn't really belong. Depth psychologists would assert that this disengagement is because modern humankind unconsciously realises neither we nor our works deserve to belong. Underlying modernity, masked by its technical bravura and hubris, they detect a suppressed awareness of its many problematic aspects – including the destructiveness of its technologically supercharged, savage assaults on nature, place and local cultures. Whether or not you agree and sympathise with such a view, it is surely clear that the striking common characteristic of these buildings, their aloofness from us and context, is what today is referred to as an ‘identity level’ problem, related to a confused psychological sense of who we really are. And just as we cannot progress to sustainability without embracing a higher cultural meme, so we cannot resolve problems arising from the identity level with solutions belonging to a lower level, such as that of behaviours – the level of the solutions advocated by architects, environmentalists and politicians.

To properly understand the above needs explanatory background, although the idea of differing psychological levels has long pervaded such fields as management theory, clinical psychology and psychotherapy. The notion stretches back to Freud – with his id, ego and super ego – and even before. More pertinent here are theories developed since psychologist Abraham Maslow formulated his model of the Hierarchy of Needs in 1943 – now more generally conceived as the Pyramid of Needs. At the broad base are physical and survival needs while at the apex is what he termed self-actualisation. More recent, and both widely influential and powerfully effective when applied, is the model of ‘Logical Levels’ (sometimes called ‘Neurological Levels’) inspired by cyberneticist Gregory Bateson and formulated by Robert Dilts, a leading NLP (neuro-linguistic programming) practitioner.

Like the Maslow model, this needs no detailed explanation for our purposes here. Suffice it to know that a lower level is that of behaviours while at a higher level is identity, and above that beliefs. A correlated assumption of the logical levels model, backed by years of empirical application in collective and personal ‘change management’, is that problems are best tackled with solutions addressing the same, or preferably higher, level as that of the underlying causes, and that measures on a level below that of the cause(s) tend to be futile. A simplistic example illustrates the principle: telling children to tidy their rooms (behaviour level) requires frequent repetition. But persuading children they are not

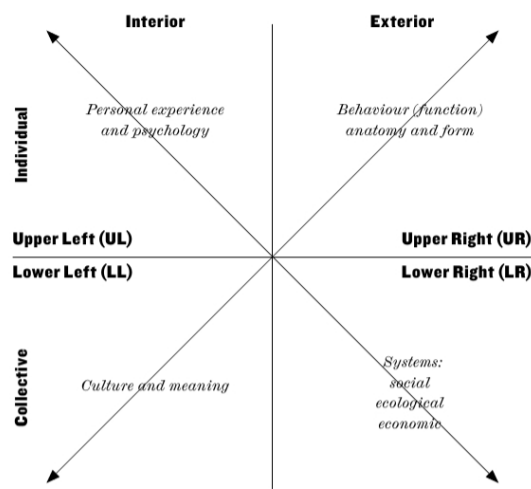


the sort to leave untidy rooms (identity level) eliminates the need for nagging. The last 40 years has seen many quick and easy techniques developed to bring about identity change, often by changing the supporting beliefs (the level below and underpinning identity), or, better yet, clarifying a sense of personal purpose. Astute questioning can bring beliefs into consciousness awareness, and often merely exposing beliefs to critical scrutiny, showing them as fallacious or no longer useful, is enough to change them. And sense of purpose is a major focus of contemporary psychotherapy and management theory.

Acknowledging the critical role of these higher psychological levels of identity and belief, and addressing them, is crucial to provoking the profound changes urgently needed in many areas of modern life. That progress towards sustainability (and such associated issues as healing the destruction wrought by modern architecture and urbanism upon our cities and countryside) has been so limited is because we have so far concentrated on the level of behaviours: consume less energy and resources, pollute less, recycle more and so on. We may know it intellectually, but until we viscerally feel and believe ourselves to be intrinsic parts of nature and locality, until we fully register and identify with the fact that we emerged from the earth through the long process of evolution, and so are rooted and belong here, we will not take full responsibility for all these and be motivated to take truly effective action. But our modern lifestyles and built environment so suppress our awareness of our connections to, and multiple interdependencies with, the natural world, and even with our manmade historic legacy, that we don't truly believe deep down that we belong: it is simply not part of our experienced identity. This drives the unsustainability of modern civilisation and our callous disregard for the natural world, treating it merely as a storehouse of resources and our destructive impacts on it as 'externalities', as collateral damage to be ignored or tolerated as minor inevitabilities in the quest for growth and greater wealth. Even the latter, our urge to possess, to amass more land and goods, is a mad and futile compensation for the far greater comfort and satisfaction of truly belonging, of participating in a slow and noble unfolding far greater than us.

#### Degrees of separation

Our distorted identity, as being divorced from the world and not belonging, is reinforced by what can be called the Myth of Separation, a term chosen in acknowledgement of that used by Charles Eisenstein to denote the current era – the Age of Separation – in *The Ascent of Humanity*.<sup>4</sup> This myth or illusion, that we are fundamentally distinct and disconnected from each other and nature, underpins our times, shaping all aspects of our experience, and is among the most damaging of delusions. It is referred to as a myth because nearly 100 years ago the leading edge of science (particularly, but not only, Quantum Mechanics with its theories of quantum entanglement and so on) proved it to be utterly untrue. Despite this, and the mounting supporting evidence of our manifold intimate interconnections with everything around arising from fields such as biology, ecology and evolution, this myth



still determines how most of us perceive and understand the world. It also still underpins the mechanistic materialist science, which despite its limits and the crippling limits it sets to progress in some crucial areas (such as understanding many physical and mental health conditions), remains dominant because still operationally valid – it landed us on the moon, after all.

Although climaxing and reaching an extreme with modernity, the Myth of Separation originates far back in our history, starting with the acquisition of language and later intensified by the advent of agriculture, which progressively set us against nature. Many developments compounded it, such as the departure of the gods from this earth, through a transitional period of semi-detachment on Olympus, in favour of a single god up in the heavens, so that the earth plane was no longer a heaven but only a way station to be endured on the way to it. Besides the delusions of independence sponsored by our all-pervasive technologies, among the most influential and extreme sources is Cartesian dualism and post-Enlightenment thinking, reinforcing modernity's stress on the Right Hand Quadrants of the AQAL diagram (so suppressing our sensual, experiential connections with the world and our once multiple cultural and symbolic links with it). These compound the disengagement arising from another major source, modernity's fundamental founding assumption of an objective reality independent of us. As explained in TBR 3, this is what led to the world fragmenting into disconnected objects, as exemplified by the modern City of Doing in which separation (of buildings from each other and context, of one activity or function from another and so on) is a prime characteristic.

From the myth of separation comes the pervasive feeling that we transcend and are independent from nature, not truly of the earth, not deeply connected to it in reverential gratitude and so also responsible for it. It also accounts for the atomisation and hyper individualism of contemporary society, where people are disconnected also from each other and their own deep selves. Our built environment reflects this in not belonging to or creating



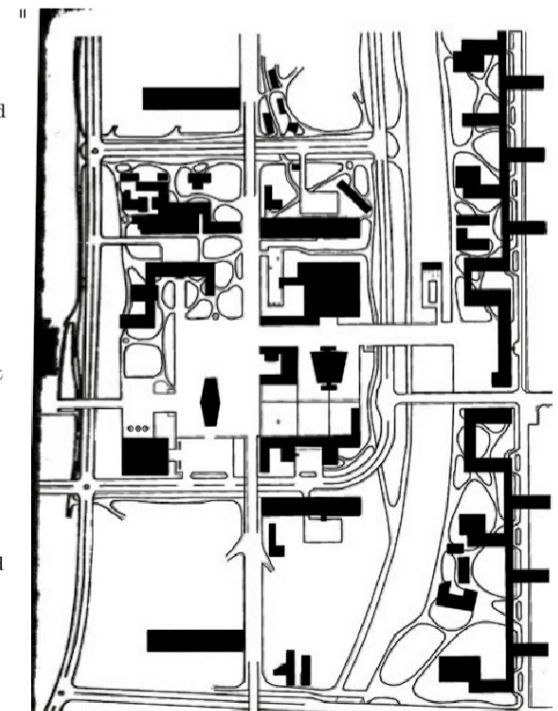
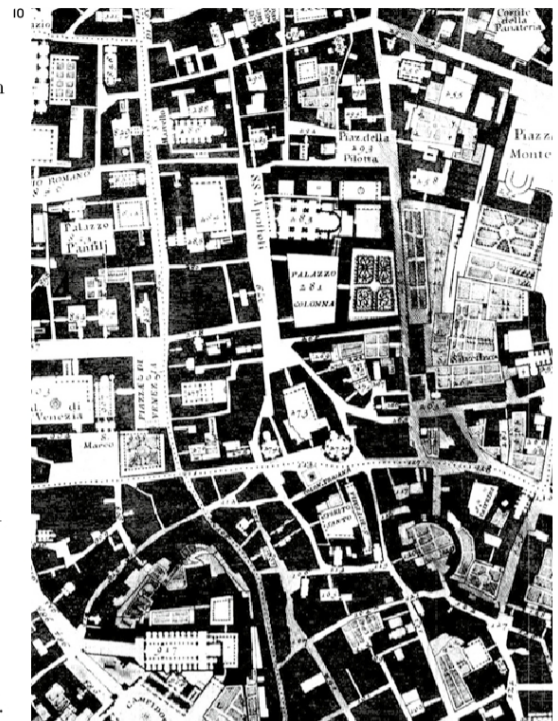
**10&11. The historic City of Being, contrasted with the modern City of Doing, below. The City of Being is one of continuities of physical fabric, space and experience while the City of Doing is one of isolated buildings freestanding in a void and so of discontinuities in activities and experience**

place, nor helping us to belong, offering little for us (formally and symbolically) to relate to physically and psychologically. Hence the restlessness, the literally unsettled character, of modern humankind, alienated from and destructive of the world it feels dispossessed of and exiled from. And this is why progress to sustainability has been so slow and limited. The problem is an identity level issue – and our impotent attempts to solve them are at the level of behaviours, and so will never be effective.

The myth of separation was already pervasively influential when Villa Fallet was built; indeed its mediatory rhetorical elements mark it and its occupants as above nature as much as relating them to the larger spatio-temporal frame discussed earlier. But architecture being a conservative discipline (rightly so, and often should be more so), it took time for modernity's intensification of the myth to become visibly noticeable. Obviously disengaged from setting and stripped of recognisable rhetorical elements, the self-centred disconnect that exemplifies the myth of separation, is much more explicit and extreme at the Villa Savoye, as it is with most modern architecture. Moreover, the profound experiential and psychological consequences of the myth, its erosion of the sustaining webs of culture and its impacts on identity, are easily and viscerally experienced by trying a simple but illuminating experiment. Readers are urged to try it. Drop your awareness from your head down into your body, and then imagine lying on your deathbed and looking back at a long life lived in Savoye. Then do the same to experience the effects of life in Fallet. The experiences reported below summarise typical reactions from lecture audiences who have tried this, who were generally surprised at how distinctly and intensely different were the feelings evoked by each house.

Savoye elicits an exciting feeling of expansive freedom in the fresh air and sunlight of an eternal summer elevated above the earth. Strongly felt is the horizontal and centrifugal spatial emphasis, which some feel as shallowly dish-shaped. Although the daily cycle is highlighted, that of the seasons is less distinct, nor is there much feeling of life adding up over time, of mellow maturation, especially as there is a disconcerting sense of disengagement from the earth and its rhythms in a building whose materials and finishes don't weather gracefully. Life seems to have been fun but shallow, not least because without lasting legacy in beneficial impact on the surroundings. The reported long-term experience of the Villa Fallet is almost antithetical. Connection with surrounding trees and neighbours is felt, but much more powerful is the sense of a sheltering and centripetal intimacy and vertical connections, rooting the house deep into the ground and linking earth and sky. There is a reassuring sense of enduring permanence and awareness of the cycles of the seasons as well as of sheltering against and opening up to them. Here you feel of the earth, at home in and connected with planet and place, and life has a sense of fullness so that you face death with the quiet satisfaction of a settled life properly lived without the nagging sense of not having fully engaged with place and nature that Savoye confers.

This simple exercise gives a memorably visceral understanding of how the myth of separation, and the



disengaged buildings it results in, actively discourage identification with earth and place, nature and its seasons, and so any sense of responsible stewardship for them and the desire for a beneficial legacy in lasting improvements. This raises an immensely significant issue of profound consequences for architecture, urbanism and the continuation of civilised life. Which way does true and lasting sustainability lie, supported as it must be by deep psychic satisfaction and an ennobling sense of identity? Is it with the gentle and temporary disengagement of aloof and voyeuristic detachment, of purporting to minimise impact and damage (or more usually, simply denying it) but without really connecting and belonging? Or is it with nestling into and engagement with place, as the term settlement implies, pleased to accept all its long-term responsibilities to its past and its future because of the deeply satisfying sense of meaningful purpose and lasting legacy these bring? Much supposedly green design pursues the former option, of merely doing less damage, or being less unsustainable. But surely for true sustainability we must choose the latter, and identify ourselves as belonging to and responsible for the earth and all its communities of humans and other species, and help all of these to flourish.

#### City of Doing and City of Being

Imaginary recollections from the deathbed are equally revealing of crucial differences between what earlier essays refer to as the City of Doing and the City of Being (TBR 11, AR March 2013). The former is the modern city of separate functional zones and freestanding buildings – which elicit relationship with neither neighbouring buildings nor us humans, being instead glacially alienating or (today especially) jazzed up with jolly colours and disturbingly jittery rhythms – all dispersed in a conceptual and experiential void to be connected by movement-only roads. Elsewhere I've called this the wiring diagram city. This is the city of fragmented fabric and fragmented lives, of differing activities undertaken in different places, of lives largely reduced to toil and, for those who can afford it, conspicuous consumption (as if that could be sufficient compensation for the lack of meaning) and succinctly summarised by the 1968 slogan of *métro, boulot, dodo*. The City of Being is the traditional city with its continuities of physical fabric and lived experience, the city as crucible of culture and consciousness, the configuration of its fabric creating many kinds of places and locations suited to a host of qualitatively different but interlinked activities, a place for actively engaged citizens, not mere passive consumers.

Again drop your awareness from your head down into your body and imagine looking back from your deathbed at a life lived in each kind of city in turn. The differences can again be startling. With the former, people generally

sense the fragmentation and consequent dispersal of their attention and energies, and even of their sense of self, as a dissatisfying restlessness and purposeless busyness. Without the sense of the buildings or themselves as being embedded in place, and so of being grounded and present, it's as if nothing can drain or offset the pressures and stress that comes with being permanently distracted, with energy and attention dispersed, and so always somewhat unsettled. Thus the City of Doing is not only that of alienation and anomie, but also of overwhelm, ADHD and hypertension – all of them omnipresent conditions to which modern architecture and cities, and the lifestyles they shape, are major contributors. To these debilitating impacts must also be added all those discussed in earlier essays of the City of Doing, including those of the lonely isolation from community that impedes self-knowledge and flowering into full maturity. So the sense many report of looking back from imminent death on a life that was immensely busy but only half lived.

The deathbed experience reveals the City of Being to be markedly different. Here you experience the seamless continuities of physical fabric and lived experience, of being always enveloped and grounded, with buildings of a reassuring physical presence and compositional subtlety to gently engage yet not overwhelm awareness. In such a humane and supportive setting you can be absorbed in what you are doing or who you are with, without that feeling of frazzled distractedness and pressured busyness. Psychologically it is clearly the much more satisfying option and reminds you that the fullness of a life well-lived, such as you hope to look back on from your deathbed, is less about the many things done than of being fully present while doing them. And all these benefits are in addition to those already explored in earlier essays (particularly TBR 11). These include the benefits to self-knowledge, psychological health and developing maturity of being visible to all on the street, enmeshed in community and fully known by others in all aspects of your life – in contrast to these being fragmented between different places and the differing roles played out in them, as in the City of Doing.

The profound differences between these two kinds of cities are again largely those of psychological attitude and identity. Designed and managed by those unguided by a sense of deep connection and belonging to the larger whole, the modern City of Doing is dogged by various fracturing impacts. Its public realm is the domain of single-minded and uncooperative disciplines, of engineers of various sorts (traffic, lighting, telecommunications, sewage), landscapers and signage people; and for those who commission its buildings the city is little more than a chessboard of economic opportunity. To this is added an architectural chaos of egos competing with 'statement buildings' – demonstrating the architects' vaunted creativity in often spurious form-making, or their uncompromising integrity as proven in the unfriendliness of materials. Bad enough as are the products of these ambitiously individualistic, ego-driven architects, hardly less so are the products of those in it for the money only: mean-spirited utilitarianism that similarly spurns responsibilities to any larger whole. The disharmonious

'Our modern lifestyles and built environment so suppress our awareness of our connections to, and multiple interdependencies with, the natural world that we don't truly believe we belong'

**12. An assortment of buildings by a mixed bag of architects – including Zaha Hadid, CRAB studio, Carme Pinós and Hitoshi Abe – at the campus of Vienna University**  
**13. Ralph Tubbs' Indian YMCA in Fitzrovia, London, fits harmoniously with the historic building to the left, proving that exemplary modern architecture could be compatible with a sensitively respectful response to setting**  
**14. Recently built house in north London, its abstract forms signalling aloof disdain for its setting, as if still considering that this might prove its contemporary credentials**

jostling of a multitude of typologies, materials and much else, highlights the unsettled and unsettling nature of buildings that refuse to relate and add up to any larger whole, let alone be rooted in place and past.

Earlier essays noted that in cities and other settlements where visual harmony prevails – both between buildings, and between them collectively and their larger setting – this is largely due to the repetition of only a few formal typologies, enhanced by a limited range of materials, as well as commonalities of facade composition and proportions. At least equally important was the psychological attitude and sense of identity of clients and architects. When building the traditional City of Being they were very aware of their responsibilities to the larger whole, to the pre-existing communities of both buildings and people (as today we should also be of the communities of other species and all that they depend on). The ambition was not only to build well in the manner of the existing architecture, but also to fit in as an intrinsic part of the larger whole they were extending and embellishing, with any competitive urges tempered by the stronger collaborative one of enhancing the whole.

Despite all the ongoing talk of contextualism, the ego-striving ethos of the City of Doing remains dominant, intensifying the fragmenting grip of the myth of separation. In London it is clear in the willy-waving crop of new towers, each standing out with their distinctive, nickname-attracting forms: the Shard, the Walkie Talkie, the Cheesegrater and so on. Disruptive as these are, another 230 towers have planning approval, or are advancing towards it, to be dotted haphazardly around the city in a mad dash to destroy much of its remaining cohesiveness. The same pernicious ethos is equally clear

‘The new campus in Vienna built by starchitects shrieks no interest in any form of deference or coherence, like drunken drag queens showing how eye-catchingly and inappropriately over-dressed and outrageous they can be’

in greater London in the gratuitous offensiveness architects feel compelled to display to street and neighbours with the assertively abstract forms of new houses that announce disdain for all around. That this obtuse offensiveness is not the proof of Modernist credentials these architects assume it to be is shown by earlier buildings such as Ralph Tubbs' Indian YMCA (1952) near Fitzroy Square, and many others which are uncompromisingly modern yet slip into place with a tact and deference that enhances their surroundings.

That the urge to be distinct and not fit in still displayed today seems more blatant than ever before (except perhaps in the Brutalist era) is, one can only hope, a sign of reaching a sunset-effect terminal extreme before civility and concern for the larger whole returns. The recent apotheosis of this manically competitive, ego-induced chaos is not in London but Vienna (AR May 2014): the new campus built by starchitects shrieking no interest in any form of deference or coherence, like drunken drag queens showing how eye-catchingly and inappropriately over-dressed and outrageous they can be. The result is a pyrotechnic sunset effect strongly suggesting this nonsense must surely be nearly over and we can start to develop a more mature and reciprocal architecture of



**15. Diagrams by Richard Tarnas poignantly illustrate the progression of the experienced sense of self and its relationship with the larger world around. In the Primal Worldview, the self was sensed as permeable to and part of the larger world around. With the progressive development of the Modern Worldview since the advent of agriculture and then the city, the self was increasingly experienced as separate from the world around. This reaches an extreme in the Late Modern Worldview where the isolated self of atomised contemporary humanity feels lonely and lost in an indifferent world**



shaping places where, instead of jangling over stimulation, we can feel settled and at peace with ourselves and our settings. But the latter environments require designers whose sense of self transcends the shallow reaches of the ego to identify with and embrace larger responsibilities to place and people and so ultimately to the planet too.

The diagrams by Richard Tarnas, shown in TBR 3, speak eloquently to the psychological predicament (which he describes in different terms to what follows) that contemporary architecture and urbanism does so much to intensify. This is illustrated by the last diagram, showing the Late Modern (or contemporary) Worldview and evoking the sense of solitary smallness and impotent powerlessness in the face of an alienating environment and unsupportive social milieu. In marked contrast, as the first diagram shows, is what Tarnas calls the Primal Worldview that pertained through most of human history, when as tribal nomads the whole world was our home and we were intrinsic to and barely separate from it. We were just some of the beings who coexisted there, yet because conscious also responsible for and with reverential gratitude towards, a prodigiously providential paradise.

But with farming and permanent settlement came what for Tarnas is the Modern Worldview as we strove to create for ourselves a home bounded within this larger world. The latter then became ‘other’ and distinct from us, a wilderness seen in differing degrees to be hostile, to be defended against and, with the advent of cities, to be walled off from. But with the coming of a mechanistic science, and particularly since the Enlightenment (and later the reduction of architecture to serving function), we have created a world that frustrates our ability to feel at home in it and truly belong. The central thesis and much of the argument in these essays is that – guided by Integral theory, Spiral Dynamics and much else now available to us – it is time to shape a new culture and concomitant built environment. In these we will both move forward into the next phase of cultural evolution, the era already emerging, and regain – through

understanding such things as ecology and evolution, reinforced by an enhanced sense of identity – a sense of belonging within and being at home in the world.

Imagine extra-terrestrials visiting earth. They’d be appalled by what we are doing to this glorious planet and by our pressured lifestyles (of long work and commuting hours, unhealthy food and so on). The latter, they’d probably surmise, we created to minimise enjoyment of and absorption in earth’s profligate beauty and webs of harmonious relationships, and as feeble excuses for our unawareness and inaction. Maybe extra-terrestrials haven’t visited because looking from afar they worry our affliction is contagious. If they did come, it is pretty clear what they would say: why don’t you just accept that you are Earthlings – as much part of nature as earthworms? And having acknowledged your identity as Earthlings you will no longer be a purely parasitic presence but will embrace, treasure and be responsible for your miraculous planet – shaping lifestyles and settlements accordingly.

Attitudes of designers would then differ dramatically from those typical today, becoming much more sensitively attuned to the long-term needs of the manmade and natural surroundings, including those of every species present, seeking to contribute, not just exploit. Surely, central to educational curricula at all levels, including that of architects and urbanists, should be tuition on becoming a fully-fledged Earthling – as it was for the many millennia before civilisation. This relates directly to earlier discussion (TBR 12, AR September 2012) about the urgent need to pursue two of the central questions of our time. First, who deep down do we truly want to be in light of today’s understandings of what it is to be truly human, so that we can look back from the deathbed with the satisfying sense of a life fully lived? Second, who does the planet, which evolved us, want us to be? We need to explore these until both answers are identical. From this will emerge renewed and empowering identities, collective and personal.



**16. Another new house in north London whose abstract and alien forms contrast with the welcoming and legible forms of the traditional houses to the left of it. These latter acknowledge, greet and in various ways relate to the passers-by and 'look them in the eyes' in contrast to the inscrutable evasiveness of the new house**  
**17&18. Elevational drawing and street elevation of north London houses. The drawing analyses some of the ways the elevation is composed (with an interplay of 'centres' forming a coherently disciplined pattern) so as to invest the building with a sense of 'aliveness' that elicits a relationship with passing humans. This is a crucial aspect of how historic buildings helped us to feel at home in the world, some equivalent of which has to be recovered as part of the larger project of achieving genuine sustainability**

Recognising ourselves as Earthlings implies nothing regressive, like becoming Hobbits in a Peter Jackson film. (It is more about an ethos than an aesthetic. Those who bury their homes in nature today tend not to be proper Earthlings in that they spurn the community of fellow humans, and so still exemplify the myth of separation.) Instead being an Earthling entails taking the next step forward in our development and healing an immensely damaging split which is among the most pernicious legacies of the modern mindset's intensification of the myth of separation: the widespread assumption nature and culture are polarised opposites. Proto-cultural behaviours are found in other species – in grooming and mating rituals, rank hierarchies and so on. As with these other species, culture is absolutely intrinsic to who we are. It developed with us as we evolved within nature. It is also the prime means of advancing yet further our own evolution, which is that of human nature – and thereby continuing the advance of evolution generally. Emerging from, rather than opposed to nature, culture is how we give meaning to all aspects of the natural world and find our place within it, intensifying our experience and appreciation of it. Understanding this clarifies the assertion in an earlier essay that the Noosphere (culture) transcends and includes the Biosphere (nature), as well as why the views of deep ecologists and others who hold that we should invert this, although understandable and laudable in motive, are simply wrongheaded.

Such understandings should drive and inform one of the great collaborative projects of our time: recreating a culture that will connect us with our origins and the cosmos, and support us in our unfolding into full humanity – as Earthlings. But at the moment we are stuck, the inertia entrenched because we are, as described by the increasingly influential eco-theologian, the late Thomas Berry, 'between stories' – those meaning-making narratives central to all cultures. The old stories – the myths, legends and religions – that underpinned traditional and historical cultures, withered under the onslaught of materialist science and rationalist thinking, leading to Nietzsche's 'death of God'. But the elements of an excitingly ennobling new story, that will give meaning to and reconnect us with everything around, are there for the taking. These are among the greatest of modernity's legacies and include the New Sciences – New Physics,

New Cosmology and New Biology – that have not yet impacted our worldview that is still in thrall to a mechanistic rationalism and materialist science. From this vast legacy of knowledge and technique is emerging the new story with which to consciously engineer a new culture. Among much else, the sources of this new story – just asking to be woven into an encompassing, life-enhancing and empowering culture – include (among much else) the work of Eisenstein and Berry, and mathematical cosmologist Brian Swimme (with whom Berry co-authored the seminal *The Universe Story*),<sup>5</sup> the epigenetics and extrapolations from it of cell biologist Bruce Lipton, the depth psychology of Carl Jung and James Hillman and the many tools for personal and cultural transformation developed in psychotherapy and management studies – and, of course, the synthesising rigour of Integral theory and Spiral Dynamics.

#### Narratives of planetary culture

This new culture will envelop leading-edge science as part of it (rather than an antagonist) to be as resonant as any myth and as spiritual in its implications as any religion. It will thus re-enmesh us in a rich web of connections that give renewed meaning and purpose to our lives, as well as an enhanced identity and sense of belonging that exhort us to take responsibility for more than only our own lives. Further elaborating this master narrative of a planetary culture will be a rich ecology of local variants, woven from the particulars of place, its customs and history, preserving or evolving from the best of local traditions to provide, in a manner analogous to biodiversity, levels of redundancy and resilience necessary to sustainability. All this would be part of shaping a more inspiring vision of what is possible, so enticing and giving us the psychic drive to tackle the many forms of systemic breakdown that confront us, in contrast to the debilitating emphasis on the negative that reinforces our current inertia. Social psychologists say the hectoring emphasis on the threats we face and the sacrifices we must make only serve to foster extrinsic, selfish values at the expense of intrinsic, communal and altruistic ones, so compounding resistance to change.

As argued in earlier essays (particularly TBR 4, AR March 2012), the role of architecture goes far beyond providing shelter, economic return, accommodating function and so on. Historically, as with the city too, its most essential and ennobling purpose was to help us create ourselves (through such things as ritual and the spatial projection of the psyche, as described in that essay) as complex, cultured beings. Understanding this – and again applying the vast reservoir of knowledge modernity generated, and gathered from earlier cultures – architects can then contribute to this regeneration of culture to help shape the next step in human development by designing a built environment that accommodates and actively encourages this epochal transition so that the natural and manmade world once again becomes our home. Much of what this would be like was discussed, along with their roles in shaping identity and fulfilling our human potential, in the essays on urban design (TBR 11) and the neighbourhood (TBR 12, AR June 2013).



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In part these were about elaborating a built environment rich in potential social encounters and different kinds of places to enjoy and explore as a means to discovering and developing the self. Also stressed was the need to reconnect up our fragmented world and reconnect us with it by creating buildings that related to each other and us, as well as to the natural world with which it gives us a heightened sense of awareness.

Some of the more purely architectural aspects of shaping a built environment to which we can relate and feel at home are discussed in the essay on 'Place and Aliveness' (TBR 7, AR July 2012). Among other things, this discussed the role of facade composition – especially the physiognomic dimensions of pattern and the enlivening effects of a play between elements forming distinct 'centres'. The benefit is that instead of the public realm being shaped by the repetitive, extruded rhythms typical of modern and contemporary architecture, it would be faced by buildings that themselves project a sense of identity and being – and so hold the space before them and invest it with a sense of place. The most succinct way of explaining this is that such buildings, like pre-modern ones, look you in the eye, so acknowledging and greeting you, in contrast to the way modern and contemporary buildings evade eye contact and so fail to acknowledge and relate to you.

Yet this introduces another troublesome identity issue: when this is explained and illustrated to audiences of architects, they tend to readily grasp and be convinced by the argument. Yet when asked if they would attempt to apply these insights, they sheepishly tend to admit not. More than doubting if they have the compositional skills, it is an identity issue: nervousness of the judgement of peers. Confronted with the choice of being Earthlings or architects, with shaping the long-term future or seeking quick and easy recognition, with healing and serving the city and its citizens or saving face, many grudgingly admit it would be the latter. Architects, then, need a new sense of identity too, one in which they feel they belong to and are responsible for a larger whole, and so will design to enhance that sense of wholeness which helps them and us to feel at home.

#### Notes

1. Reyner Banham, 'A Home is not a House', *Art in America*, no 2, April 1965.
2. *Witness to the Fire: Creativity and the Veil of Addiction* by Linda Schierse Leonard is only one of numerous books exploring the theme.
3. Problems endemic to a cultural meme are best resolved by solutions from a more elevated and expansive meme, which is why current Orange meme approaches to sustainability have been limited in their success. The psychological issue here though is that we fail to recognise that the cause of a problem is often at a higher psychological level than the proposed solutions.
4. Charles Eisenstein, *The Ascent of Humanity: Civilization and the Human Sense of Self*, Evolver Editions, 2007, 2013. Although this essay draws on the ideas of this book, it also, because of space constraints, simplifies and somewhat distorts them. Although it is a big book, reading it is highly recommended.
5. Berry first posited this idea in his 1978 booklet *The New Story*, later republished in his book *The Dream of the Earth*, Sierra Club, 1988. This theme is developed at length in *The Universe Story* by Thomas Berry and Brian Swimme, Harper, 1994. See also *The Great Work* by Thomas Berry, Bell Tower, 2000.



