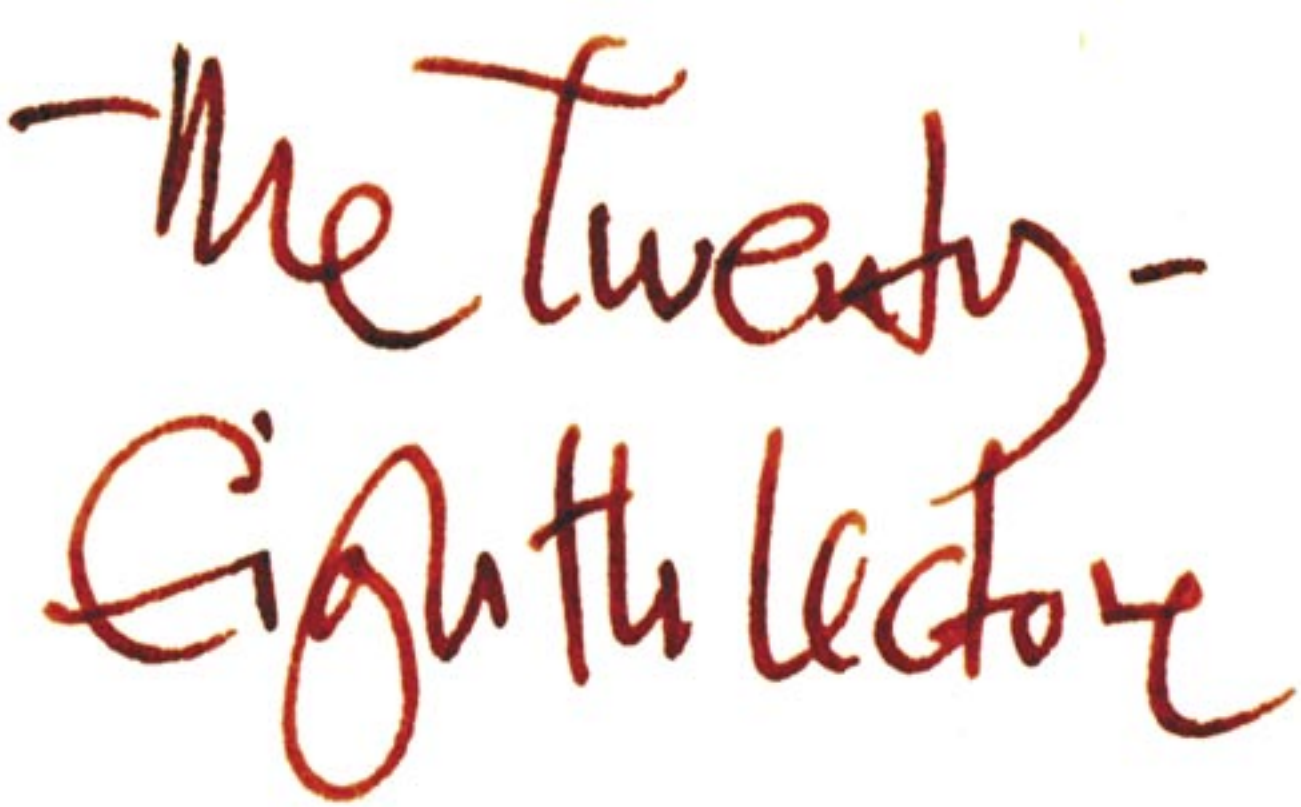


Writing Outside

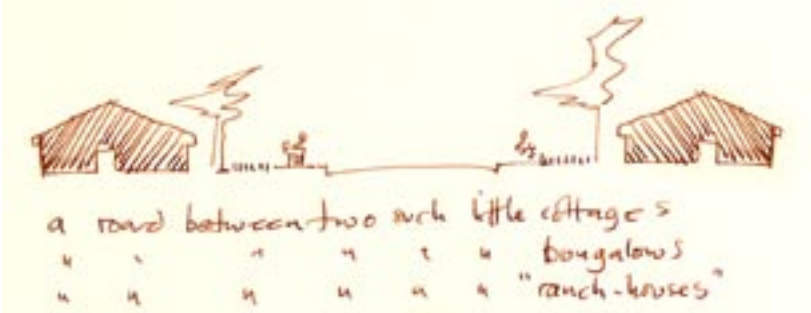
JOA

Baroness Thatcher famously remarked, during her campaign to destroy Communism, that

There is no such thing as Society.

Her view of 'Society' was obscured by the fixity of her admiring gaze upon Dallas, Texas, the city that she wished to import into Britain. The history of post-war English planning theory revealed, in Lecture Three: 'The End of Urbanity' that this fancy, typical of clever English minds void of 'dimensional realism', was nothing new.

Thatcher could be forgiven, when gazing out upon the late 20C cities of the New World, for not being able to see anything recognisably 'social'. My characterisation of the central element of the River of Space that unites a community, as an old, hollow, tree-trunk, seems far removed from the concrete flight-paths skimmed by the rubber-shod ships of suburbia. How could anyone respond to this total collapse of that 'space of appearances' which is the only, final, and legitimate, theatre in which a civil society can come into being?



The suburban Ranch House descends from the 'Broadacre City' of Frank Lloyd Wright. It is the cosy cottage, projected by the geomantic pantheism of Wright, into an 'Usonian' suburbia.

Equally destructive of any project for a civil urbanity are the more recent contra-bungaloid bungalows that descend, via the Nordic Romanticism of Neutra and Schindler, from the Barcelona pavilion of Mies van der Rohe. Here they perch on the bulldozed hills of L.A., waiting, dreamily intoxicated by Corbusian "soleil, espace & verdure", for a Californian cloudburst and a terminal mud-slide.

These illustrations, taken from the 1940's manuals of the US Army Corps of Engineers, show how to precipitate the premature birth of a city. As with much of of the post WWII USA, this catastrphe was psycho-engineered with the aid of expatriate behavioural psychologists keen to get the West 'back to basics' after the totalitarian ideologies of both Right and Left.

This collapse of urbanity, though it reached full term in late 20C USA, was born in post-Napoleonic, early 19C, Britain. The cholera-ridden, crime-infested, smoke-choked cities of industrialising Britain were deserted by everyone who could buy a season railway ticket. By 1897, the resident population of the City of London, Europe's greatest, had already been surpassed by the numbers of daily commuters on its new suburban railways. But such was the horror of the English Establishment for the Revolution and Napoleon that coherent, French, Beaux-Arts, city-design never crossed the channel. Beaux Arts city-planning spread around the globe from its fount in Paris, but there are no Boulevards in Britain. The lifespace of Britain's imperial industrialisation was 'farmed' as a conceptual and mechnical chaos dictated by the imperatives of capital and rent alone.

Any building that descends from the late 18C to early 19C, English cult of a peculiarly 'Swiss' version of Rusticity, culminating in its final, romanticised, version of the 'country cottage', is destructive of civil society. Any society ambitous of urbanity will rebuild the bungaloid ranches of suburbia with houses of at least three storeys.
Yet merely building three storeys is not enough to create 'society'. Society is, very precisely, a theatre. It is an artifice created by human beings for their own purposes. Society needs its own, special and specific place in order to be brought into being. This is called a 'public realm'. The Romans, even during the Empire, when such places were 'owned' by the Emperor or the property of the Imperial household, still called them the 'res publica' - the Public Thing. The theatre of the res publica is made by the buildings around it. It needs its own place. This is the place Hannah Arendt calls the "space of appearances". It is the place where the Polis, which we Nordics call the City, comes into being. Imagine my surprise to find it, in its highest form, a Beaux Arts plan, in the midst of 20C, Texan, suburbia!

Three storey buildings are needed to create a 'public place. But, in themselves they are a mere militry barracks, a prison camp, or an administrative block in a contemporary business park. Something more is needed.

This 'something more' is constituted of four elements. There must be a door which is arched and preferably portico-ed. This portico must be slightly elevated to take the form of a 'stoop'. There must be a balcony ("of appearances"). The theatrical role of these three elements is obvious. The fourth element is the Entablature. This offers no place to the human actors of the Public Realm. The Entablature shows that the 'building' has received the 'cargo' carried by the 'raft'. The projection of an Entablature, and even more so, the projection of its 'cargo' in the form of roof-top emblems, shows that a building, and the institution it houses, declares its (public) support for the cultural superstructure of ideas, laws and principles constituting the 'public culture' relative to that Polis. To remark that this 'declaration' is only possible in an iconically literate culture is to state the obvious.

The only difference in this drawing is to subsume the vehicular road into the general 'staging' of the Public realm. When one sees this effected one marks the presence of a culture with some inkling of the needs of that 'public realm' which is the birthplace of urbanity - home to that 'Society' which Baroness Thatcher so notably feared.
But how can the additional cost of these four 'facade elements' be justified? Here I can adduce the economic benefits of my 'Sixth Order'. Invented far back in the 1970's to reify an iconography which I then called my "four figures", I could now turn this Ordine to a greater purpose than the re-invention of Architecture as a mere 'Art-Form". I could now reify the 'Polis'. With my 'Sixth Order' I could inscribe the 'Republic of the Valley' into Houston, Texas, that most hostile of counter-urbanities - and, seemingly, with the enthusiastic support of its leading citizens. My long struggle, which had been born of my experience of North America, was to find its fulfilment in the very place where it had all begun.

In Rice University I found, ready-made, that narrative of Space-as-Time which I term the Republic of the Valley.

Two ambitions flowed from this pleasing discovery. The first was to find out more about this real example of ideas that I thought lost to Modernism. The second was to use my existing knowledge to revitalise this despised planning technique by:

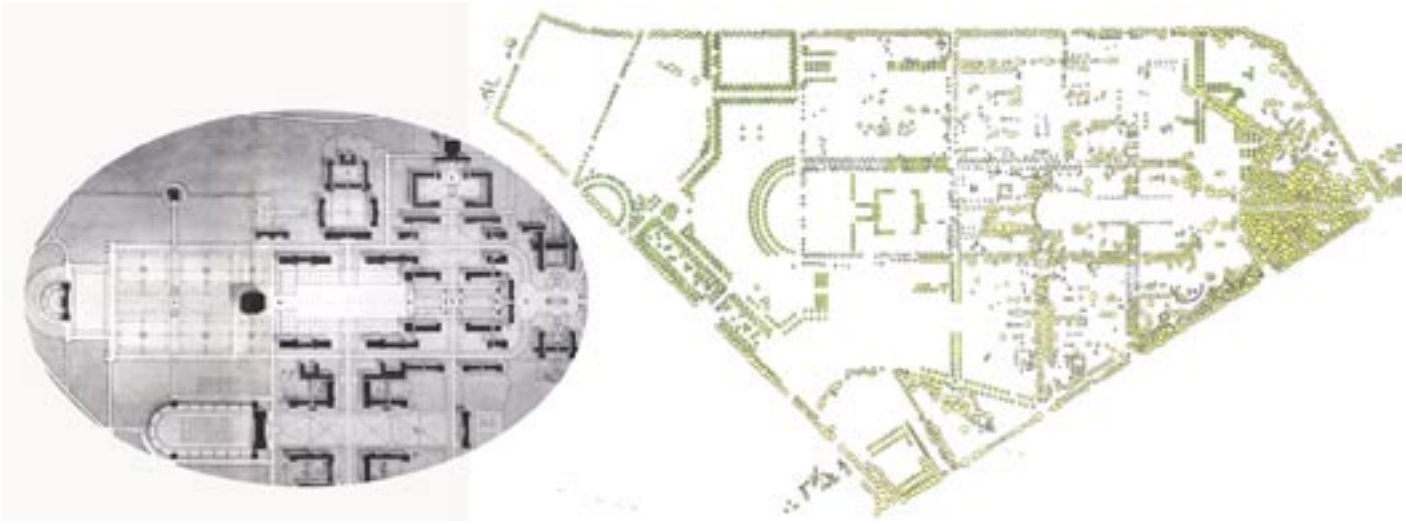
inscribing it into my own new building.

I found that the the whole campus plan was a multi-fold example of a 'weave' that alternated circulation corridors and rooms around an 'honorific centre'. This weave was also 'mitred' into crossings. Not that the history of Cram's plan was altogether simple. The buildings of 1910-1930 made their Beaux-Arts strategies very clear. Then the building-out of Cram's culture suffered major set-backs in the 1940's, '50's and '60's. This was followed by a strong recovery between the 1970's, '80's and '90's. What I had not forseen, back in 1992, when I arrived, was that Rice would now enter another period when my profession would do its best to destroy Cram's Plan. I was led, very politely, to understand that there was a rift between the Architectural Faculty, and the Building and Grounds Committee under its Chairperson Josephine Abercrombie. I found that, contrary to some other U.S. Universities, the Faculty played no part whatever in the project to which I was appointed. I learned, years later, that the Faculty's hostility to my eventual design was taken, by the rest of the University, as a sign of its suitability to their Campus! This hostility led me to understand that the ideology of failure canonised by the Venturis, back in the 1960's, had now, under the rubric of 'Deconstruction', become the mainstream of US architectural pedagogy. But this had never been my own ambition. I was invited, but preferred to refrain, from participating in the sordid academic 'sport' of receiving 'Art Funding', from the local Establishment while decrying their honest 'taste'.

After nearly 100 years, Cram's Beaux-Arts plan evidenced a notable genetic longevity. The Building and Grounds Committee used a number of formal principles which an intelligent person could grasp without any knowledge of architectural arcana. Axes, especially if 'walked', must be continued. Building boundaries should line up if at all practicable. Bricks must come from the St. Joe's brickworks in New Orleans, Lousiana. Window colours must be rich and darkish in what I would call Edwardian hues. Roofs should be pitched and of pinky-brown Roman tiles. This was only a very little more conservative than I liked. But I was not complaining. The 'ensemble-playing' worked.

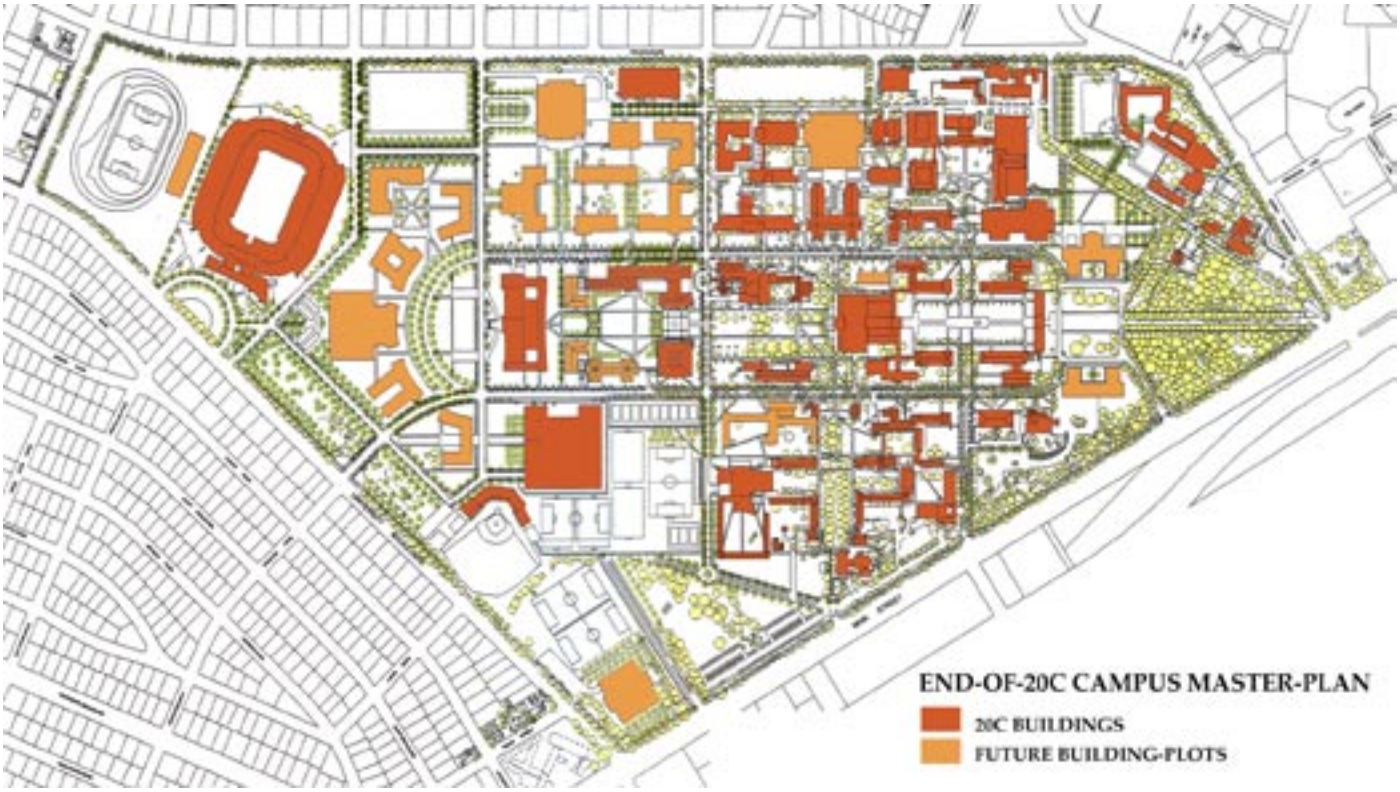
My own sense of the situation was that here, in Jefferson's already-quadrated USA, on a world-class campus that was not even 100 years old, JOA were to be given the chance (especially precious after the cruel disappointments of the Judge), to reify an instance of what I knew could be done for Modernity. I could escape from the Neo-Feudal miasma of wonkiness that had regressed Britain's own lifespace back to Saxon, geomantic, occultism. What could Franco-American 'Deconstruction' offer me, an Englishman, that my own conceptually-pulped lifespace already provided with such embarassing abundance?

I learned to admire the steely discipline of the Building and Grounds Committee, the Engineering Professors, and the Architects of the Facilities and Maintenance Departments. There was an assumption that any Architect building on Rice Campus did so, primarily, not for himself, but for the glory of the Campus, and the Institution of the University. I had no objection at all to this!



Cram's 1912 version of Beaux-Arts 'Greco-Gothic' planning used trees like collonnades to define rivers and tributaries of axial space. 100 years later, the luxuriant plantings of the early 20C that one sees in the Patte d'oie/'Delta', are thinning under the pressure of building development. Rice Campus is turning from a verdant park into a fragment of low-density urbanity. More than trees are needed to invoke the spirit of Cram in these newly lumpy air-con buildings.

No extant text describes the symbolic (semantic), principles used for Rice's master-planning. That it worked as well as it did for its first 100 years is due, I believe, to the narrative logic of the 'natural symbolism' in which the Republic of the Valley is grounded. Yet there is one opportunity which the Committee might now take, now that I have made explicit a semantic foundation for Cram's Plan. The 'fluvial narrative' of Cram's original plan, seen above, 'sources' in a semi-circular building that he calls, somewhat audacously for a nascent technical college in the frontier state of Texas, a "Nymphaeum". Fifty years later a circular building, the Stadium, was constructed in the same position. If I had been masterplanning after this event I would have suggested that the main 'river of space' be 'swivel-jointed' to make this volcanic annulus, fount of the vital energies of adolescent aggression and combat, into the 'fluvial fount' of the event-horizons of the Valley-Republic. In contrast to this, the proposed 'source' to the axial 'river of space', which is shown in the late 1990's Masterplan below, is less than iconically persuasive. Form (syntax) can afford to be more elastic when it is structured by (semantic) meaning.



Ralph Adams Cram knew nothing of such novel technologies as air-conditioning and the low ambient light levels rquired for CRTs. So while the early 20C buildings were long and thin to allow cross ventilation by the humid marine breezes from the neaby Gulf of Mexico, the late 20C structures were becoming thicker, deeper, and less easily manipulated into his beautifully urbane compositions. The fat buildings have interior streets and squares which must also be 'inspired' to epiphanise that 'greater whole' which is the Campus. But how is that to be done?

I had been told that Josephine Abercrombie had sacked one of her proposed new Consultants after only one design presentation, his first to the B&G Committee. It was justice as summary as "He needed killun" - the folkloric Texan defence of homicide. I asked my Professorial Clients in the Department of Computational Engineering for an iconography of their world. They replied that they were tired of seeing the beautiful computer-generated thunderstorms, giant molecules and three-colour Penrose mosaics that graphic designers put on their learned journals. They wanted me to give them what I, as an Architect, knew.

Who was I to quarrel with that?

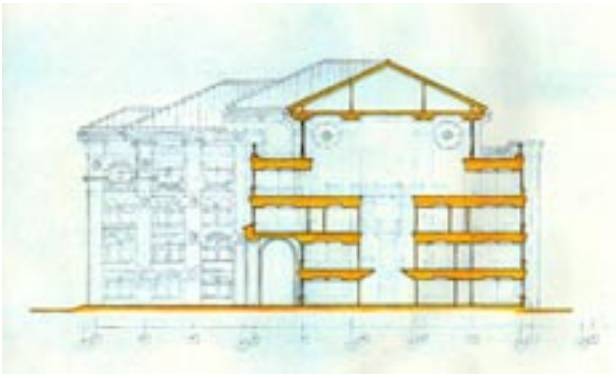
When chosen as an Architect for Rice one returns home and proposes the details of the contract. When these are finally agreed from a distance of 4,300 miles, one returned to Houston. We rented adjacent hotel rooms and my team met, over seven days, with everyone concerned. We bought drawing boards and colour-corrected lamps. We freehanded everything, at 1:200 scale, with coloured inks and crayons that were then colour copied and mounted on foam-core boards. Long experience had taught me this method. It allowed one to 'show and tell' while facing the audience. Luminous projections are less effective. The committee dozes in the dark and one can not see their faces and respond to signs of pleasure or pain. Besides...Amateurs respect Pro's who can draw freehand.

Only the briefest of silences followed JOA's 'storyboarding'. Josephine Abercrombie remarked "this is one of the best presentations we have seen". The six-shooters were still in their holsters and we were out of the door.

My first freehand sketch for the long elevation that faced onto the main 'fluvial' axis of the Campus Plan. The column-module was only 5'0" and not 6'0' as finally built. This made the proportions more vertical, and more 'traditional' It may have helped the design over its first hurdle. But the broadening of the proportions following-on from Adrian James' use of the wider module, helped it break loose from any mimicry of the Antique. The other big change was the retraction of the Fourth 'clearstorey' floor. Otherwise, three years on. everything here was built.

Josephine later said to me: "John, this is the good time. This is the honeymoon period. Enjoy it."
I imagine that she meant that, eventually, JOA's somwhat Baroque elevations would be shredded by cost cutting and the US building industry. But I was not disturbed. English Architects are not felt-tip philosophers. I had written my own Bills of Quantities for three early projects. Poyle had cost £11/sq. ft. My budget here was £100/sq.ft. I had cut my teeth on 'social' houses costing £2,400 each instad of the millionaires mansions that were needed to make the reputation of the young American architect. Besides which, JOA had a secret weapon, which we sensed would be welcomed at Rice University. We now knew how to decorate cheaply.

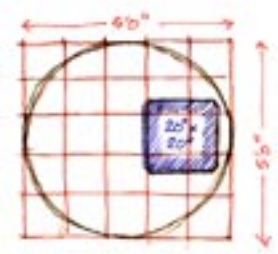
Bill Marshall, of the firm of I.A.Naman & Associates, my Mechanical and Electrical Engineering Consultant, took only a week to invent a way of using my architectural strategies. He put (up to three) fan-coil units into almost every column of the 'Serving' Order. He fed them with hot and cold water and controlled them with a clockwork (egg) timer. Rice's own Facilities and Maintenance Division were scandalised - calling it 'motel' air-conditioning". They predicted mould in the trays, clogged filters, noisy fans and an explosion of maintenance costs. Bill Marshall's solution was to: "Buy top quality units and run them at half-speed - like a Rolls Royce engine - and you will have no trouble". Normally, if one worked at night or over the week-end, one 'phoned the Duty Engineer at Central Services to switch-on the conditioning of a whole sector of the building. In our plan one turned a clockwork dial in one's own room. The Faculty liked being able to set a different temperature for every room. Central Services eventually accepted, after a six-month demurral, when their calculations showed that although more energy was used when all the rooms were full, so much was saved, over the whole 24/7, when fewer rooms were occupied at night and over the week-end, that the total energy bill showed reductions.



The Section through the sketch Elevation, above. The short floor-to floor dimensions, made possible by placing half the services in the 6th Order Columns, allows a high arcade. The clear-storey windows became ceiling roof-lights. The brilliant sub-tropical sunlight of Texas easily penetrated the five floors down to the ground, and was mercifully softened thereby!

My 'Serving Order' columns were now filling up with Bill Marshall's bulky tin boxes. So then I turned to David Ashcraft, of the firm of Walter P. Moore, who was my Houstonian Structural Engineering Consultant. Moore's was used to working with commercial clients. Columns were the things people paid Engineers to 'disappear'. The fact that big spans cost more to build was less important than that the Realtor's Agent could show a Tenant a totally blank, white (spatial) sheet and persuade him he could write any (interior-design) story he liked onto it. Commercial workspace design is driven by Letting Agent paranoias.

We went to see the building control division in Houston City Hall. It is a small, but beautiul ,Art Deco composition in shelly limestone with cast aluminium trim. The officials found it hard to categorise what they determined was an 'Office Building' that was long and low with a big internal void. There were four technical building codes: the Federal US, The State of Texas, the City of Houston, and the new Disability Code. These were periodically amended, at different times, and sometimes disagreed with each other. After some increasingly arcane argument as to whether half-way was in the middle or half the distance an older official was summoned and presented, with an inimitble Americanism, as 'The Code Jockey'. He pronounced my design "A skyscraper on its side". We had been conceived as a supine aberration of Houston's normative architecture of private property extended upwards *ad infinitum*. After that we all worked our way through the textual jungle without further major problems.



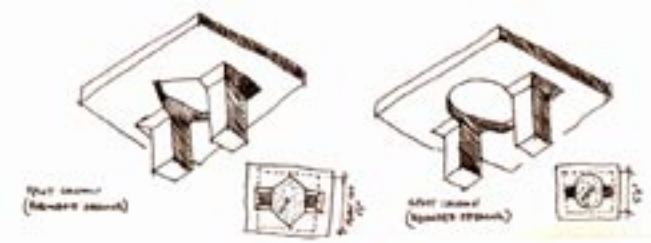
I took a columnar module of 5'0" (1.5M) diameter. The 80'0"-high concrete pillars of the Judge had been only 12"x12". 20"x20", for 40'0" columns was too fat.. I needed two smaller pillars.

The reason for our 'unnaturally' squat height was that no building could be allowed to overtop Lovett Hall, the first building erected at Rice, the progenitor and measure of all that was good on Campus, and a rightly treasured monument for the citizens of Houston. This worked to the advantage of my architecture - which had been born under the vertically-challenged 'cottage-culture' of Engish planning. Placing as much material as possible in walls and columns, and using flat plate floors with no downstand beams, enabled my design to squeeze four floors under the height restrictions. But to do this I needed some clever planning inside my 'Serving Order' columns.

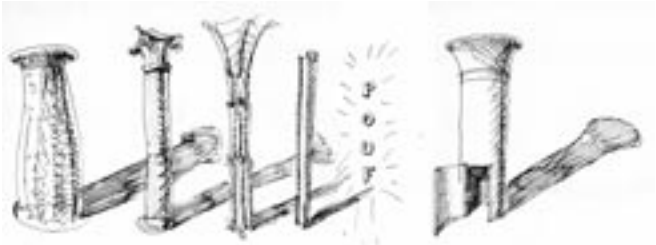
I could not accommodate David Ashcraft's first proposal. His 20"x20" columns were just too big. Hesitant at first, but eventually wonderfully ingenious, David took each of the cases of my 'Serving Order' columns and laced them with his slimmed-down reinforced concrete structure so that it nowhere caused 'hernias' in the sheetrock trunks of my Forest of Infinitude.

Structural Engineers, today, know that they spend an increasingly small fraction of the construction budget. Yet, because of the collapse of compositional theory during the 20C, and the elevation of Physics to a main generator of built form (even more so in 'Green' Eco-Tech) , Structural Engineers have been elevated to the rank of prime form-givers. While this may create a few bizarre built forms, such as we increasingly see adopted for pedestrian bridges, It results in no gain at all for an urbane culture. David came to understand, as have most of the Engineers with whom I have worked, that an Architecture that is humanistically-generated may 'hide' their work but, in fact, offers them more difficult (and therefore more 'interesting') problems.

A humanistic lifespace renders their Profession the more 'necessary'.



The most expensive part of any anti-gravity structure are its long-span beams. Cost increases by the cube of span. Floors are designed less for strength than for stiffness. They sag before they break. Long-span buildings bounce. Brick and stone walls crack if supported on thin steel frames which are too elastic. Their outer walls must be 'hung'. Only a sheet material that is strong in tension will serve. So 'bouncy' buildings are covered in an 'architecture' of glass and steel. From this descends poor sound absorption and noisy streets. Pillars use little steel, cheaper shuttering and reduce the steel in floors by the cube root. It was economical to split a big column into two and puncture the floor between them for vertical services. Short spans permit a flat-ceilinged slab- the cheapest floor to cast in wet concrete. Service pipes and ducts could run tight up against its smooth ceiling. This saved height and meant we could insert an extra floor of usable accommodation.



To persuade my structural consultant I drew him my little history of the Death and Re-birth of the column (Lecture One page nine). It helped him accept that the centre-lines of the building's grid, traditionally located on the structural pillars, should now be inscribed onto the columns of the Hypostyle of Infinity, whether actually 'enfleshed' or not. Both he and I knew that this represented some sort of 'loss of status' for his discipline. But he could also see that an Architecture of my sort, whose prime discipline was humanistic, needed the better Engineers - to solve the tricky little structural problems it created!

My U.S. Engineering Consultants had now helped JOA establish the material bases for our Architecture.

'Firmness' was assured.

I have already described how Duncan Hall was space-planned by inscribing the Fluvial narrative of Somatic Time into the Hypostylar Forest of Infinity. One does not need an Architect to extend the outline of a plan upwards so that it becomes a walled enclosure. Householders, builders and land agents do it all the time. It is when a 'look' to this box is needed (if it ever is) that one turns to someone 'artistic' who can 'draw a sketch'. The 21C Architect has lost the confidence to perform this service for his Clients. He prefers to believe that a 'look', as such, is a superfluity to 'what really matters'. When pressed, he can only offer 'Deconstructed' 'diagonals of denial', 'pixel blurs' and Burkean blobs. He positively erases the 'look'.

I had my own intuitions about how this problem could be solved. One of them was that they focussed down on what one might call 'the problem of the Entablature'. But, even though I 'knew' this problem, I did not yet know, as was proved to me by the fiasco of the Judge interior, how to solve it.

I had also got to know, by this time, the leading Architects of my generation. JOA had exhibited in Venice with James Stirling and Foster, Rogers, Hopkins and Grimshaw. Stirling had also been 'High Tech'. One could hardly be British and not be. But he had progressed beyond its 'boy's toys' enthusiasms. The others never did.

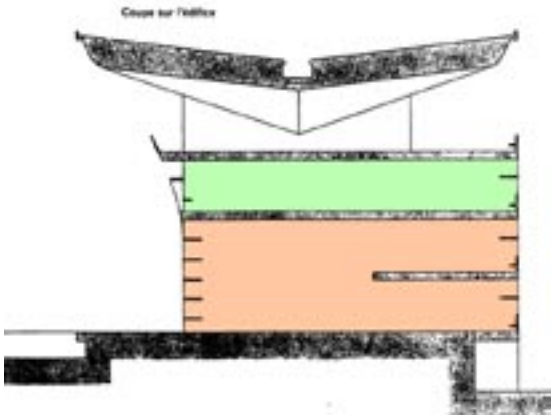
HIS UNTIMELY DEATH REMOVED THE ONLY ARCHITECT TO WHOM ONE COULD GIVE RESPECT AND THE GLIMMER OF AN INTEREST.

I had listened to a tape-recording of Eisenmann's gastric rumblings as they accompanied his Biennale exhibit. I had learned, first-hand, of Gehry's enthusiasm for ice hockey.

Lunching in their company, at Phyllis Lambert's invitation, I found that the only item off the menu was Architecture.

It was something one 'did' - a sore, an itch to be secretly scratched. Like Fine Art, it was an urge to be satisfied in be-galleried seclusion. The Company confirmed something I remember James Stirling telling me when he was my (strikingly inarticulate) tutor, back in 1957. This was never to think 'theoretically' about architecture - "it would ruin one's ability to do it" .

Another sketch, drawn to explain my 'architecture' to Professor Keith Cooper revealed, as everyone later realised, what came to be called an "occluded temple". This was no mere pitched roof of pink tiles, as was prescribed for the Campus. This was the Entablature, as a Raft, landing with its 'cargo' on a 'grove' of the primordial Forest of Infinity. The actual building (which was the Universiity's interest), merely nestled under it in a pleasantly relaxed manner. But how was one to pay for such a gigantic structure?



Corbusier built exactly this for the Palais de Justice at Chandigarh. A huge flying roof "addressed the horizons", as was his wont. Its 'aetos', the peak of the pedimental triangle, was inverted, showing that it carried no 'cargo'. A double volume Court space (coloured buff) sheltered below it.

As with the rest of Chandigarh's 'Capitol', the Palais de Justice is a climatological catastrophe. It is now surrounded with a shantytown of small steel and wooden arcades under which the Clients and the Offiers of the Courts shelter from the blistering sun. Indians have melanin in their skin to prevent it burning, not to screen them from over-heating. Corbusier knew this perfectly well, but refused to invent a Modern Architecture which was capable of functioning, climatically, like that already built by the culturally symbiotic Raj during the preceding centuries. The huge arches 'supporting' his 'flying wing' entablature should have been an arcade at ground level. The great space under them, at roof level, should have been the sheltered, shady,'internal street' that one finds in every Raj Courthouse.

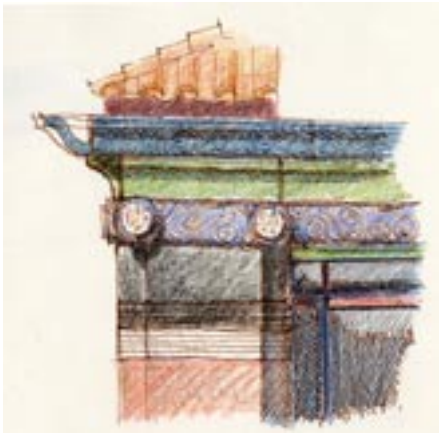
My model was, instead, theatrical interiors such as this one of steel and glass, staircased by the contractor Roussell, of the Grand Magasin Dufayel - a late-19C shopping-machine in Paris. This was the architecture that Modernism rejected.- fluid, flexible (even technically heroic), but coated in a Belle Epoque Deco-Porno of iconically sterile Naturalism. The Art Deco - Moderne that followed promised more - but failed to perform. What both lacked was an iconology that was 'tougher', even, than that of material and mechanical engineering. What could that be but the 'steel' of a performative conceptuality.

When I looked further afield for precedents other than my fin-de-siecle generation already slipping into the over-rhetorical suicide of Deconstruction, I found, as usual, Corbusier. As if to justify the proposition of Levi-Strauss that narratives needed only their principal mythic components to be recognised as such, Corbusier used on the Palais de Justice at Chandigarh, Major Order Coloumns for a Portico, an Arcade the entire length of a building and a huge, all-encompassing Entablature.

Only, as was also his wont, Corbusier refused to deploy these vastly expensive elements in any way that might be physically useful to Humans. Corbusier preferred to show his genius by patently demonstrating that these Architectural instruments were nothing but "plastic events'. They were 'Fine Art' objects for which only his his enomous stature, as the greatest Modern Architect of the 20C, had obliged the Government of India to pay. Covered with the begriming black algae that live on the alkali in cement, they served the newly enfranchised citizens of India's Punjab as portentous reminders of an European Architecture, a 'Western' lifespace-design technique, that had not yet been decrypted to the point of solving a few 'real' problems.

There was nothing to do but hit the 'problem of the Entablature' head-on and try, once gain, to discover how and why Architecture ferried this 'cargo' on a 'raft' . What was this cargo - especially for us today, who inherited a hundred years of its prohibition? Why was this all so forbidden? While this would break more taboos than most 20C Architects knew existed, what better place to try than 'can-do' Houston, Texas - the place where, as they jokingly said, you got things right - because the next stop was Mexico.

Perhaps the biggest mistake made by 20C Architecture was its turn, to Engineering and its rejection of Art. I have already argued that this was no revolution, but only extended the dislike of obscurity canonised by the Illuminismo, back in the early 18C. I have shown how the equally early 20C generation of Aby Warburg set Art on its properly Modern course by proposing that it found its practice upon a coherence of sense mediated by narrative. I knew the 'sense' of the canonic plan that mediated the temporal phenomenologies of Infinitude and Living. I knew, from studying the theory of Vedic Architecture, the canonic phenomenology of the Time of Inception. I knew that the 'arrival' of the Raft, bearing its germinal elements, was the event that triggered the performance of this ritual in the name of Architecture. But I needed to build it (for that is the only way for an Architect to 'understand' something), from its beginning until its end in the forbidden media of giant graphics and polychrome sculptures like that of Lichtenstein in Barcelona.

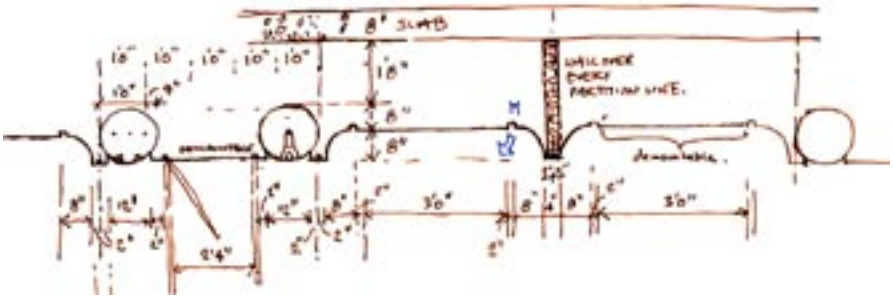


The 'Entablature' on the outside, complete with its 'canonic beams', 'artificial earth', cyma-recta 'horizon', and cargo-pyre of earthy 'waves'.

The USA, and Rice, gave me a sympathetic context for my endeavour. This is because there is, in the building industry of the USA, a quality that is abhorrent to the English. There is no cult of 'natural materials' whose purpose is designed to disguise and obscure the fact that culture is an linguistic artifice created by Man. I found therefore, an appetite, which struck me as entirely reasonable, for an Architecture that performed the task of grounding a culture upon a secure foundation of linguistic invention. Yet what is invention, when raised to its most textual level, but 'theory'. I therefore found myself, in Houston, amongst 'natives' who expected me, if not to justify, then at least to explain, my actions in a manner that, whatever its lack of clarity might be, indeed could only be, called "theoretical".

One of my sketches showing a pair of the 'canonic beams' for a raft that 'steadies' the deck of an internal bridge

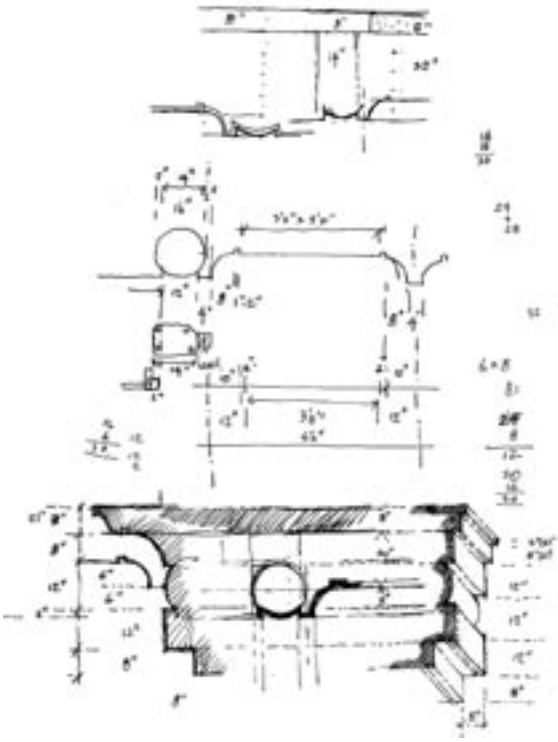
The compulsion to 'expose structure' is a paranoia born of the fear of exposing the Cargo of the Entablature. To reduce the Entablature to a mere grid of beams, as did the 18C, and again the 20C, is to deny its function. The Entablature is not formed merely to raise an over-elaborated structure up to the level of a Work of Art. The 'trabica' exists, like all rafts, to carry cargo. It is manifested, even if only as an incised decorum, to publish that the institution that shelters under its 'roofing' also supports (as Banham knew), this burden of 'the Cargo'.



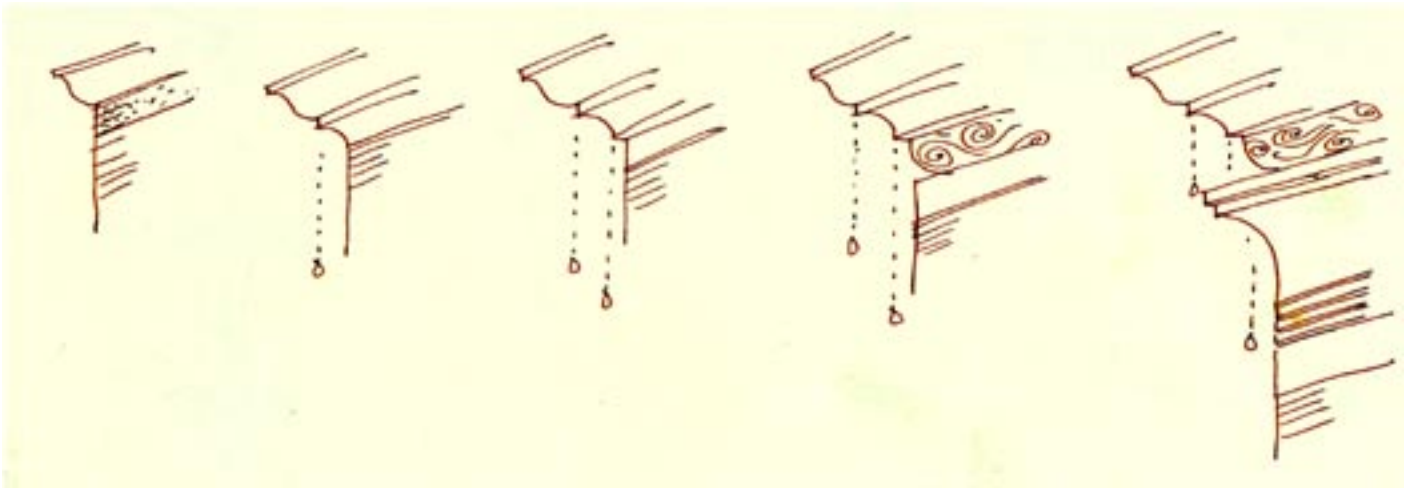
My sketches for the fibrous plaster ceiling of the offices of the Dean of Engineering show the Canonic Beams merely appearing as rounded bellies. The green 'wings' of the Artificial Earth have 'slipped down' to nearly obscure them. The ceilings of the coffers were access hatches. The dimensioning was simple, but had to be exact.

Being, in its pure and original state, is not really a raft of logs but an armature of power, the canonic beams have no 'material' body. If they are any real thing then they are light, fire and energy. So the problem for my Architecture was never how to coerce some lengths of wood, concrete or steel into the form of a cage of cylinders. It was how to bring the 'concept', of a 'cage of light' into Being. It was an exercise in epiphanic engineering.

In the end it proved surprisingly easy. The canonic beams simply 'pass through' the fleshy (and necessarily so) body of the building. It was sufficient for them to periodically appear and disappear for them to be 'present' in the space and body of the lifespace. The tool that was indispensible to this 'epiphanic functioning' was the Module. The 'cage of power' had to be dimensionally located with an absolute regularity. If this 'formal regularity' was not achieved then the trabica could not come into being as that armature of Fire, Light and Energy which so 'steadied' the rhetoric of 'Architecture' that it proved capable of moving up to the final level of 'enfleshment' at whch picture-planes could be conceptually 'flown'. For it was only at the level of the 'picture plane' that the Cargo of the entablature could be explicated to the interior and only at the level of roof-top sculpture that such an explication of Cargo could be demonstrated to the exterior.

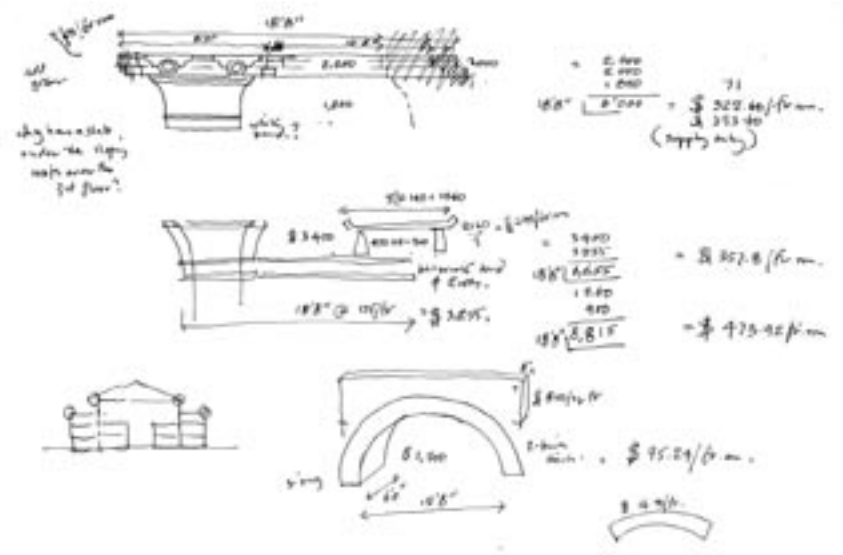


Some sketches establishing the edge-profiles of an internal floor. the canonic beams, buried in the 'fleshy corpus' of a building, show a mere quarter-circle at the edges and ceilings.

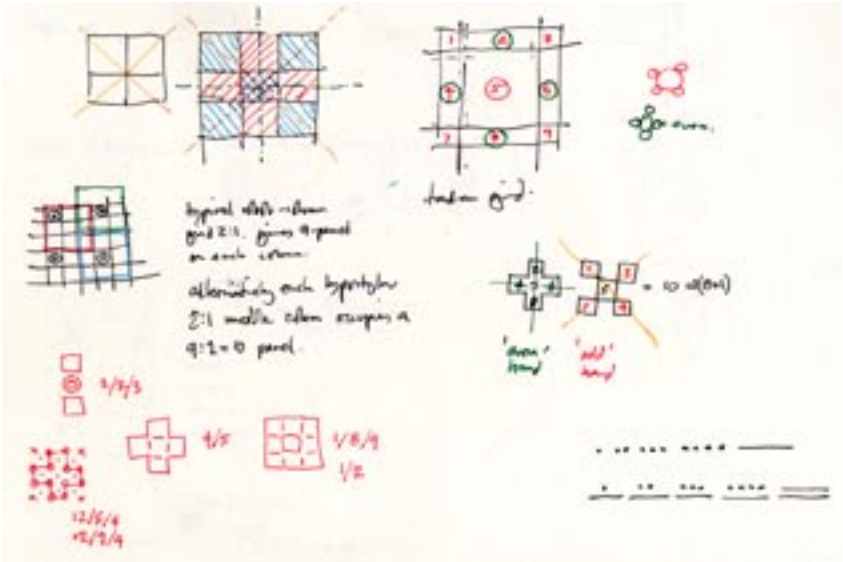


Stages in the elaboration of the 6th Order Entablature - from its fullest elaboration to the right to its reduction to a mere cyma-recta moulding which would serve also as a gutter. Interestiingly, an examination of Venetian Houses showed that most of them were 'corniced' with a single stone gutter. Venice does not derive her charm from her Architecture, but from the sunlit reflections of her bulging plaster walls. Venice, if built today, would be a barracks.

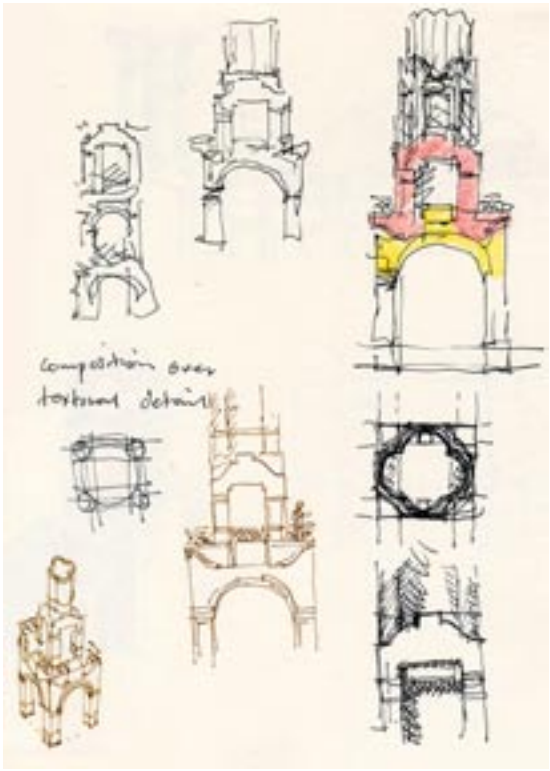
George Hersey, in 'Pythagorean Palaces' describes the germ of Architecture as the "Cubic Adam". But within the cube, as he also describes Serlio proposing, is the cylinder. I decrypt this as the Canonic Beam of conceptual 'steel' that cores the Modular armature of Architecture. Beams and columns should be materially hollowed-out so as to be filled with the stronger metal of mentality.



Dimensioning the Entablature on the exterior at the points at which the modular discipline was most critical as well as most expensive. The small section is 'ringed' at these critical points.



The beat of the 'proton chronon' that is the measure of the Time that grounds Architecture in the security of Negation. After that this anything is possible. Games can be played whose rules are either obscure, banal, or both. What matters is that the rigorous modularity of the 'carrier wave' is broadcast. When this is strongly received, throughout the visually impenetrable mass of the building, the devation to the modularity that represents a sensible communication can be read through the contingent 'noise. At this point the fat lady starts to sing.



Explorations of the progressive 'hollowing-out' of the 6th Order column so that it makes a transition from Serving Order to Walk-in(g) Order. What is this but the confirmation of a humanly 'functional' Architecture in which one's own, physical, body displaces cold, 'objective' stone and steel, to step into the locus of Beam-Being power? What is this but 'Being' upon a (small) theatre of reification in which a human takes physical possession of the 'idea' of his lifespace?

I found myself in a situation where I could get on with reifying a structure of 'hollow columns and hollow beams that did not merely support the physicality of a building but were on their way to supporting something of far greater novelty for the 20C, a tabooed 'urbane' lifespace for beings who had evolved to encompass language and, beyond that, ideas. Moreover here, in Rice's Engineering Faculty, it seemed to be patently accepted that material culture was a construct mediated by a fabric of invention founded on symbolic structures which owed more to reason than tradition.

I nominated the agents of this cubic matrix as "beam and column" because this is how they are customarily conceived. If, however, they were realised as balks of wood and concrete they would cease to be 'rafts' and 'trees'. They had to be reified as present conceptually and absent materially. I had proved at Wadhurst that one of the keys to this 'epiphanic engineering' was a rigorous Modularity.

On my return to London from the Canada that had decided me on Architecture, I showed Michael Pattrick, the Secretary of the AA School, my design for a restaurant titled the 'Soucoupe volante'. Being both a flying saucer, 'French', and a temple to food combined my understanding, at the age of 21, that Modern Architecture was both a foreign import, technogenic, and highly 'cooked'. He did not approve and indicated that I might return when I had become more civilised. He was right, of course. But the civility that I sought could never generate in the aniconic desert built in the name of the Welfare State espoused by his post-war generation. For that was the very ethic against which I had already rebelled in the USA. I eventually acquiesced, after many failed revolts, to the rule of a cubic urbanity - a lesson yet to be learned by the happy haptics of Deconstruction. But this did not mean espousing the imaginative erasure that was the passport to his state of late 20C Welfare. I knew that 'something more' was needed than the slab-sided boxes I had already seen rising from the North America of the early '50's.

My first two large buildings, at Poyle and Kensal Road, had been rigorously modular. But this was only skin-deep. Internally they were just bags of rentable space. Modularity may be native to some cultures. But I doubt it. The payoff is not a merely irksome orderliness, but something requiring an iconically literate culture. No one could accuse Britain, or most late-20C North European cultures, of iconic literacy. None was observable in fit-outs inside these 'starter-units.

I only 'cashed-in' the 'payoff' myself, in the cool Autumn sunshine of 1985, when leaning against a warm 'Blitzcrete' column of the Rausing Villa at Wadhurst. I was tired, but happy to have at last come to an end of the enormous effort of completing what was, both externally, internally and on the floor, walls and ceiling, my first altogether modularised building. Few things in building are harder to construct than an object, some 35M x 35M whose finished surfaces never depart more than 2 mm from a three-dimensional module.

I knew all of the layers of diverse materials (many of them far from 'noble'), that had gone to make up the object on which I stood. Yet, with my eyes half closed in reverie, I imagined the house to be a solid which rang like a bell when struck by a hammer. Its polychromy, its polytechny, had fused into a single casting whose limbs sang with a sonorous, chordic harmony. Beyond even this, however, there grew within me a stong desire to take advantage of a 'freedom', like a door that had been opened by the music of this 'bell'. I conceived that it would be both possible, desirable and even properly imperative to decorate the surfaces framed-out by the giant beams and columns of this highly disciplined modularity. Each panel, I felt, could be brought to the point of supporting a 'picture', a 'view' - some sort of iconocryptic inscription.

I had discovered the peculiar effect of a trabeated architecture which had travelled beyond, far beyond, the infantile technicities of an 18C 'truth to structure' and 'truth to materials'. Trabeation, a rigorous modularity and 'photolithic' materials had created an alchemy which, like the homeostatic beating of the visceral supports of the body, cleared a space in the contingent which effortlessly supported the fragile operations of the mind.

The music of the bell of architecture was thought itself.

Conversely, what could one think of a medium which imposed a canonic and precise discipline upon itself yet failed to take into its hand the key that this provided to the realm of ideas?

What more certain effect could this have than to train a generation who would hold their man-made lifespace in contempt and then go on to extend that lack of care to that Established authority under whose rule they had come to live in a subhuman illiteracy?

The 'honorific entrance', on Axis No. 1 is framed by Duncan Hall's only portico which 'unveils' Serlio's primordially cylindrical column-bodies. The outer capitals are disengaged, appearing 'monumental' in their 'domestic' redundancy, to carry the 'Raft of the Advent' with, heaped upon its entabled 'fereculum' a cargo-pyre' of 'red (Roman tile) waves. This 'portico' adds to its 'public aspect' by sporting two levels of open balcony. None of this compositioinal rhetoric is allowed to interrupt, as Cram often does, the physical continuity of the cross-campus Arcade.

The cylindrical columns of the main portico, seen through the evergreen forest of sub-tropical Live Oaks, reveals the layered brick of Duncan like some timeless 'ruin'. Unafraid of that modernist paranoia which displaces the proper Rites of Entry to some mere 'aperture' I fixed a 'double-volume' doorway under a double-volume 'Balcony of Apperances'. Lacking the Office of the Dean of Enginnering, who preferred to locate at an arcaded cross-roads on the less formal end of Duncan, I placed meeting Room No 1. in the place of the bedroom of Louis XIV at Versailles, and where the Queen stood when opening the Judge. Its windows do not open, as do not any of these late 20C Houstonian buildings. But that is a frivolous reason for denying a building its proper iconography. The remainder of the Narrative of Somatic Time, from its sourcing at their top, to its dissipation into Okeanos, is unrolled, like banners of glazed blue and white brick, up and down the giant columns

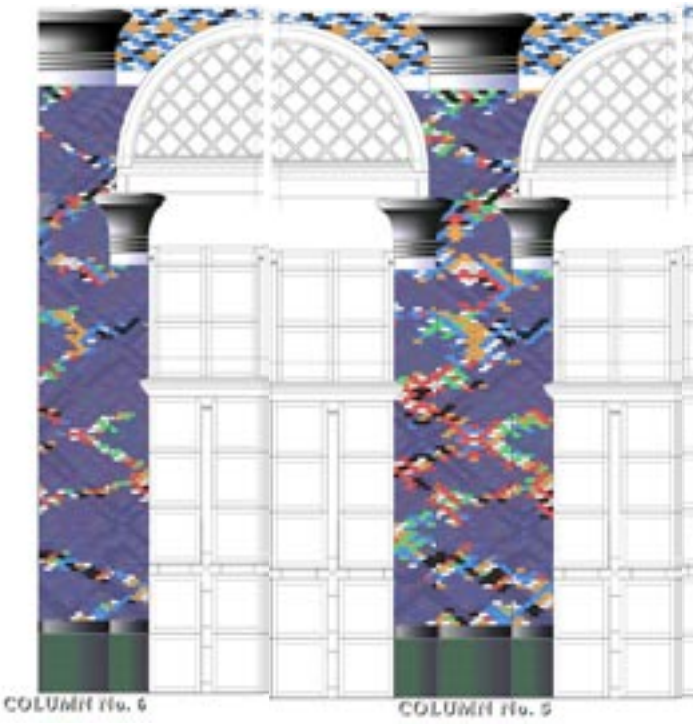
What could be the reason for this denial of the lifespace-design medium which had been used by every major culture, since its invention 9,000 years ago, except a thorough-going paranoia concerning the public culture of its time, the late 20C? How could one begin to combat this deep-rooted fear of ideas in the very form of that which marks us as human: namely symbols? How was one to explore ways of repairing what was, by any account, a catastrophic failure of the 20C to invent an humane architecture to mediate its necessarily huge lifespace-design ambitions?

Houston, with its air-ambulances ferrying auto-accident victims to the flat roofs of one of the biggest hospital-complexes on the globe, might be thought a strange place to start. But why not? The erasure of public space, and the defacing of the architecture which mediated its urbane body, was global. The eye of the hurricane is the quietest part. The 'valley' of Rice, 'parklanded' within its Beaux-Arts campus, was, if not a remote Shangri-La, then an icon forceful enough to create a space for the mind in the midst of the machine-city of Automobilia. Rice, by proving the power of the Architectural medium, and keeping to it with a very fair discipline for almost a century, was exactly the right place for me to be.

The first 'inscribed idea' which I allowed the brick body of Duncan Hall to bear, was the icon of the 'Republic of the Valley' or that of the body of the Campus itself. This was stretched, like an Aegis, upon the most honorific of its parts - the entrance on 'Axis No. 1' accessed from the lateral collonnade of Lovett Hall (as shown in Lecture 27, page 6). The portico rehearsed the 'advent' of the 'Arrow of Time' as it flowed from the 'catastrophic' Time of Inception marked by the 'Opening of the Mountain' upon the arrival of the 'Raft' upon the 'Forest of Eternity.'

The Tumbling Stream and Confluence fall to the Lazy River over the Balcony of Appearances of Meeting Room 1.

The Balcony of Appearances that is Meeting room No 1 is over the Arched Bridge. Its Hypostylar Stumps carry the Quadrations of the Delta above the Serpentine 'Kymata' of Infinitude and Oceanic Dissipation.

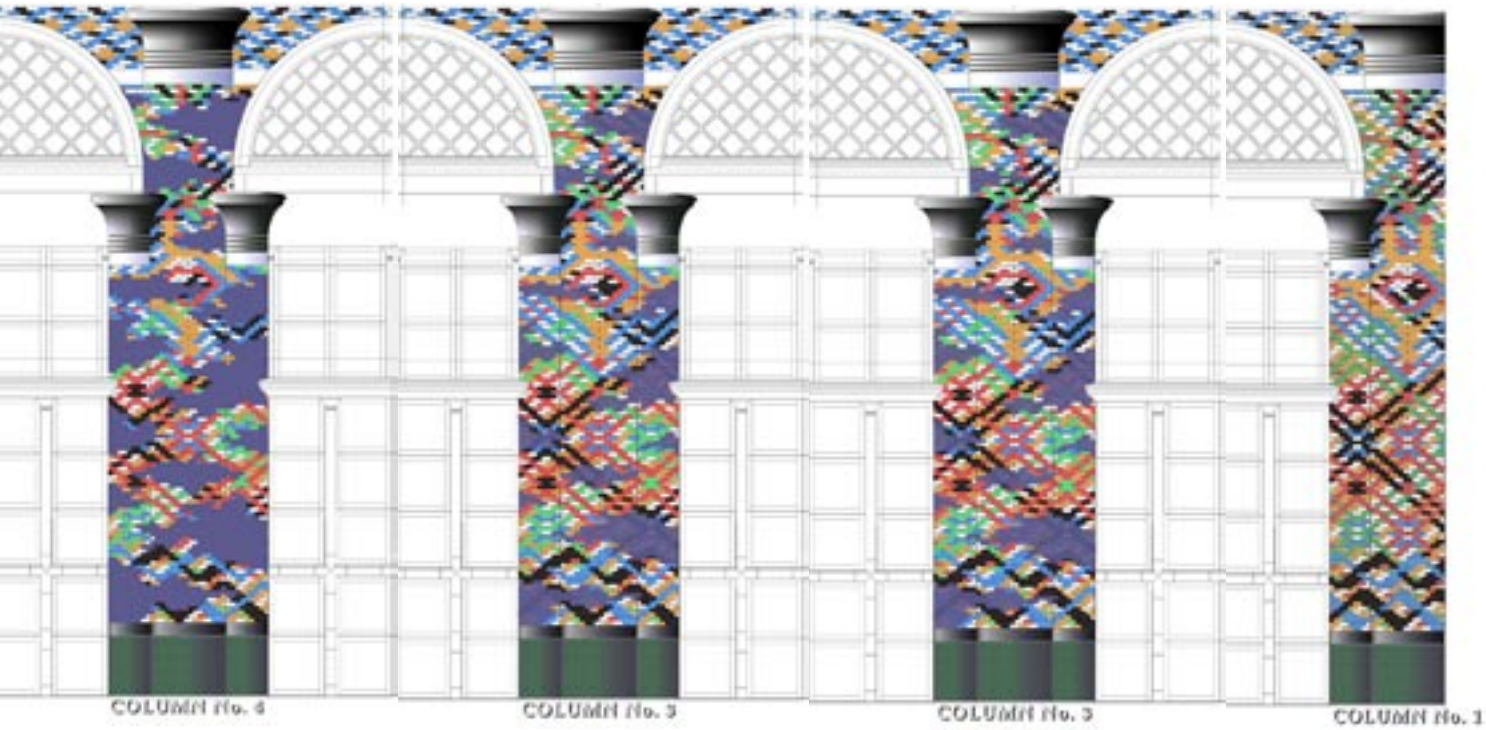


The six columns of the Rotunda of my building in Den Haag, the Netherlands, are inscribed with the 'vertical' story of the Ontogenic/Phylogenetic phenomenology of Inception that I also call the "Time of Inception". The figures used for this,

Beginning from the top of the rounded Portico-column (Seen to the Left), the Republic of the Valley is inscribed by the 'Tumbling Stream' that falls into the spiralling 'Confluence'. It continues as the meandering body of the 'River', with, to one side, the 'Displaced Crossing'. The figures of the City, the Balcony of Appearances and the Triple-Arched Bridge are not inscribed graphically because they are reified 'as built'. The Fluvial narration continues on the round columns of the Arcade with a grid, set on the diagonal, inscribing the hypostylar Field of Reeds penetrated by the tridentine diagonals of the Delta. The column bases are 'grounded' in the undulating 'kyma' -the infinity-sign for the 'Serpentine Ocean'.

Turning to the next page- one may note a congruence with the Ontogenic/Phylogenetic narration of the Time of Inception inscribed on the columns of the Den Haag rotonda. The narrative is again 'grounded' in the Ocean. The Earth is represented by an hypostylar grid laced with black, red, blue and green. Air, in Den Haag, is inscribed by the symbol of the 'subtle body' - eye, mouth and hand. In Duncan Hall it is enfleshed literally by the 'speech', in Meeting Room No. 1. Fire in Den Haag is the whirling wheel of sparks - formally congruent to the spiral of the 'Confluence'-figure. Both columns are crowned by the smooth black body of 'Thought'.

The Rice portico, situated in a park, has no need for the high-temperature graphics of Den Haag - which must compete with the visual 'noise' of shop-signs. But even Den Haag was 'cooled'. For as the columns left the darkness of the shadowed North side and came around into the sunlight of a Southern exposure the colour-glazed bricks were invaded, like grey clouds of amnesia, by grey 'engineerings' from Britain..



when abstracted enough to be be inscribed into a medium with such a 'big pixel' as brickwork, become congruent with those used to inscribe the horizontal narrative of Somatic Time. A facade, when iconically engineered by a syntax of 20C abstraction, invokes multiple layers of meaning. Abstraction, to the iconically literate, provides a richer diet for the mind. I told another 'story', outlined below, by 'clouding' the 'fire' of the column from No. 1 to 6.

The columns of the 'Rotonda', of the retail development by MAB in Den Haag, are 'emplotted' with a narrative that describes a temporal phenomenology of inception. In keeping with a tendency towards narration I also proposed, following the iconography of the golden rose in the dark blue coffer, that the imagination worked better in darkness.So I progressively erased the column-inscriptions, invading glazed Dutch bricks with dusty blue 'engineerings' from England, as the columns came round from the shadowy North to the sunlit South.

The Arcade alternates round and square columns. This makes diagonal enfilades on a square, hypostylar, grid.

The arcade reduces to one storey when it passes under the out-jutting wings of the Greek Cross' plan.

The double-height Arcade of the Southern Portico, in front of the main door, seen from the Eastern side.The 4-colour St. Joe's bricks and creasing tiles represent the sedimentary 'Submarine Mountain' which entombed the Genius Loci prior to its release by the Architecture of the Ontogenic narrative at the Time of Inception.

The plans of Duncan Hall shown on pages 27-14 to 27-15 describe how it is composed from two pavilions having bi-axial symmetry. Two of these 'wings', or arms, touch and make the nave-like internal street. The five remaining arms are divided at their ends into two pavilions framing three balconies to a main central pavilion. These fractured ends disguise the bulk of this new, air-conditioned deep-plan building-type and bring it into scale with the buildings erected in the first half of the 20C.

A view down the Southern (main entrance) portico, looking from the East. Universities fear putting plants into planters. These huge black 'vases' are even larger than those in Cambridge, England. They are supplied with their own, internal, drainage, but have been capped off and left botanically barren. Note the wider windows, & projecting spandrels, to the upper floor.

The other extremity of the 300'0" (100M) - long Arcade faces West - towards the main body of the Campus buildings. The Arcade vaulting is plastered so as to look 'internal', and therefore welcoming. It also gives a white surface for the decoration that will come when its conceptual function is appreciated and understood.The curving edge of the 'ground-cover' discs can be seen.

The southern portico to Duncan Hall that is illustrated above, presents a double-volume space, denoted the Meeting Room No. 1. It occupies the honorific posisiton of a Balcony of Appearances located directly over the Main Door.This room is framed by the round columns on the Ground Floor. These columns also frame the three arches needed to signify the tridentine spatial flow that debouches from them through the Delta, into the Ocean of the Campus-City. The whole, honorific composition is further reinforced by being inscribed with some of the Event Horizons of the Republic of the Valley, whose spatial narrative will be found inside the building.

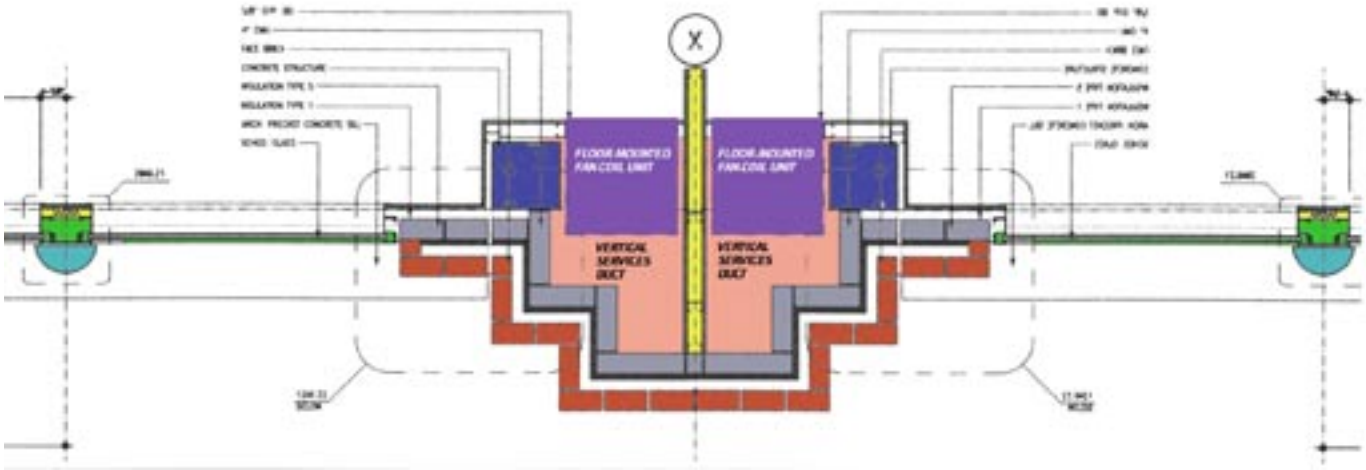
34% of the ground level footprint of Duncan Hall is a sheltered 'walker's world'.

The highest ratio for any building on campus.

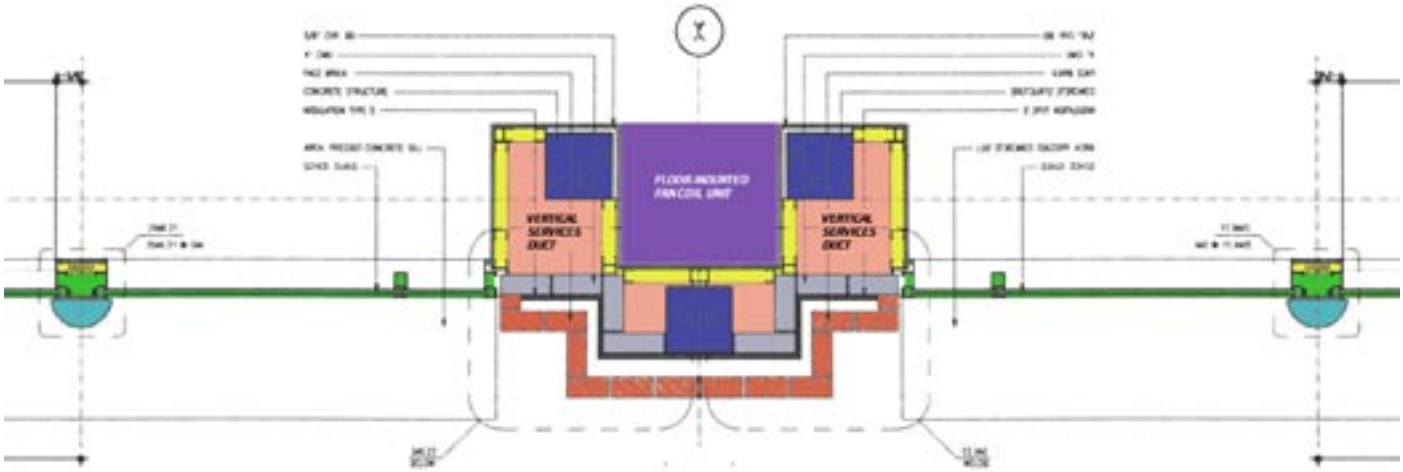
How could this have been added to the rooms required by the University and be delivered on-budget?

The answer is the 6th Order.

It was achieved by the 'Reconquest by the Architect's Pencil', as described back in Lecture One page 01-17, that brought-back the parts of the physical fabric of building which, according to Gregory Turner, had been lost by 'Architecture Autre' during the 20C. It was this, and this alone, that enabled Duncan Hall to provide such lavish public spaces and such a lavish public architecture, with its profusion of columns, entablatures, polychromy and, most especially, the 300'0" (100M) long double-height arcade. None of these were add-ons provided by indulgent benefactors. All were achieved within the original budget. Duncan Hall set a new standard for Rice's contemporary buildings, one that went far beyond anything previously achieved since the final collapse of urbane rchitecture after WWII.



The Serving Order version of the 6th Order Column has a ponderous proper name, as must be the case for any precise technique, but the material, and therefore the monetary reality is that it is nothing but a piece of brick and cinder-block wall with a few of those extra corners which come so easily to brick-layers. These few kinks turn a dumb wall into the prime of architectural elements, its 'sine qua non' - the Column of an Ordine. The 'kinked' brickwork here contains what the new building, the world over, contains - concrete antigravity props, air-tempering devices, other service pipes and wires, and some sheet-rock-clad metal studding. It is nothing 'material' that makes this Architecture lavish with its benefits. It is its formal discipline that couches its iconic fertility.



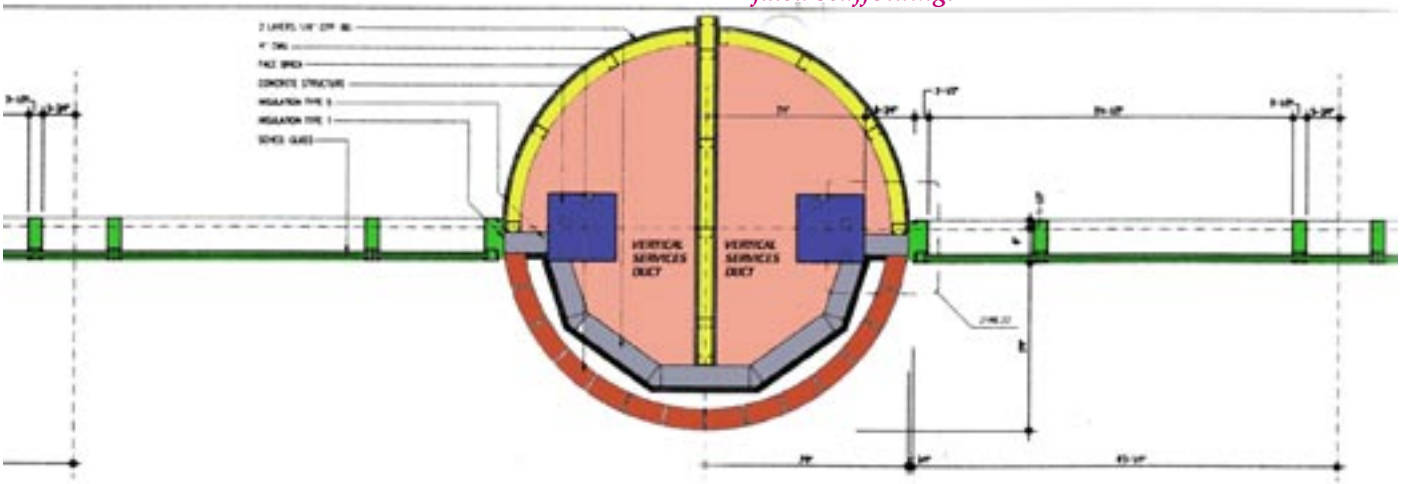
This variant of the 'square' column was used around the Auditorium. Two columns supported the long-span ceiling. The third supported the walling. The servant-space was dimensioned to house the larger air-tempering unit needed to serve the larger room. If this plan is compared to the drawing just above it will be seen to have been taken higher up the column, on the Second Floor, where the floor-slab has come forward to over-hang the one below. As a result the glass area of the window widened. This may be studied on the elevations on the previous page. A device like this makes the upper floor seem 'supported by the lower one. The second floor looks 'lighter' than those below it.

The few round columns relieve the disciplined flatness of brickwork.

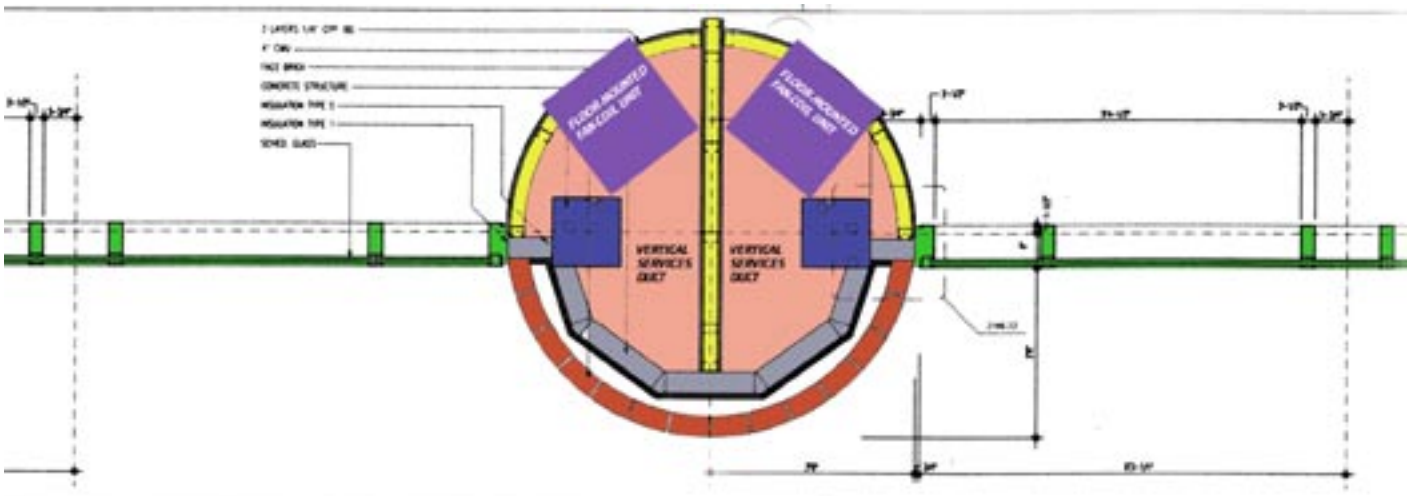
The Texan Contractor took the Serlian 'round' columns in his stride. He built both internal and external ones off moveable scaffolding - giving the lie to the London developers of the destructive 1980's and exposing their pre-fabricative strategy for what it was - a Thatcherite project to destroy the Building Unions.

No external wall is as cost-effective as beautiful brickwork.

The interior showing a metal frame for a half-round column being built in the foreground. Note the 'lazy-tongs' movable, one-man, scissor-lifts, on the Ground and Second floors, used to work this interior without fixed scaffolding.



Even the great round (1.8M. 6'0" diameter) columns of the arcade, Serlio's primordial cylinders, held no fear for their builders. Curved bricks can be made by many brickyards. The Judge Institute had specially-curved cinder-blocks for their Serving Order columns. In Texas the brick-layers just cut them and laid them to a decagon. These cinder-blocks exist only to support the vapour-barrier and the insulation and to offer their rough surfaces to Fitters working inside them, who must fix the vertical wires and pipes. So why not build crudely and materially inside the Order? What is more 'material' than Engineering. What more appropriate place for it than supporting a new Architecture whose very scale and corporality is positively enlarged by the electromechanical 'cargo' which it now supports?



The building technique to which I did have to pay respect was the walling in curved sheetrock (what we Brits call plasterboard). The curved column-surfaces were immaculately executed by being built, on site, on an armature of metal studding laid horizontally on the floor. Two sheets of (5mm) sheetrock were used along with proprietary aluminion trim that is now only manufacured for the giant sheetrock construction industry of the USA.

What owners pay for is usable floor-space. The 'more for less' economic logic of construction is

more space for less fabric.

Fabric is the cost. Space is the 'product'.

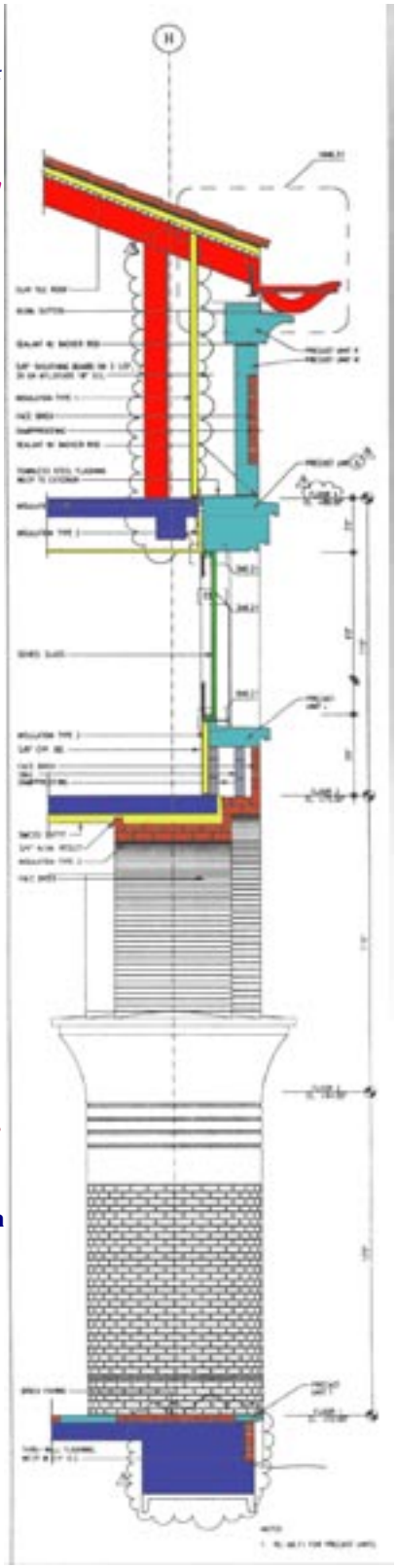
Why manufacture 'space' in a central factory and ship it to far distant sites - when the 'space', itself, is already there? The attraction is never economic. It is political. It removes 'workers' from a place where they can cause trouble by holding to ransom the completion of financially valuable 'space'. The way to cheaper floorspace is effective politics.

Making things with one's body, which includes the mind as well as the hands, is one of the most satisfying things a human being can do. Building something that one feels is going to improve one's public culture, gives pleasure to everyone, not excluding its builders. I have always found that building workers, on site, enjoy building something beautiful. JOA have never had a single strike on one of our projects. The most economical solution to the manufacture of rentable space is to build what the building workers feel will make their public life better.

Arriving late to a meeting of London Arts and Crafts Guild I beheld a vigorous picking of the scab on that old 18C Positivist wound: "should one exhibit a lintel in masonry?" These jaded conceptual infantilites fade when a spandrel is 'floated forth' (gravity-free), on the rounded 'canones' of a minor entablature. An august ACG figure, grey-pony-tailed above and grey flannel kilted below, argued, at length, that he wished "Only to be an Ordinary Architect". I could not resist rising in the hubbub to exclaim: "Sir, You ARE!".

Contrary to what Architects are told by Developer-Clients in Britain, the USA uses plenty of on-site workpeople, men as well as women. They are issued with a wealth of on-site machines as well as mechanised hand tools. To cap it all, they are rigorously unionised. The reason is that they have a dignity which makes them superior, even, to the professional Architects and the Engineers who ask them, fraternally, to do this or that. They are not 'fallen gentlemen', dressed, as were their British counterparts in the 1950's, in torn pin-stripe suits and broken black brogues. The US building worker is better described as a 'heroic handyman'. His ancestor is the Frontiersman who could turn his hand to shooting and butchering game, digging a well, ploughing and harvesting, building a cabin, and so on. The American building worker does, today, specialise. But his archetype, and not-so-distant reality, was capable in all the trades. This elevated pedigree places the American building worker on a higher mythopoetic plane than that of the mere immigrant townsmen who came after the 'Winning of the West' to bring all the ills of 'civilisation' in his train.

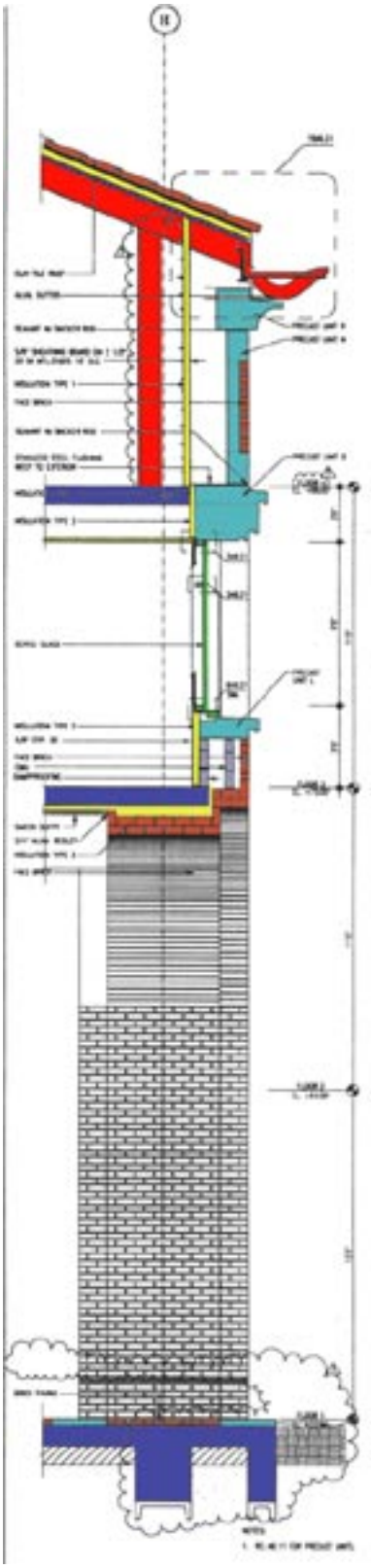
Europe can never 'import' this peculiarly 'American' status of the 'Heroic Handyman'. But why should we trouble, when we have the superior concept of the free, democratic, 'citizen' who builds the whole, civic, culture that he lives by? British developers mislead the Public, as well as Architects, when they pretend to import 'American Methods' while, in fact, importing building prefabrication as one of the weapons of Continental Europe's Class Wars.



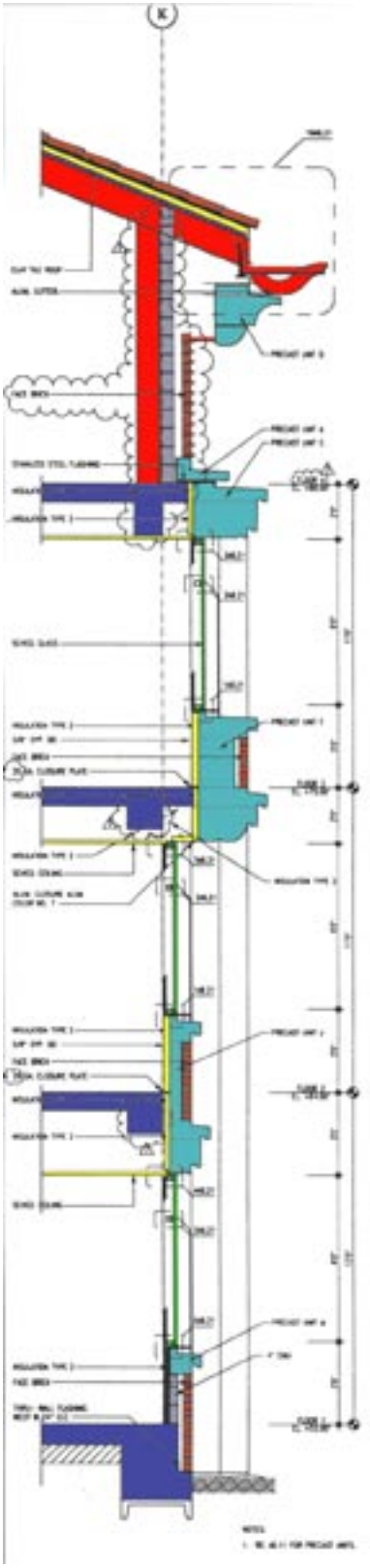
A 'section' cut through the crown of one of the arches of the Arcade. It shows how exacting were the dimensioning of the arch as it pressed up against the structural floor above. It is never easy to introduce a vaulted a ceiling into a modern building

Houston is not London's 'Home Counties'.

But the sequence of building operations that JOA had learned back at Poyle in 1973, and refined for 20 years of practice, stood us in good stead 4300 miles from home.



A modular, geometrical discipline, which makes the result look 'easy' is the hardest to design. To build it needs concentration and brains, fuelled by the love of beauty.



The three 'normal' storeys of accommodation with the Serving Entablature above. Note how the rising wall steps outwards. This leaves more public space on the ground and gives more private space up in the air.

First to build was the frame, then the big pieces of pre-cast, fixed by standing on the slab floors. Then the internal block skin, insulated and tarred. Then the windows and roof, and the building was enclosed and watertight before the external walls were completed. The steel roof rested, like the bungalow warehouses of my architectural youth, on a multi-story concrete base.

The big pieces of pre-cast concrete on my building (coloured pale blue on the Sections), might be considered a luxury - for the heaviest was 11 tons. These had to be fixed as soon as the frame was up. So the process of their casting and manufacturing had to start at the same time as the foundations were dug.

Simulating the effect, with water, of clear 'Sika' lacquer on dark grey concrete capitals that were jardinieres big enough for trees.

But without these big, sculptural, cast forms the simple brick planes of my columns would not have been able to rise to the dignity of an 'Order'. My roof-line would never have became an 'Intablatura', supported on 'Architectural Capitals'. The big aluminium gutter would have seemed grossly over-sized instead of becoming a cyma-recta cornice. In fact, with 20 cm of rain falling in half a day, Houston is one of the places where a gutter big enough to lie down in is not as outlandish as it sounds.

Without JOA's heroically-dimensioned 'photolithic concrete the 6th Order could never rise to its potential for 'street-facade Architecture -

-the sine-qua non of an effective urbanity.

AFTERWORD for the TWENTY-EIGHTH LECTURE: 'WRITING OUTSIDE'.

JOA began this project in 1992 with a staff of 22 qualified Architects. The process ended in 1995 with the opening of Rice's Duncan Hall. By this time JOA was, after the deliberate destruction wrought by the 'Fiat Nihil', down to five qualified Architects. But, at Rice, in far-away Texas, we had proved what our British Clients were not prepared to allow - that a 'New Order' was possible that was better than the five Canonic Orders so destructively defended by the Neo-Classical necrophiliacs of Britain.

Most big 'classical' buildings are a posh portico behind which one finds the usual squalid shambles of space-plumbing. The 6th Order penetrates the whole building like a magic solution. It raises everything up to the cognitive status of Architecture. It was how Duncan Hall delivered, on budget, 43% of its footprint as covered arcades - something that should be commonplace, but is not, in such a hot, wet, climate. It was why they were vaulted in curved plaster, ready to receive surface-scripting. It was why every 'sourcing' of the River of Somatic Time, and its tributaries, occurred in an external terrace flanked by fragrant plants in gigantic 'capital-planters'. These were twice the size of the ones that filled with coca-cola tins on the Judge. The Sixth Order is why every one of the hollow 'Service-Column' variants of the 6th Order bore small air-con units serving the individual rooms of the Faculty with an individually-controlled climate. The actual steel and concrete that served to hold-up the building, and steady it against all the other physical shocks to which it will be subject, was hidden. The Public take these things for granted. Yet it needed the best efforts of the best Houstonian Engineering Consultants Rice University could appoint to make all of this 'work'. Yet this 'working' is, after all, the Engineer's 'work'!

Engineering is not Architecture, in spite of the weak-minded theorists of the centuries since the 18th. Only a Profession that refused to understand its own Medium, as did the Architects of the West after WWII, would forward the Carnal in preference to the Cognitive (as did High Tech), for their Public Philosophy. Lecture 27 showed how to solve ALL of the mechanical problems, both novel and usual AND still enable the Sixth Order to 'talk'. It showed how it could be inscribed with ideas from, amongst others, Italy, Greece, Meso-America and India that were germane to Duncan Hall's identity. Ed Burris, Engineering Dean in 1996, idly murmured to me one day "John, what is a University?" Such questions are never asked in the Old World. What could they be but the places where EVERYTHING is brought together so as to flow out again to fertilise the World anew?

In 1995, though battered by the transition in our home market from the "Makers of silk purses out of sow's ears", to, like Byron, "Mad, bad and dangerous to know", we had, in Texas, finally completed JOA's 'Architectural Project'. It was, though we did not know it then, 'our finest hour'.