the fourth leaf.

The Great Escape

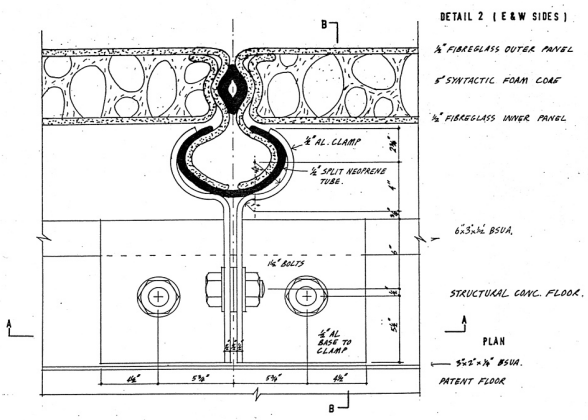
ON THE ENTRY OF THE STUDENT COHORT OF SEPTEMBER 1955 WE WERE TOLD THREE THINGS BY JOHN S. WALKDEN THE AVUNCULAR 'HEADMASTER' OF THE ROYAL CENTRAL LONDON POLYTECHNIC. IN 1992 THIS BECAME THE 'UNIVERSITY OF WESTMINSTER'.

The first was that "Architects lost their charisma when they abandoned the Classical Orders". The second was that "Architecture was no longer a literary medium". The third was: that, as an aside, "I believe that my son is likely to be picked for the British Olympic swimming team". These inscrutable rubrics were all that he ever told his new students. After this, he removed himself to the invisibility of the Administration.

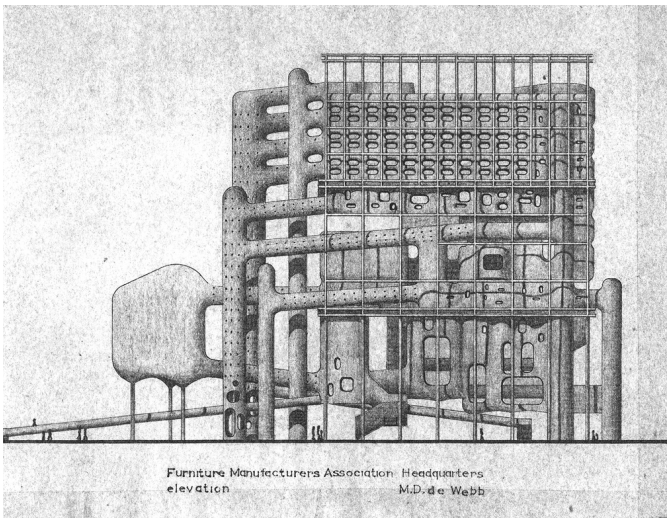
We novices had neither a sense of the term 'charisma' nor of the departed magic of the Classical Orders. We already knew that the Polytechnic was unique, even in the anti-literate 1950s, in having no entry-level book list at all. As to his son, it is clear, with hindsight, that Walkden was a disaffected Classicist who regarded the human athlete as a paradigm of the Hellenic ethos. He found himself teaching in a changed, post-war, world that was not to his taste. One never saw him after his oracular advice - unless one fell into some academic difficulty.

We students swam in an ethos in which the only sure flotation was to be obtained from such certainties as the bare physical dimensions of space-planning and the cheapest, "catalogue culture" construction for housing and schools.

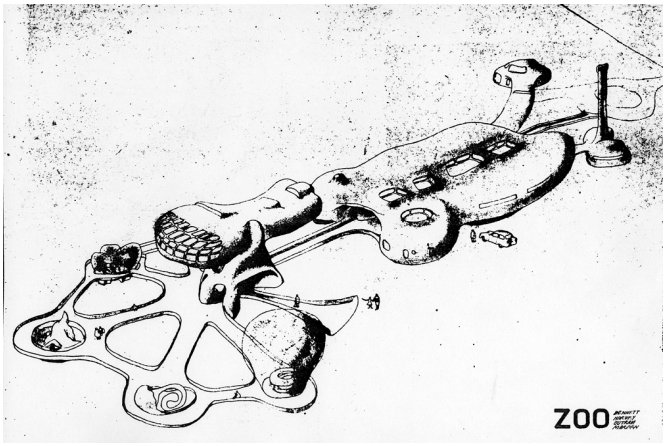
It must hardly be surprising that, denied the inspirations of both history and philosophy, we, the neophyte-technicians of the dissimulatory ethos of Welfare, should 'raise our game' by turning to mechanical engineering for interesting sorts of 'piping' and to bio-mechanics (of the D'Arcy Thompson sort) for more amusing (sexier) sorts of space-plumbing than the prefab boxes prescribed by our Tutors. There was a dim intuition of a 'vitality' that would later be termed "Vitalism", by the rare intellectuals, such as Robert Jeffrey, who studied the design of cities.



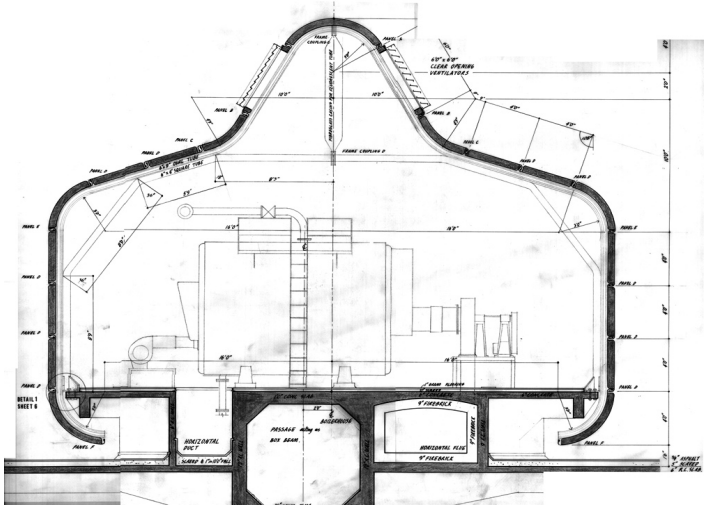
The novelties of my Boilerhouse, for the AA in 1958, were the syntactic foam- filled curved fibreglass panels sealed by the sort of huge neoprene gaskets canonised by Foster at the Sainsbury Centre 20 years later, in 1978 . I took them from Eero Saarinens 'blue-suit-style' GM Labs in the USA. I gave them a 'Brit (Pop) Blob' aesthetic that took another 40 years to 'mature' into 'Cool Britannia'- if that is the right verb for such haptic infantilities.



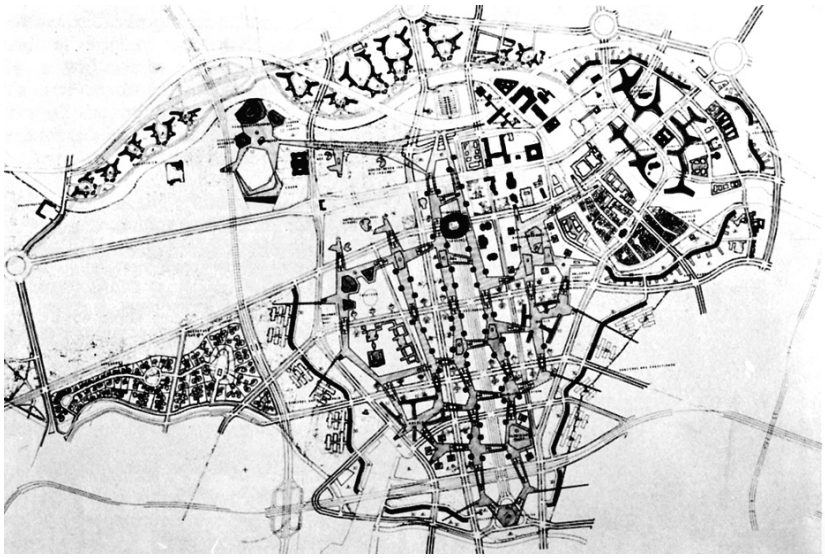
This design, created by Michael Webb in 1957, became a canonic image of the rebellion against the insipid (and illiterate) Meliorism of the Festival-Welfare styles. It registered our desire to assimilate the rejected culture of industry, the machine, engineering and making generally. Webb dissected the spaces of a building from its putative 'technical' support, a bony structural frame. The spaces, 'liberated' from orthogonal constraint, became pure, that is to say Functionalist, space-plumbing.



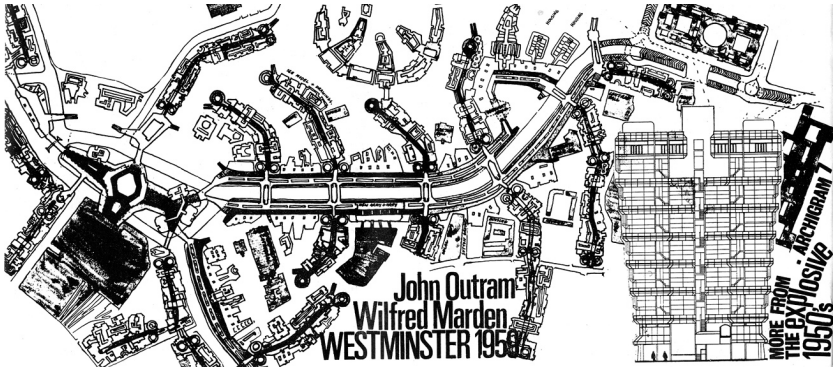
Design for a Zoo. 1957, by Bennetts, Harvey, Marden and Outram, shows the optically aggressive nose of a Boeing B50 above a sprayed concrete organism whose forms pursue a rigorously bionic pragmatism



Cross-section through my roof-top boiler-house, 1958. Peter Cook, who later led the Archigram group, wrote in AD51/12/1981, that this design was the "first time he had seen anything that would later be denoted 'High-Tech'."



The Smithson's 1958 Berlin City Planning competition-design aimed to alter the Hippodamian grid of a Central European State Capital into the 'romantic' chaos of an English industrial shambles. Post War 'reality' was 'going with the flow' of 'natural structures'.

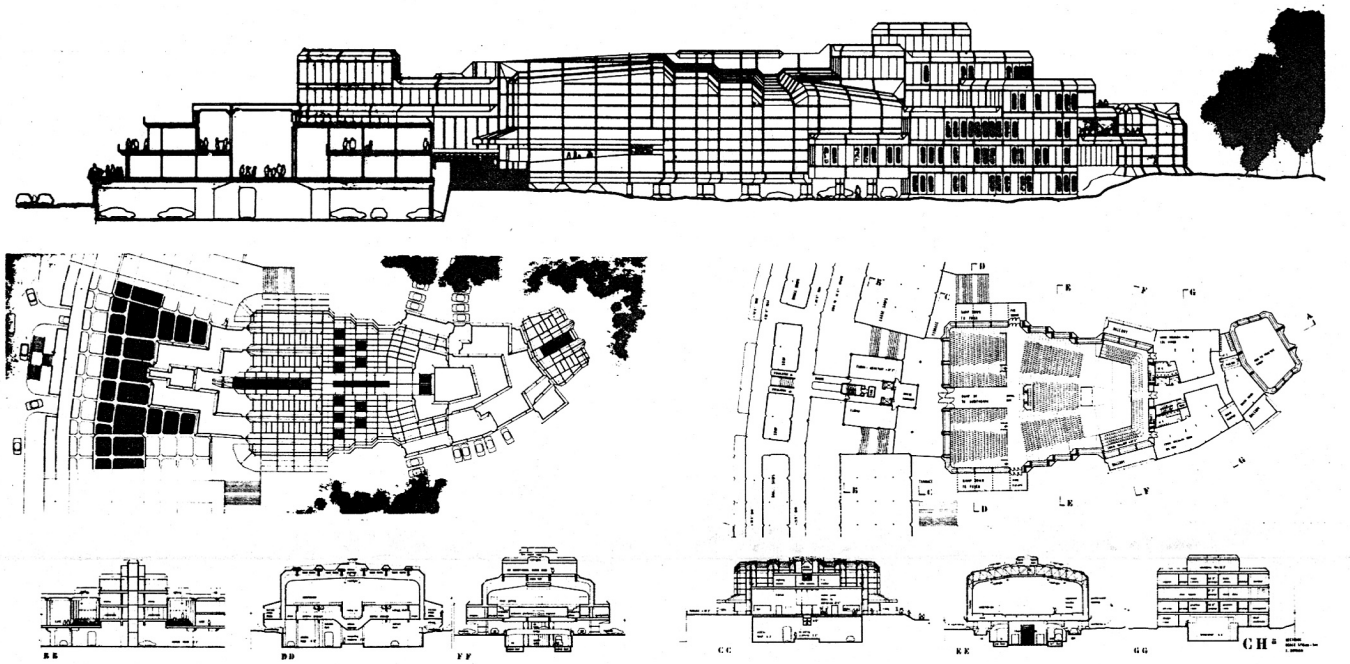


If the 'organic' lexicon of this 'vitalist-bionic 1959 design is deducted, its topology maps well onto Beaux-Arts axial symmetries.This 'Beaux-Arts' chromosome was to emerge, in my work, in the 1960s. Archigram went in reverse order. Like much of the 20C, it mistook styling for syntax. It was why Archigram never became Architecture.

Formal Composition was taught as a bundle of intuitive impulses rehearsed by two non-Architect, Fine Art, 'Professional Painters'. The Polytechnic's ambition was to show how to arrange the parts of a building by a purely 'abstract' order. The Public were to be denied any chance of 'recognising', that is to say 'naming', even such iconically primitive entities as Entrances and Roofs. This would (according to Reyner Banham), release Architecture from the 'literate' burden of its no-longer required "Cultural Load". The new buildings of the Welfare State could be 'Engineered' down to a level of cheapness and simplicity such that they could be enjoyed by its poorest and most illiterate users. It was, as it turned out, a technical, as well as a cultural, disaster.

However, the young architect of 1955 did learn how to compose in the manner of 20C abstraction, from Cubism to Dada. It is ironic, therefore, that this skill was not used to compose the ceiling, floor and wall decoration characteristic of all Architectures from their very beginning. That it was not so used was due to a) The fact, reported by John Harris in Lecture 3, that English Architecture has always avoided the cultivation of an internal decoration that accessed a metaphysical realm. b). The proud, as well as absolute, iconic illiteracy of our Professors.

It was a far more degraded design-culture pedagogy than even the entirely ignored Beaux Arts. The latter was held up as an example of the futility of composition abstracted from function. But at least a Beaux-Arts plan, however seemingly a mere pattern, implied both vertical extension into spatial volumes as well as some sense that they needed to be built rather than just 'grow naturally'.



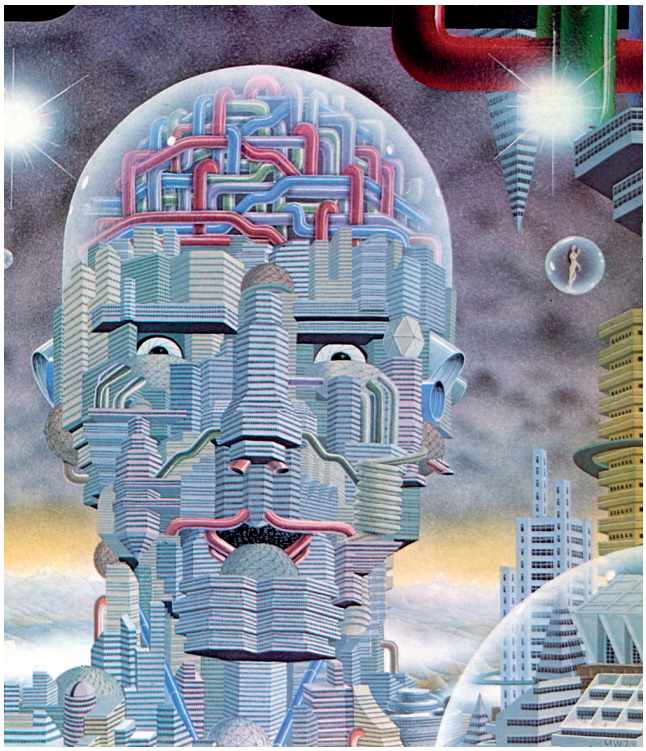
My 'plug-in' Concert Hall of 1958. The sections show a 'Beaux-Arts' compositional 'ordonnance' that was disguised, externally, by the vitalist gyrations of its plan and the 'as found' (cheese-grater) contra-formality of its elevations. In the end, even romantic chaos is revealed as just another human fiction to clothe the armature of the relentless reality of human habitation. And what an enervating fiction it is, in the end - that everything is a compulsively deterministic muddle. did a free, Modern, Architecture have to add-up to no more than this!

The attack upon the Post-WWII Architectural Establishment (her artist husband) was carried out with sound, fury and some effect within the small world of aesthetic politics.

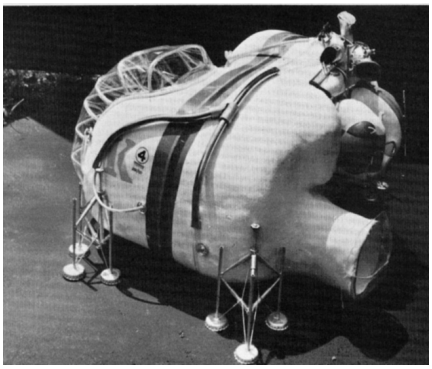
Its killer blow, delivered by Peter Smithson's course of lectures in 1958, was to reveal that Modern Architecture was more than the 'Big Three of Wright, Mies and Corbusier. It encompassed a great diversity of pre-war talents - none of whom had been British. Most of them, like the formally flaccid Gropius' more talented partner, Adler, and the compulsively mechanistic Hannes Meyer, or the industrial Architect, Albert Kahn, were either German or German-American.

These revelations, so damaging to the prevailing taboos on history and iconography exercised by the Welfare State Architects ruling the R.I.B.A at the time, led, in the mid-1950s, to an explosion of formal chaos out of which emerged the Archigram of the 1960s, a radically product-oriented lifespace-project in which nothing was permanent. No vestige of 'architectural culture' remained. None was either desired or understood. Every item was either rented for the moment (like a walking city) or bought across a counter (like a 'suitaloon' outdoor living-suit).

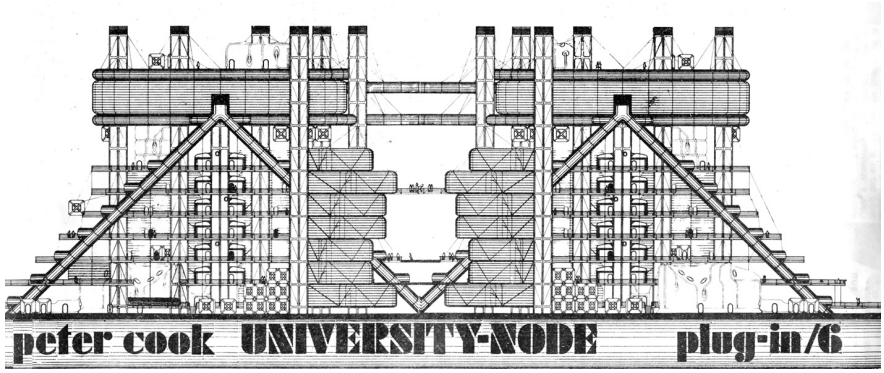
British Archigram was an even more extreme consumerisation of the lifespace than any yet either envisaged, or achieved, by the USA.



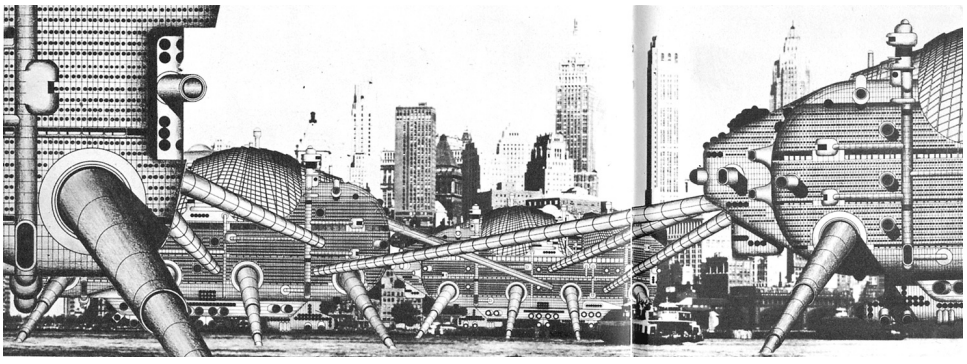
The 19-- Science Fiction drawing of Mike Wilkes elides Android and city via an industrial architecture of tubing as pursued by British High-tech. But it is the precise lack of any anthropo-morphic element, such as a columnar order, that is the missing link between mechanised 'work' and the architecture of a totalising urbanity.



David Green's 'fully applianced house' of 1966. Vitalism meets Functionalism in a gastro-intestinal week-end cottage-pod.

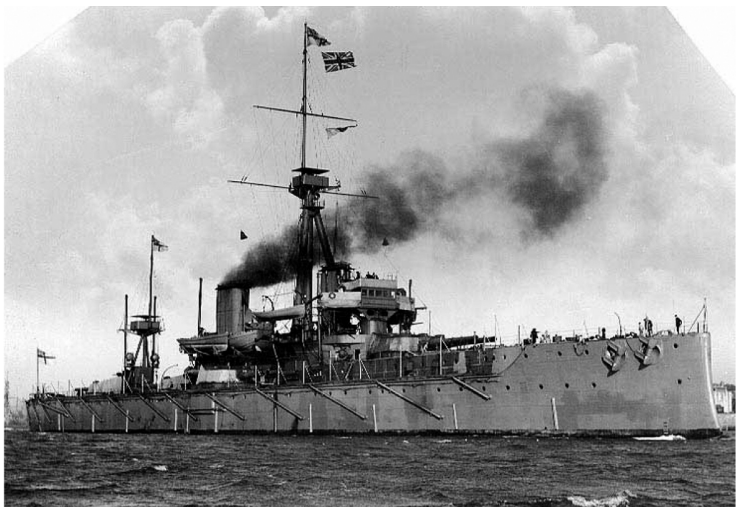


The city is stripped back to an armature of pipes, wires and routes into which the capsules of transient functions are 'plugged'. As fantastic as any Science-fiction drawings, 1966 Archigram gave the hopeless project of forcing the 20C American suburb into the 19C English one a 'cutting edge' iconography that found its nemesis in the coastal trailer-park.

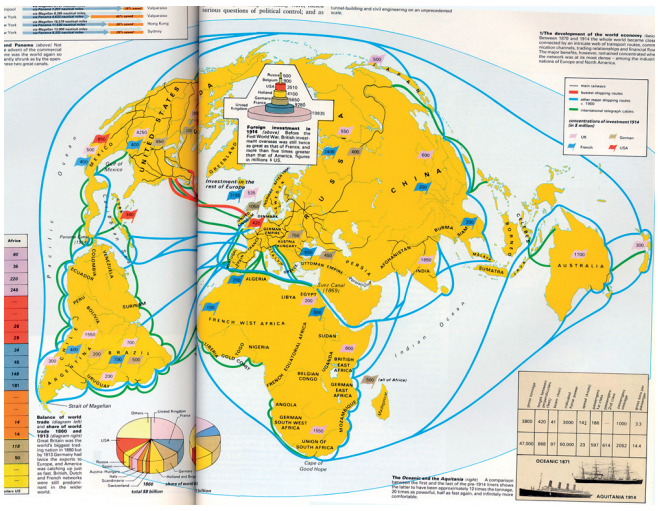


The Final solution of 'Dallas into Dorchester wont go'. Ron Herron's Blobs go walkabout. Rent a city for Easter Break and take your egg to the Big Apple. The engines (are they not, perhaps city-crushers, leaving a wake of trashed urbanities behind them?) probe each other and aggregate, as gregariously as maggots, to feed off the corpus of the loathed 'historical city'.

William Alsop's 2003 conversion of Victoria House sports a 1960s Herron 'Walking City' that now pods-in as a break-out space suspended in a glazed-in atrium. When will it hatch into a room?



HMS Dreadnaught was launched in February 1906. With no small guns, but ten of the heaviest cannon then made, she was the first large warship to be powered by steam turbines. Fast and lethal, she gave a generic name to a new marine vehicle. So began the Anglo-German marine ship-building competition that ended in the battle of Jutland.



In 1914 Britain's outflow of foreign investment was still twice that of France and five times that of the USA. The Fleet protected London's capital and ensured that its dividends were paid. The role of global banker, and policeman of capital, has now passed to another, larger 'island': the USA.

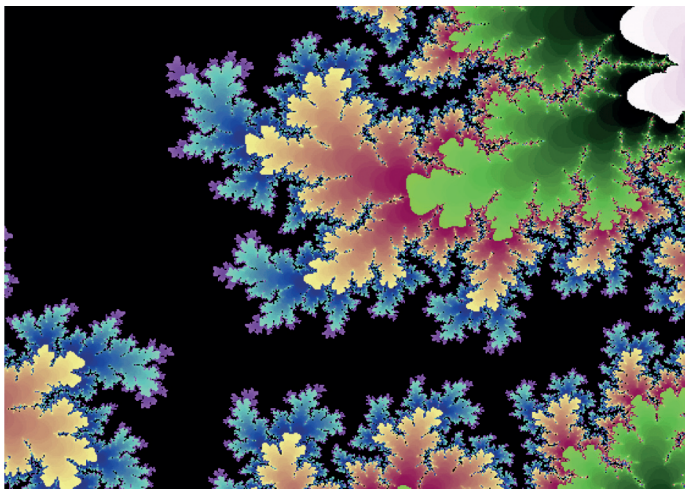
At the end of the 19C Britain's Fleet had more capital ships than all of the world's navies combined.

Nothing creates more interest in a culture than world domination. What was it that resulted in such power? Historians often look in the wrong place, attributing it to 'traditions', cricket, the playing-fields of Eton, modest, but classy, tailoring and afternoon tea. Actually little that happened on land was critical to Britain's global dominance.

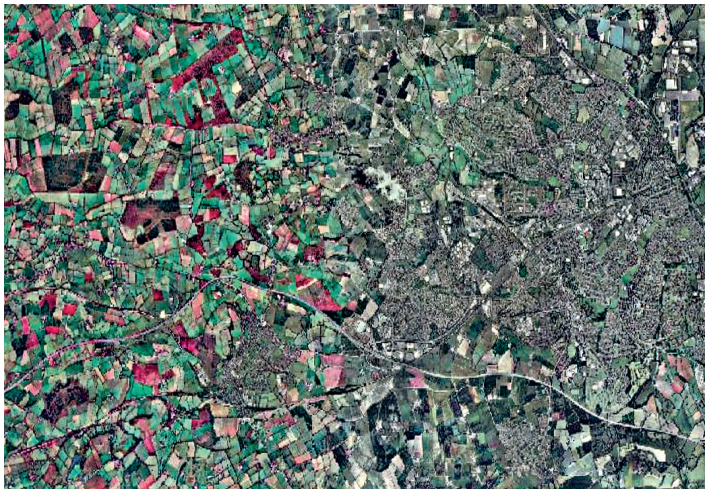
English history suggests that power accrues to those cultures whose instruments of wealth are also those of war.

A ship, during the long period of maritime culture now swept away by automobiles and airspace-craft, can be a floating warehouse one day, a gun-platform next, a passenger-liner after that and then a troopship. London's global network of political 'contracts', banks, harbours, dry-docks, bunkers, economic hinterlands and colonial or imperial populations, could serve to create wealth or make war with equal facility. There was a perfect technological synchronicity between the floating instruments of war and those of peaceful prosperity in the global mechanism of Britain's material culture.

The phenomenology of the maritime medium was of larger importance to British power than anything terrestrial. Ships, harbours, coastlines, chronometers, winds, currents and the declinations of the sun and stars were the armature that scaffolded Britain's power. The surfaces of terra firma were economic and demographic hinterlands, 'backgrounds' that supplied the manufactures and the markets that served to animate the marine foreground that Britannia ruled. This dominance of the marine opposed the adoption of the 'Enlightenment' terrestrial lifespace-design culture found in all other civilised societies, especially ones with ambitions to empire or other large compass.



The geometry of a 'coastline' generated by a fractal logic of 'self-similarity'. The sea is everywhere fluid, chaotic, impermanent and antithetical to settled, agricultural, civic culture. London developed the abstract structures needed to map and master its trackless vacancy. The imperial terrains were treated similarly. Britons, and their 19C & 20C global extensions, lived 'all at sea'.



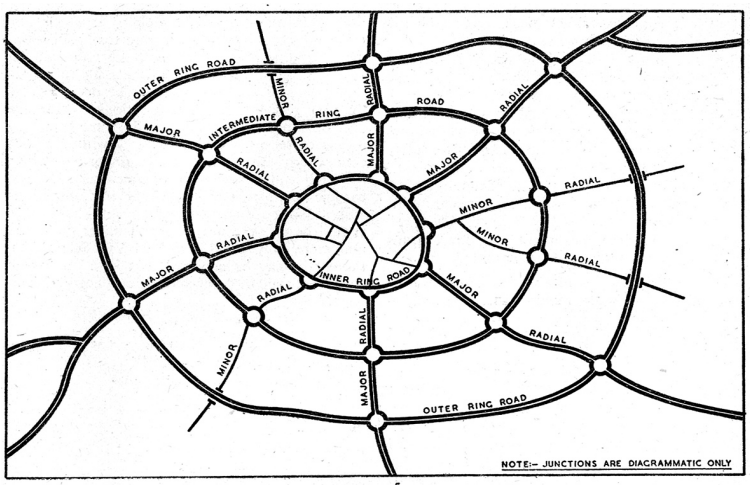
The West of the city of Swindon. The geometry of the city building plots imitates that of the fields. This is not a 'natural' or 'unconscious' imitation. Roman Britain had, like America, straight roads, orthogonal fields, gridded towns and a cubic Architecture. It was deliberately erased and over-written by the nomadic Vikings, Angles, Jutes, Danes et al.

The West of Swindon shows the absolute subjection of the urban world of Britain to the formal compulsion of an ideology of the 'Natural' origin of culture. Not only are there no orthogonals in the field-pattern but none in the villages, towns or cities. The lifespace of the greatest empire the world ever had, whose extent may never be seen again, is a labyrinth of closed spaces whose effect is to compel a closeness of vision on land that could never engender any sense of a community larger than a ship. This 'Saxon Shambles' is an unique terrestial and, especially urban Imperium.

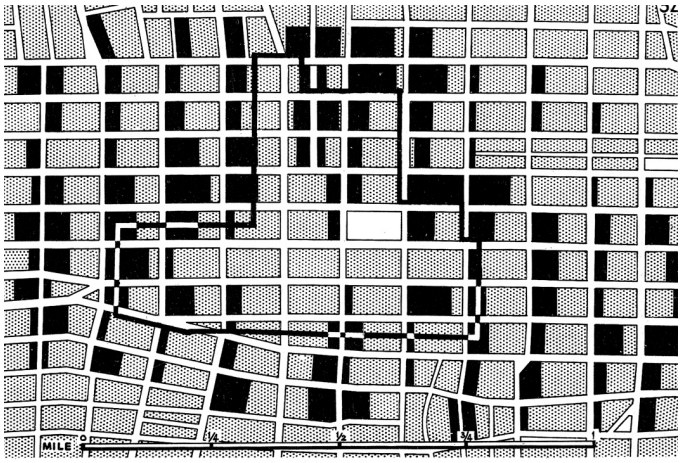
One may go further and suggest that the cult of 'romantic' chaos and muddle found in the 'English Landscape' has the effect of avoiding that cultivation of the 'large view' which anyone needs if they are to form a picture of their situation in any way more general than the view through net curtains at a front garden.

It is a prescription for the enfleshing of a society of 'little people'. It restricts the formation of identity to villages, the smallest of communities. These will have neither the ambition, nor the capability, of forming collective identities of the size needed to develop a level of local, autonomous sensibility. The rustic, villagey, English lifespace-landscape inscribes a political culture that will never interfere with the government of the imperial, global, economy - secure in its faceless, abstract, inscrutable marine dimensions and giant ships.

Ashmore, in Dorset, 700 ft. above sea level, is focussed on a prehistoric circular pond. Its name 'Aismere', in the Domesday Book, meant "the pond where ashes grow" This formula, of water, trees, and wandering roads, was the model used in all Post-War Planning compositions, even the 1,000-strong Architect's department of London.



'Roads in Town and Country', published by Whitehall in 1946, had the same, putatively 'natural', icon of the 'planned' British city. Its pulpy accretions crushed a similarly boneless 'central area'. Could the ubiquitous, still 'eye' in the centre of every local centre, serve a folk memory of disc-shaped, pre-historic, village ponds? Should one, perhaps, flood the vacancy in the middle of all roundabouts (and call out the ducks)?



PARKING STUDY

space used for parking in relation to total land area in and near the centre of Los Angeles in 1941. The central business area is bounded by a heavy line

parking area for 200 cars

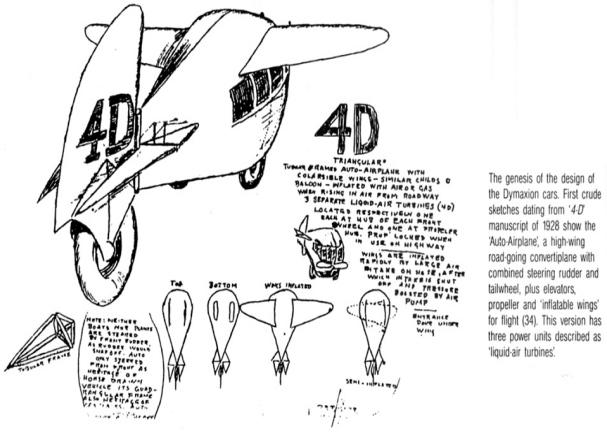
The 'Redevelopment of Central Areas' was strict in its taboo on anything from 'history'. Its only illustration of a real, pre-existing, place was a plan of Los Angeles laid out (incredibly for the English) on a Spanish/ Hippodamian grid. Was the purpose of this frightening view of the remainder of the globe's city-planning culture to show how such 'rational' grotesqueries could be mercifully demolished to make way for suburban-rusticating 'car parking'?

How could they have forseeen that the grid of the surveyor would become the grid of concrete freeways that made the 20C USA into the first 'land ocean' whose wheeled wagons slid along their frictionless parabolas as smoothly as ships through water. A huge continent could now be colonised and developed and traded and manufactured as if it was an equi-valent medium like the sea, or the air, that left no trace of man's actions. To echo Baudrillard, it was "as if all that was solid had melted into air (-ocean)".

20C Engineering dawned with the aircraft and the automobile. The Oceans had competition. The end was in sight of that perfect symmetry of media-vehicles that had helped Britain to her three centuries of increasing power and wealth. The air-ocean and the terrestial super-highway re-focussed power back onto terra-firma. Yet this was no 'novelty'. For it was the medium whose phenomenology had governed culture for the main part of civilised history!

Jefferson, with 'his ideal of a 'Saxon Democracy' of self-sufficient farmers, had ordered, by the geometry of the 'Cardo' and the 'Decumanus'. the 'Sectionalisation' of the USA into 1-mile squares,

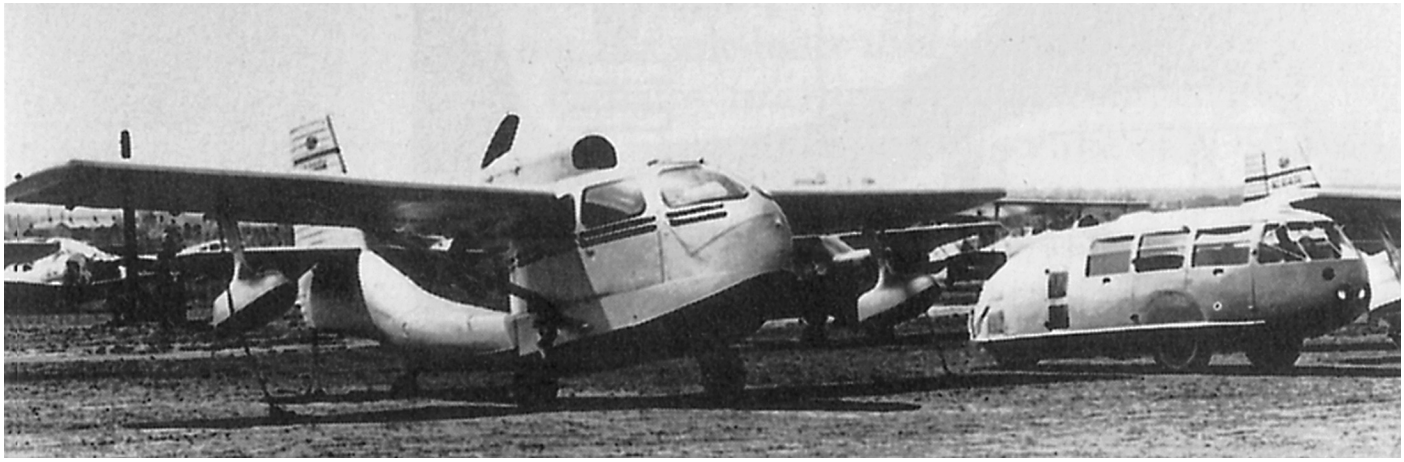
In the late 18C and 19C, the Settlers spread evenly all over its squared-off and sold-off (in 'fee simple) New Territories.



The genesis of the design of the Dymaxion cars. First crude sketches dating from '4-D' manuscript of 1928 show the 'Auto-Airplane', a high-wing road-going convertiplane with combined steering rudder and tailwheel, plus elevators, propeller and 'inflatable wings' for flight (34). This version has three power units described as 'liquid-air turbines'.

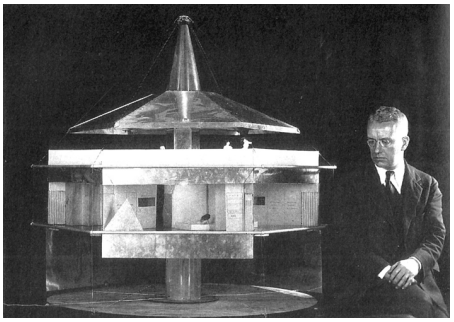
Fuller's sketch-design of the flying family auto. Is it a corpulent plane with inadequate wings or an auto with sunshade awnings and tricycle undercarriage?

An American aeronautical and marine engineer, Buckminster Fuller, became the visionary of this new medium of airways and roadways. Aiming to invent a road-vehicle that would also fly, he went on to invent buildings that could be dropped from the air and, ultimately, cities that would, being lighter than air, float around in it. He was adopted as the patron saint, priest and guru of the British High-Tech style.

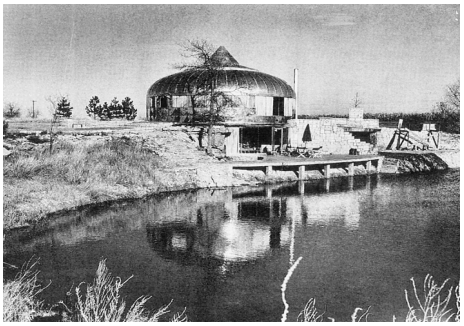


Two 'streamline' blobs that turned out to be genera-incompatible. They refused to mate and give birth to the flying motor-car. So Fuller built his still-born Dymaxion auto and bought a Republican Seabee flying amphibian. To Fuller, as with many geniuses, Earth, Sea and Sky, not to mention the human lifespace of the City, were "all the same". It was all one global medium that required a radical redesign. Augustus Welby Pugin thought the world would be a better place if everyone had prefabricated 13C French Gothic furniture. Fuller upgraded the endemic mind-set of a 20C 'Saviour by Design' to gravity-defying streamline capsules, bubbles, domes and blobs.

Linklater explains how, after the division of America into 1-mile squares, the homesteader, as in this Currier & Ives print, made his cabin in the centre before chopping outwards to clear his fields.

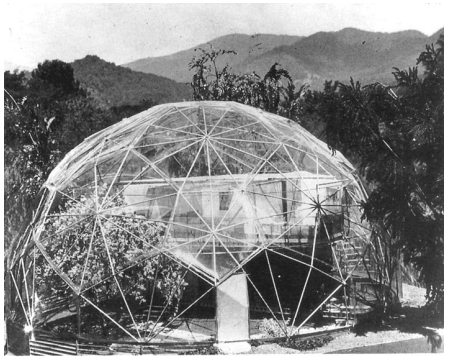


Fuller makes real Architecture: a triangulated pediment on a single column shelters a 'cubic' house. Fuller is the only boy in the world and the body on the bed, reading a mail-order catalogue, is the only girl.



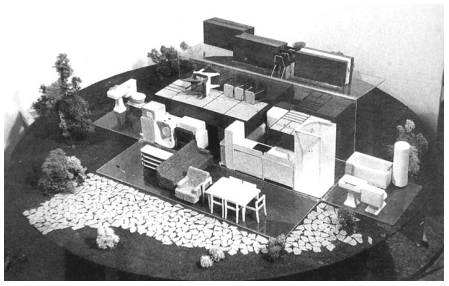
The only remnant of Fuller's 1940's project to mass-produce houses in Kansas by the Beech aircraft factory.

Not content with avoiding traffic jams, Fuller next pursued a wider ambition - that communion with Nature dear to the romantic soul of Nordics. Fuller with a pop-up gas-lift blob-tent (and a plane-load of non-fitted cubic furniture) was the last homesteader.

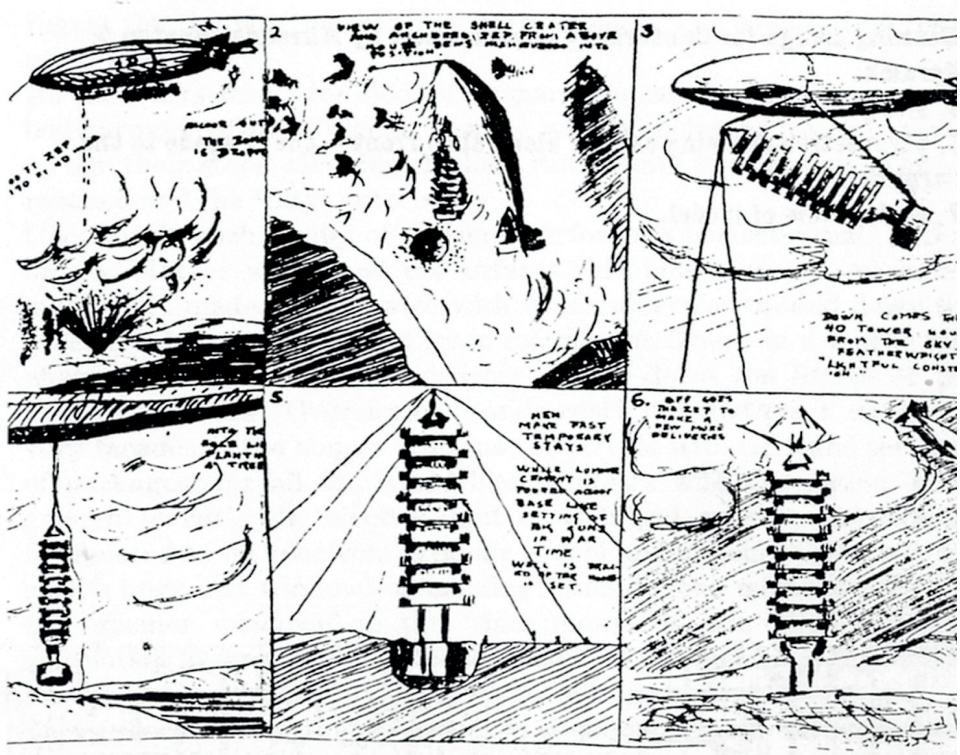


His proposal for an edge-city 'condo' was a featherlight, 4D, 'tenesgrity-tower' dropped from airships who had blasted a foundation hole with (for the 1920's) a very 'smart' bomb. One commuted from these remote fastnesses (picturesquely cratered by stray bomblets) in a (4D) Dymaxion flying auto.

The last picture shows what happens when normal lifespace equipment is squeezed into an economy-sized blob. External walling costs only some 12% of a 20C building. Only a financial illiterate would allow it to destroy every other practicality! But then Fuller began his career in factory-made housing as a simple Yankee businessman. He only became a Visionary when he couldn't sell his product and his company went belly-up.



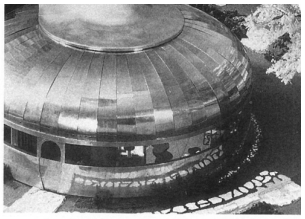
Like Robinson Crusoe, Fuller liked 'camping sauvage'. He navigated to the Fridge with a star-chart.

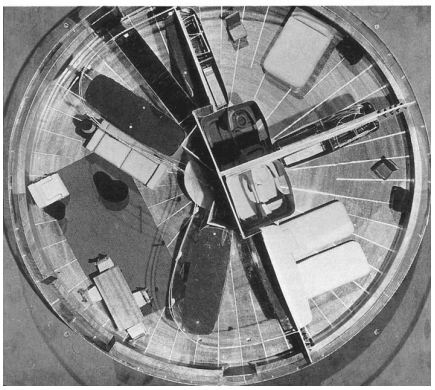


1, Buckminster Fuller: Zeppelin delivering a 10-deck 4D tower apartment house (1927).

Fuller, like all architectural radicals, intuited the syntactical imperatives of this medium. Without knowing it he was pursuing a version of the 'hypostylar forest of infinity' - seeding his forest of cataclysmic events from the 'flying raft' of a zeppelin!

Final model *(right)*, which still survives, shows compound curved duralumin segment roof surmounted by rotating extract ventilator. Despite low stance, house was actually guyed down onto sprung central mast with perimeter rainwater gutter attached to base of wall. Interior of model *(below)* shows spacious plan with two bedrooms, twin dymaxion bathrooms and unique mechanical closets. One of the two living room balconies masks the kitchen.





Spatial chaos and confusion results from shoehorning normal lifespace equipment into a 'blob'. Don't touch that lift-off button!

Fuller, engineering genius that he was, found our globe a confused and superfluous place. He wanted to design a better, lighter, emptier one. His 'spheres of influence', like the wayward yurts of a 'golden horde' of Martians, grew ever larger in their appetite for enclosure and control.

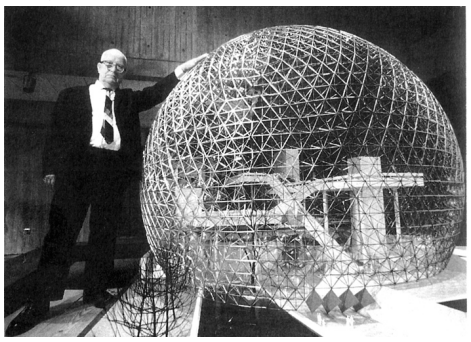
Perhaps Fuller, and his many followers, believe that if one can not escape into the wilderness (and who can in these days of global Fedex) then one can reduce the globe to a more primitive state.

Tacitus wrote of the Germans (and read all trans-Alpines) "they do not live as we (the cis-Alpines) do, one upon the other, all fitted together, but each one by himself, some way apart, by a stream". In 2000 years nothing fundamental has changed. The magnificent Nordic industrial metropolis was not a city at all, it was a wondrous collision of magnificently-engineered cabins which came together during the 18C and 19C as a result of productive convenience. By the mid-20C the dominating Nordic 'ethological imperative' had created its enabling technologies with the telephone, radio, T.V., ranch-house and automobile, and now the 'web'.

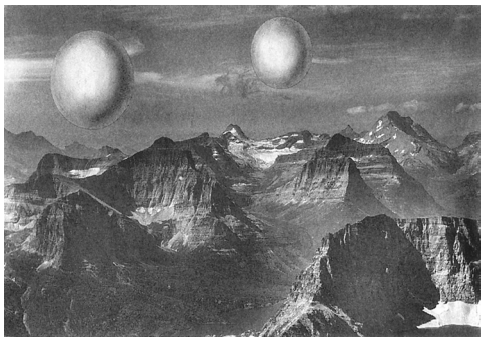
During the 20C, the English never gave off-road transport networks any priority. They placed their houses, during the past 100 years, as if rural trackways were all that was needed to join one rustic solitude to its mercifully invisible neighbour.

It is useless for the English to complain that nothing, in their crowded little island, works properly any more. In the 1960s Beeching destroyed the most densely-meshed rail system in the world. Today all the roads are clogged, the microclimate destroyed and urban security compromised. Alberti advised: "the City is a House and the House a City". We need to call in the Contractors. but where is the Architect?

Fuller proposed to 'control the climate' of New York with a dome so ephemeral that it would be invisible. Did Fuller know something, back in the 1960s, that we, post 9/11 did not? Fuller's main successes were for the military and fun-fairs. Could this both deter Terrorists and attract Tourists? The words can be confused when spoken in certain rural districts of the USA.



Fuller scoffed at architects by asking "how much does your building weigh". His bubble for Montreal's '67 Expo burnt down. Not many people actually want to live under thousands of dirty plastic windows (think of the window-cleaner's bill), lined by kilometres of perishable rubber window-gaskets.



Fuller, the aeronautical engineer, calculated that the air in a 1Km diam. bubble would lift its 'passengers' like a cloud' when warmed by the sun. It could then be 'tethered to mountain tops' - the ultimate 'free parking'.

The shape of London's new City Hall can not result "from the avoidance of solar gain". The most troublesome sun enters at a low angle in the morning and evening. No overall building shape can block this. Only external blinds will block this heat. The real point of Foster's work is to achieve a bullet-brained, go-fast, blob-body.

Foster never makes any secret of his enthusiasm for Bucky Fuller or aeronautics. His favourite 'building' is the Boeing 747. Foster's 'facades' give nothing to the street. Foster, even more than his High-Tech colleagues, builds elephantine, suburban shed-cottages.

The genre-driven Architectures of the 1940s Welfare Socialists were adopted, in the 1950s, by the 'old' real estate industry to which Whitehall was obliged, because of the incompetence of 'Welfare' lifespace culture, to have economic recourse.

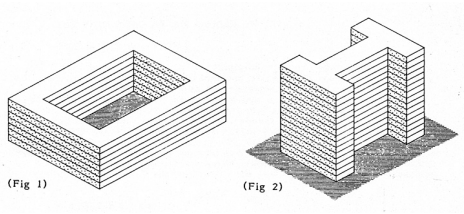
Developers were accustomed to building, before the war, in brick and stone. They even used some ornamentation. Why should they hesitate to build in the 'arte povera' aesthetic of cheap schools and housing? The 'welfare aesthetic' was turned, along with the 1951 burning of the Ration Books, to the business of making money out of 'development'..

An intellectual causeway, across the Capitalistically-polluted swamps of the burgeoning 'Mixed Economy', was attempted by Leslie Martin. He was newly retired from leading the post-war London County Council. This had grown, in 15 years, to over 1,000 professionals. It was the biggest state-run Architect's Department in Europe. Martin moved to Cambridge and occupied an old water mill, converted to a dwelling in the early-industrial, rustic-romantic Style.

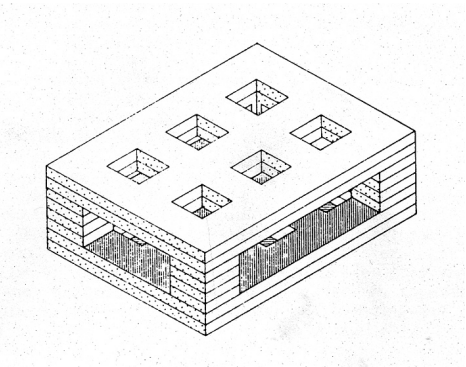
Whilst Archigrams' multi-projector image-binges were thrilling London's students with promises of an unbridled consumerism, Martin, from his fenland study, focus of much of British architectural politics, persuaded the Cambridge University Senate that he could re-found the Architectural theory needed to support the education of the new uber-class of 'Modern' architects required to build the Welfare State.

The University Senate was attracted because Martin offered to employ Mathematics, Cambridge's own prime intellectual property, as the foundation for a Social-Democratic welfare lifespace. Martin ended, in the late 1950s, the teaching of Architecture, for the Cambridge BA, as a variant of the History of Art. He aimed to qualify his graduates in the full, five-year, vocational course taught, at that time, only in Polytechnics.

The intellectual foundation of this project collapsed after 30 years, in the early 1980s, at the same time as it passed into history in other 'reality-oriented' disciplines, such as Business Management Theory. Faced with the economic rise of Japan, the North Atlantic cultures had to temper their faith in calculations of the Rand Corporation megadeath type and turn their thoughts to the softer subject of 'culture'.

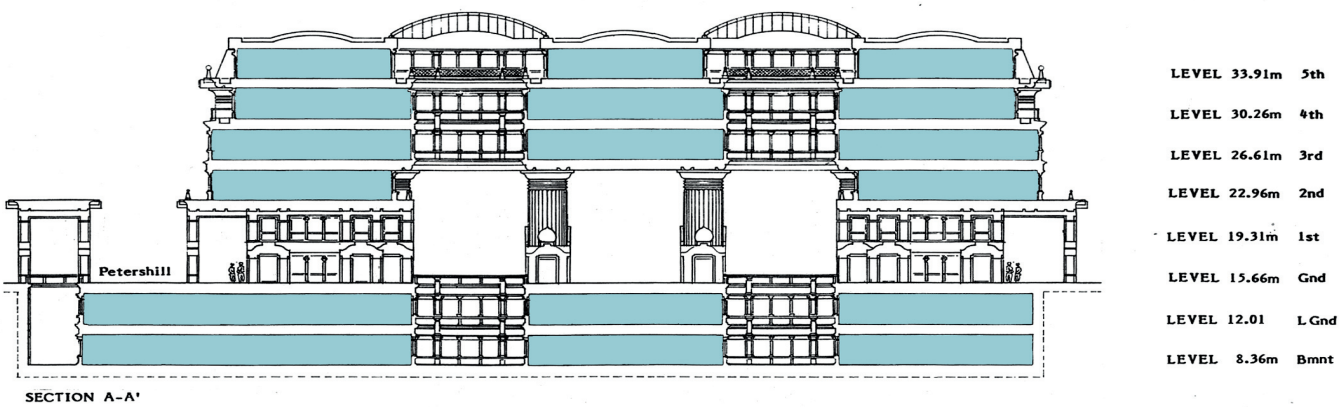


The Lionel March 'perimeter block rule' was the only widely-used mathematical formulation to emerge out of 20 years of research in Cambridge's Martin Centre. It showed that a 'defensible' urban space is created by building up to the pavements in an island-block, while useless, windswept POS (public open space) results from a tower.
NOTE: The 15-storey tower, the 7-storey 'London square,. above, and the 8-storey 'Waffle block', below, have the same gross floor area on the same-sized building plot.



In 1987 JOA extended the Lionel March perimeter block' to a fully architectural three-dimensions. We invented a new building type, the 'Waffle-Block'. Its advantage was that it created 1. a 'skyscraper' land-use density, 2. a low building that allowed light into the streets and 3. a great public/private room for social rituals.

ARCHITECTURE WAS MORE THAN MATHS



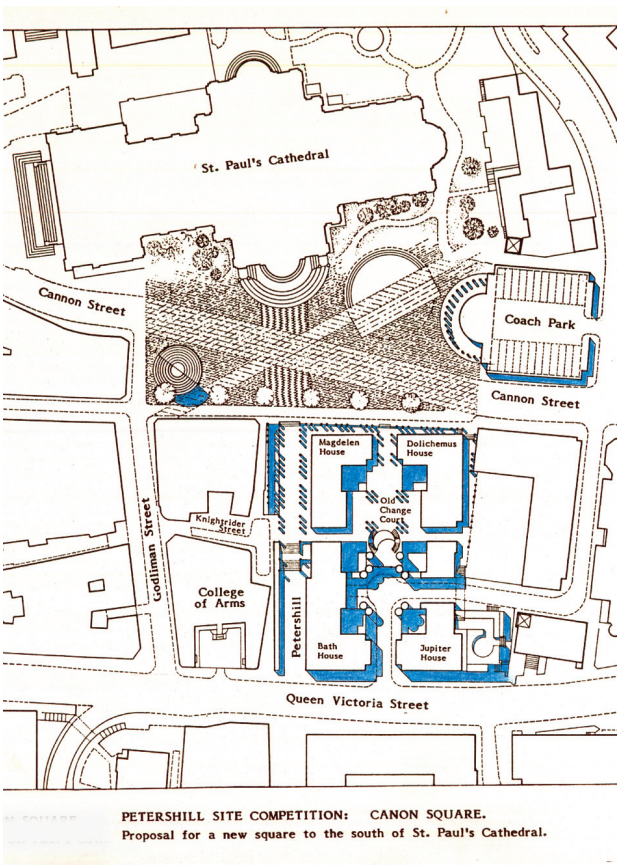
SECTION A-A'

The view from high buildings, today, shows anthills of tiny rooms without any liberating grandeur. The interior view in a 'waffle block' looks to a beautifully decorated interior that is sealed in winter and opened in summer. Plants grow out of the two-story deep 'ground atria' while light shafts in by the 'sky atria'. The idea depends absolutely on the narrative capacity of its architecture, both in the flesh of the buildings and the minds of the users. It can be assumed that our entry failed because of the lack of any narrative capability in either the objective or the subjective dimension of the architectural culture of the late 20C. This East-West section along a pedestrian route shows that, at the very least, JOA invented an urbane novelty.

During this time Martin's enterprise produced only one textbook of design..

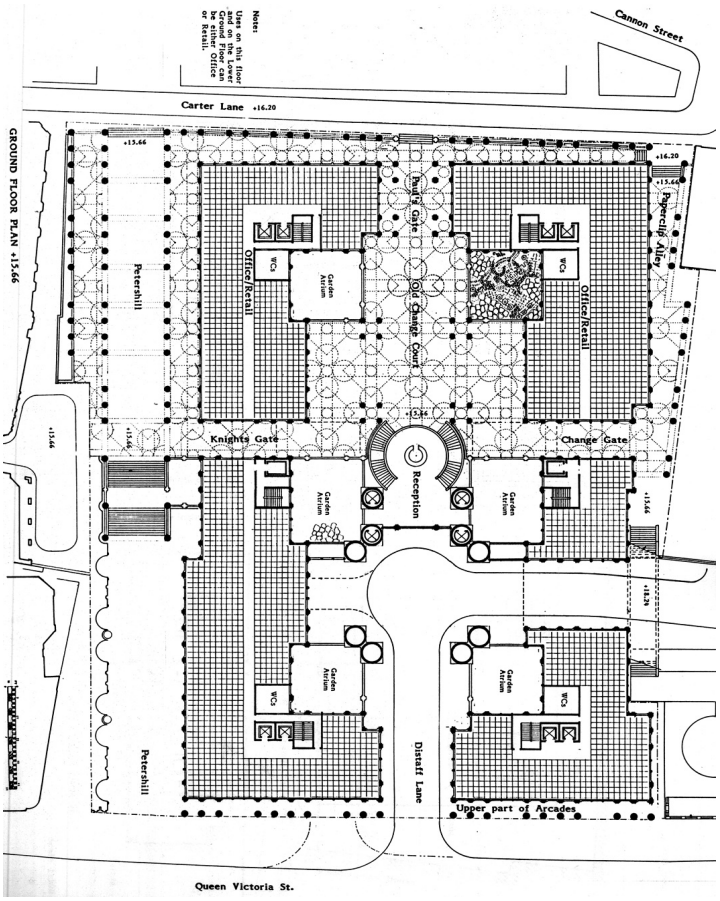
Entertainingly written by Lionel March, it rehearsed the diverse mathematical transformations with which the designer of anything might like to play formal games that were entirely detached, in their origin, from whatever real context his design-discipline might have sprung. The book, although more intellectually diverting than the fashion-driven enthusiasms of London, had little effect upon either architectural practice or theory.

The Cambridge architectural intelligentsia of the '60s to the '70s, led by Martin and Colin St. John (Sandy), Wilson, invented some hugely monumental projects. Both ambitous, widely-published and unbuilt, they detailed a total rebuild of Whitehall (Socialism by Built Form) and the British Museum quarter in Bloomsbury. Their motifs were either parallel lines of megastructural pyramids, or St. John Wilson's Post-Modern stripped-classical colonnades. These Architectures, more or less in vogue at the time, exhibited no patent theoretical 'grounding' in the mathematical fireworks of Marsh.

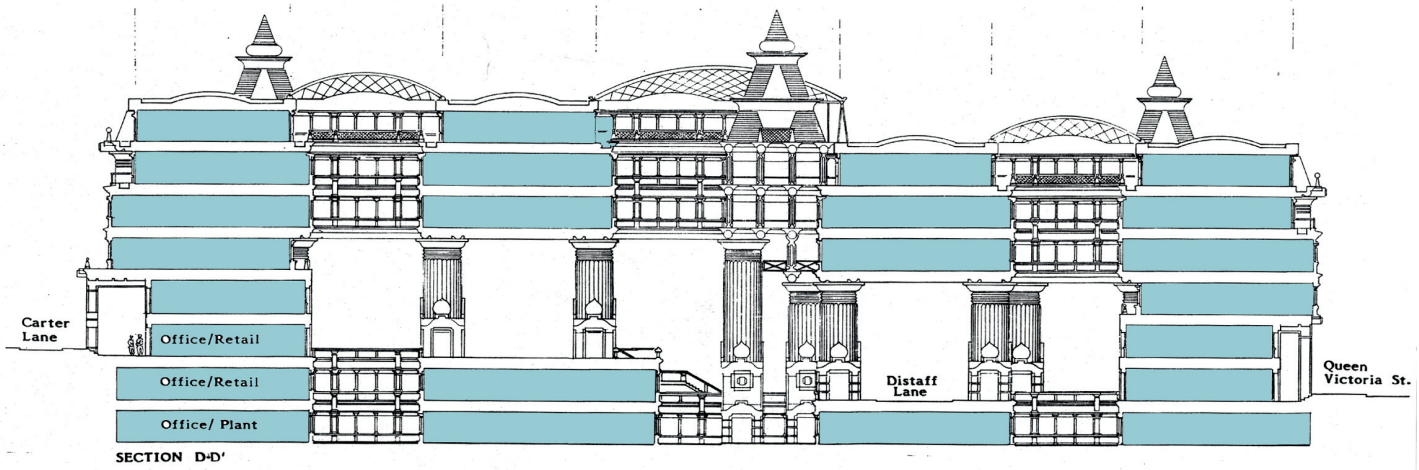


PETERSHILL SITE COMPETITION: CANON SQUARE.
Proposal for a new square to the south of St. Paul's Cathedral.

JOA quartered the island block with pedestrian axes and centred them into a great public room which was big enough to accommodate diverse uses. A vehicular road, surfaced in honed granite, snakes through it. All the best Italian Palazzi sport Fiat Cinquecentos on marble floors.



The Ground floor accommodates a storey-height fall across the block from North to South. It allows a private entrance for automobiles under the public plaza. The perimeters become arcades of 'Walk-in(g)' Columns.



SECTION D-D'

The N-S Section shows the fall through the site, the automobile access and the public plaza. The 'service columns' are also 'walk-in(g)' columns containing elevators.The city-planning laws surrounding St. Paul's Cathedral prohibit buildings of more than six floors, making the Architecture, of our ornamentally-challenged era, extremely monotonous. 'Unlet' pinnacles are, however, permitted. JOA's contained the cooling-towers.

The ending of this intellectual strategy was followed by an attempt to found architectural theory on a cultural base. This was, from its beginning, directed by a more practical view of the function of the medium.

Asked to teach in 1981, I found Cambridge students, after four years of study, seldom sketched their ideas or used colour in any way at all. They drew, like draughting-clerks, with 2H pencils on tracing paper. Some had never heard of Louis Kahn and seemed to know little of the Architectural inventions (generally termed Post-Modernist) of the last 20 years. They lived in that cocoon of small-town rusticity which is Cambridge and thought like true servants of the ethologically-provincial Welfare State that was already, with the advent of the Thatcher-Reagan backlash, being lowered into the grave it had dug for itself by its refusal (unique amongst Western Socialist ethologies) to use architecture for its properly urban purposes.

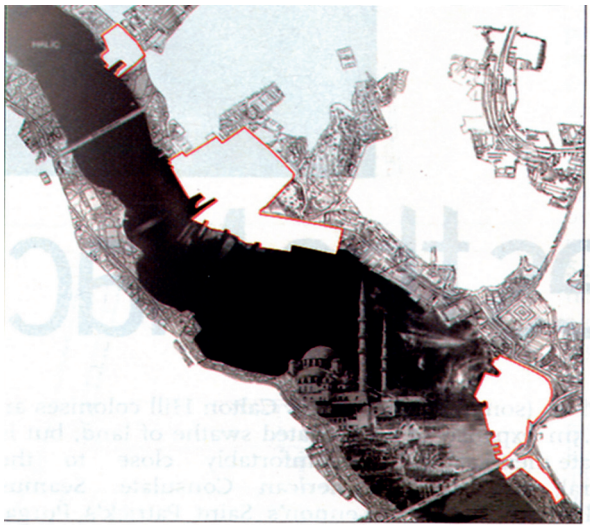
Being Cambridge, England, not only did it prove difficult to escape from the quaint rusticities of the local 'Cambridge Practitioner's' style, but the 'new realism' found itself formally crippled by the endemic pursuit of 'picturesque' composition. The new teaching extended its intellectual conquests to far wider territories than those of the previous decades. But its physical reach went little further than the 'central areas' of the very cities whose ruin it both lamented, celebrated and (Deconstructively) promoted. Burdened by the provincial millstone of the English Pragmatic Picturesque this brave effort found itself unable to theorise the architectural and city-planning techniques needed to project a constructive political economy for its time.

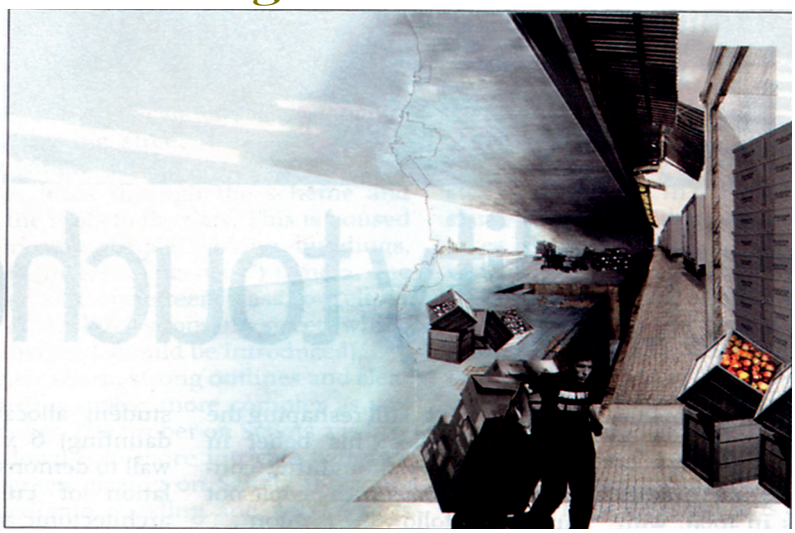
The 'critical theory' period produced no teaching textbooks at all.

The project came to its end with the decision, taken by the Professorial staff in 2003, to preserve their Post-Graduate Research and Phd territories and close down the five-year undergraduate course. Yet it was the failure of their Research projects to attract government funding that had caused the Department's financial shortfall. Nothing illustrates better the intellectual collapse of Cambridge Critical Theory than this preference for professionally useless humanistic ruminations whose only fruits were an enthusiasm for the picturesque muddles of Decon and, on the other side, the decline of the Leslie Martin mathematical project into clerkly calculations of sustainability, ventilation, thermal loss and even road traffic management. The researches, of the Faculty, into the capabilities of Architecture, Ornament and Decoration to positively 'design' the human lifespace entirely failed to bear fruit.

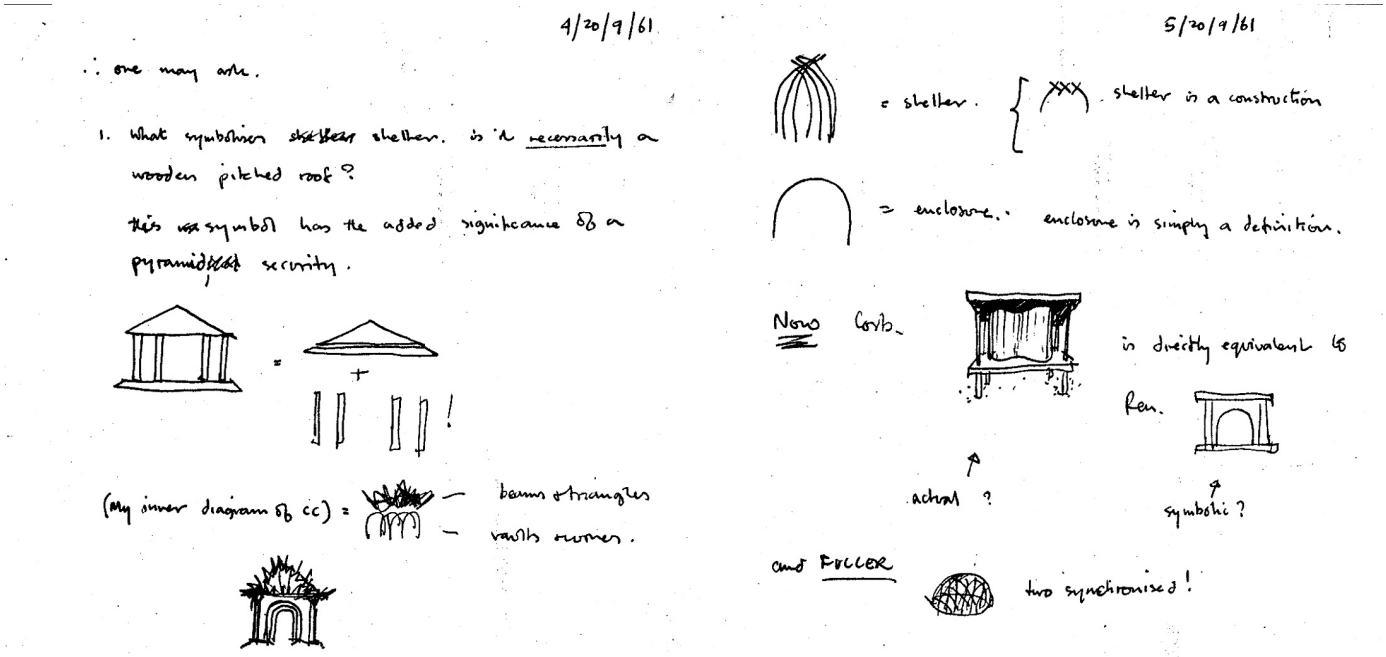
So complete has been this intellectual failure that, ten years into the new Millenium, the Senate refuses to pay anyone to teach 'design', as such. Design, the basic skill of Architecture, is brought to Cambridge for free, by young 'designers' (no one calls themselves 'Architect'), on the train up from London, as a vagary of fashion dictated by the inscrutable whims of 'Genius'.

Yet during this failure, the human race was urbanising as fast as its cities were descending into chaos.





'Ending with a whimper'. The 'Critical Theory' period ended by falling into a massively self-indulgent subjectivism which sought to rise, above, escape from, or otherwise triumph over the material concerns of Engineering. Architects retreated to the secure hill-forts of the vague, the incalculable, the intuitive and the inscrutable. There, in academic seclusion they waited, suicidally, for the certain end that the Academics, alone, had engineered for my Medium.

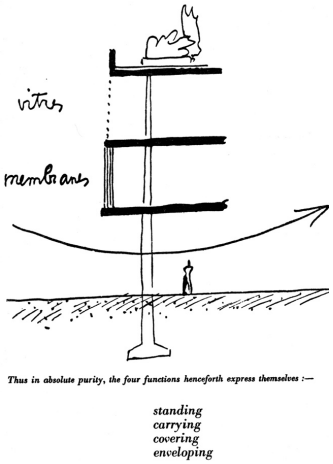


My first formulation of the 'four figures' back in 1961 was sketched while researching my third, finally-successful, thesis design . My ambition was to elucidate a formula that could characterise all the phenomena denoted as 'architecture', whatever their cultural situation in time or space. The effect was to invent a high-octane architectural medium divested of all the dim-witted 'styling' that makes buildings either old, new or anything else.

My own work had parted company from the Dan-Dare, Boys-Own, High-Tech project by the time it had begun to get under way in the multi slide projector image-binges of Archigram's genesis in the early 1960s. I had been part of the 1956 invention, out of the intellectual desert of the Regent Street Polytechnic, that became High Tech, I carried this, in 1958, into the Architectural Association. By 1960 I had already abandoned it to read Chomsky, Levi-Strauss and Saussure. Archigram went on to enlarge Hi-Tech, in the early 1960s, into what would become the canonic Brit-Pop, RIBA Gold Medal, contribution to late 20C Architecture.

By 1961 I had assimilated all of the architectures, throughout history, including that of the 20C, to a phenomenology which, at the very least, established a formal commonality which bridged the self-imposed 'divide' between Modernity and the Architectural 'past' from which my generation of students had been debarred.

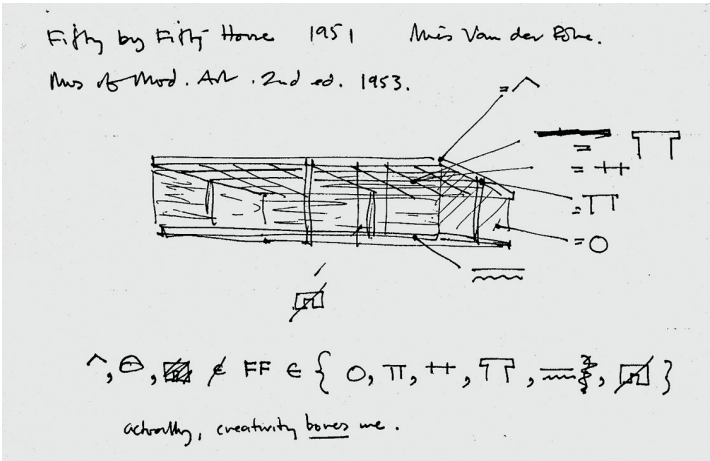
My analysis showed that all architectures, including those of the 20C, whatever else they professed, were at pains to enflesh four 'practical' qualities.



Corbusier's' four functions mirrored my 'qualities' as did Gottfried Semper's four technical origins of art, in clay-moulding, weaving, stone-cutting and carpentry.

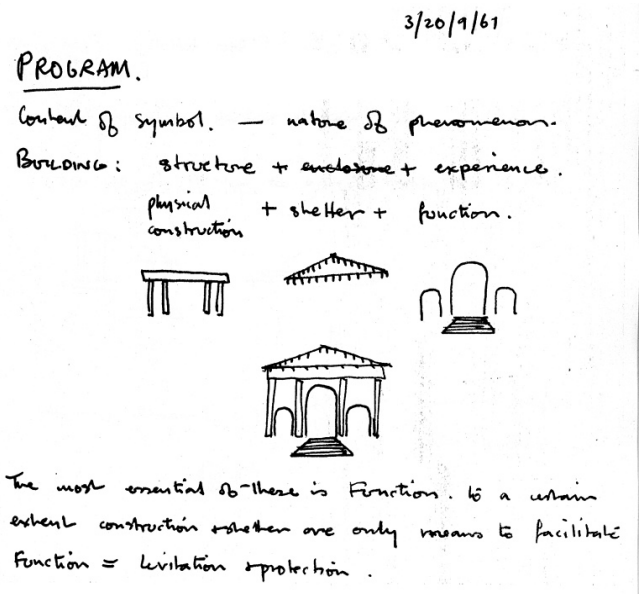
I termed these the qualities of Establishedness, Enclosedness, Constructedness and Shelteredness.

It seemed to me that these 'four figures', as I termed them, defined the phenomenon 'architecture'. whenever it was given that denotation by its situating literary culture.



The 50x50 house of Mies van der Rohe shows its interwoven 'trabica' of Sheltering rafters. Its glass prism (providing one can see right through to the far wall) manifests a sense of Enclosedness . Mies's steel 'stick-style' always manifests Constructedness. Mies never enfleshed Establishedness with granite plinths. He erases the circumstantial contingency of the earth-site by lifting his prism off of it. By knowing their syntax the Beaux-Arts-educated early 20C Moderns created Architecture while 'styling' it to their own iconology.

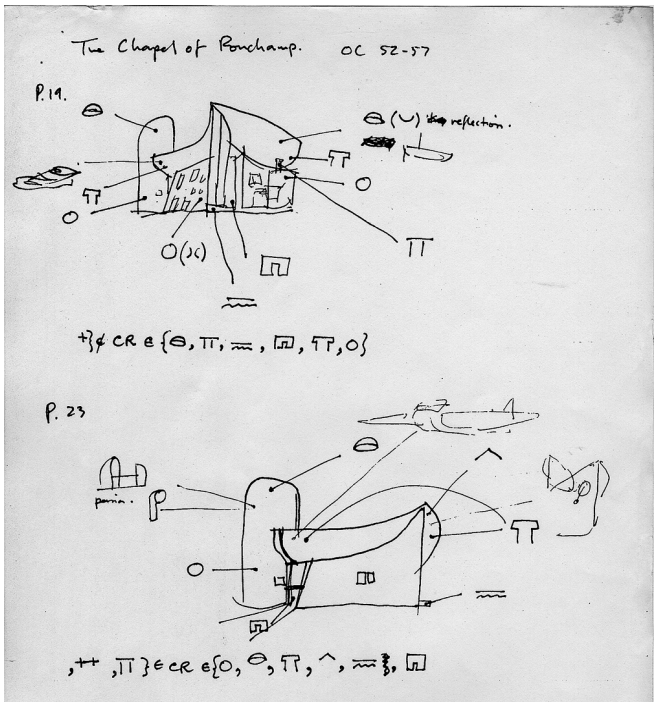
All that remained in order to renew the urbanistic dimension of the Modernist project, was to employ my Four Figures in the most straightforward and rational manner. With this simple understanding of what united the 'old' and the 'new' it seemed possible to invent architectures that extended an urbane continuity into the future, whatever it was that we wanted that to be.



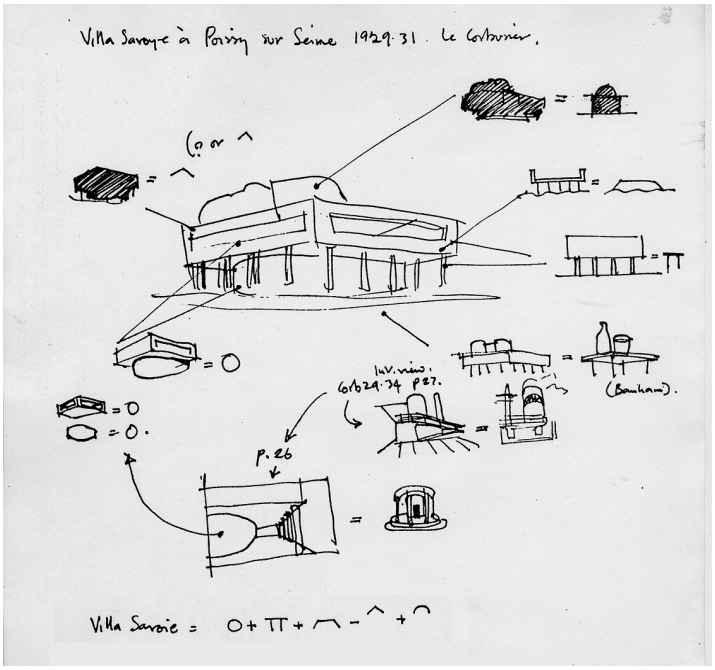
Strangely, at least to me, my effort was everywhere resisted. Even qualification proved difficult. I had already failed my final year 'thesis' twice with a design of enormous roads supporting a very dull Architecture. One reaches a state of exhaustion after five years cooking-up studio compositions, in every known architectural style, for 'individual buildings' voided of economico-political ambition.

At that point a 'minimalism', of extreme dullness, like that of the commercialised USA, seems 'right'.

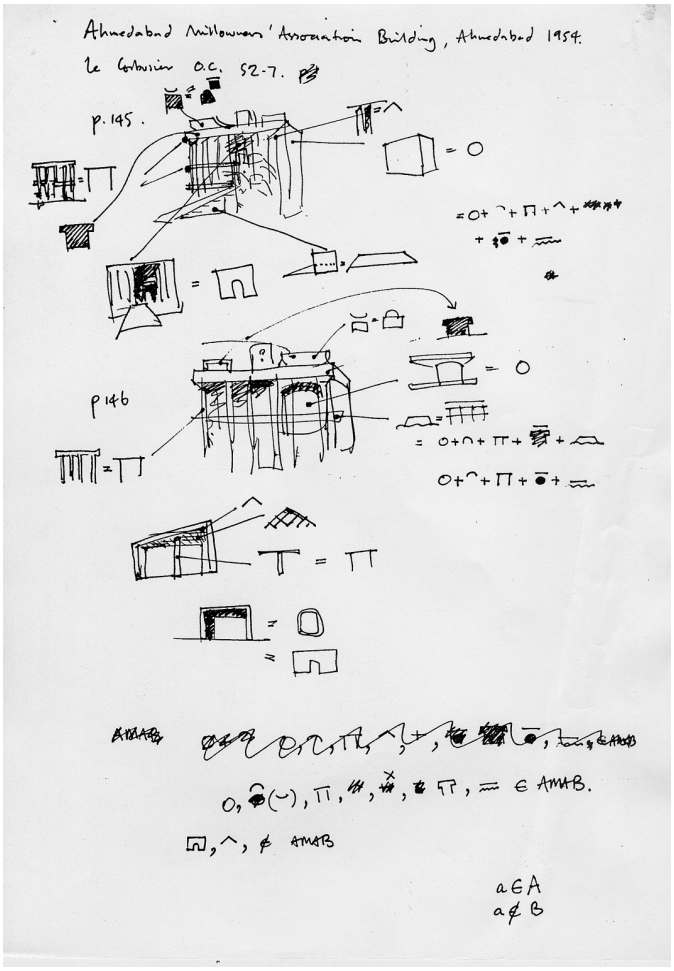
With my 'new 4-figure formula' I proposed a judiciously fractioned cocktail of Kenzo Tange and Louis Kahn that I presented as a version of Churchill College, in Cambridge. I was again rebuffed. This time, however, my Tutor, Bob Maxwell, who went on to become Dean to the Princeton School, managed to persuade the Examiners to let me enter their profession. "Let him through", he said, "he's never going to stop trying". My crime was to have travelled too far in time and space eating of the forbidden fruits of 'high architecture' and 'history'. A safe pair of (illiterate) hands, happy to massage the haptic diversions of welfare construction into some dimly picturesque rusticity, like the actually-built, Kasbah-Krumble version of Churchill, was what my examiners sought.



Corbusier's magical hill-top chapel of Ronchamps, along with his 'beton brut' Maisons Jaoul, ended the pristine, prismatic, 'white architecture' of the pre-war, 'heroic' period. My analysis allowed me to separate its intrinsic (four-figure) syntax, native to all 'Architectures', from the extrinsic lexicon of 'machine-age' forms drawn from boats and aircraft. The intrinsic syntax made it 'Architecture', the extrinsic lexicon made it Corbusier. The song was what counted for me, not the singer. I was a Practitioner, focussed upon 'Urbanity', not a Hagiographical Critic.



Reyner Banham remarked, in 'The Architecture of the First Machine Age', that Corbusier's Villa at Poissy reminded him of still-life objects on a table. This confirms Corbusier's reliance on compositional devices first invented during his early-morning recourses to painting - in short the discredited tactic of the 'picturesque'. Banham did not observe that Poissy has a peripteral colonnade screening a cella on which sits an 'enTABLAtura' that acts in the proper role of a raft carrying a valuable cargo. For this would be to jettison the 'Great Divide of 1900', between 'Historical' and 'Modern', that was the main plank of Banham's own critical flotation. This anachronical apartheid was imposed on the history students of London University.



Corbusier, like the major Architects of the early 20C, had received a Beaux-Arts education. He, Mies and even Wright all knew their entablatures from their stylobates. Their 'architectural speech', even in its denial of Roman 'classicism', remains Architecturally literate. That of the late 20C Architectural 'greats', because of the taboo on literacy, becomes increasingly divided into the mute and the gross - the depressed or the hysterical- both qualities of the speechless.

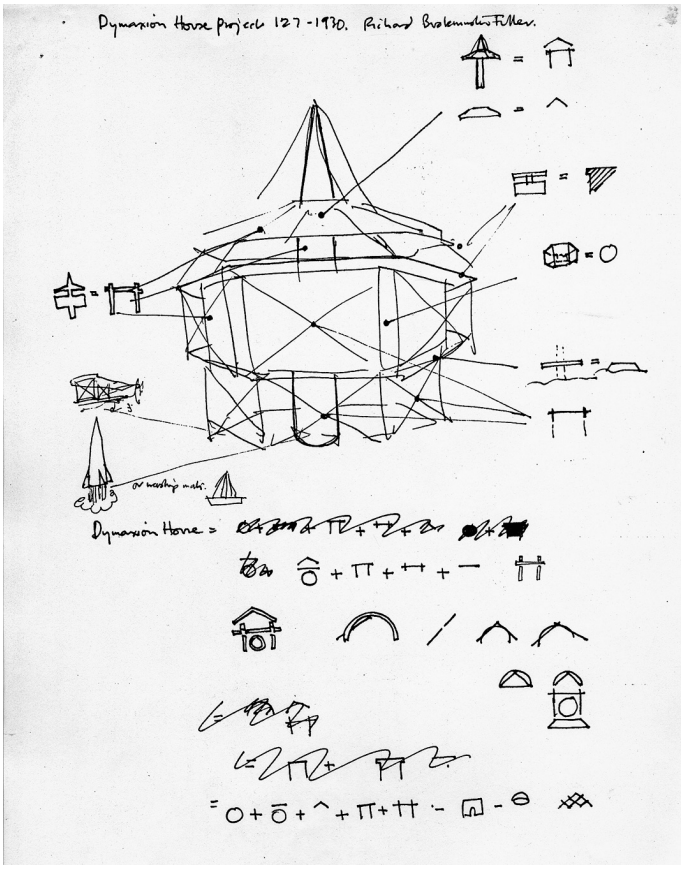
For the next eleven years, until 1973, I always worked, out of choice, for big design bureaux, in both the public and private sector. I pursued works in which there was some hope of an Urbane scale. I had, for this reason, to refuse the kind offer, in 1968, from James Stirling to join his office. The thought of the sub-urbanities that the 'art' architect performs for his stylised 'interventions' in my preferred medium, the City, filled me with intellectual despair.

It was not so difficult, after all, to twist the uncomplaining banalities of rooms and corridors, situated in some desolate car park, into an unforeseen arrangement that might catch the jaded eye of a critic. I had succeeded in these games for many years, being frequently 'published' while still a student. But such forced excitations did nothing to engender life into the moribund body of the 20C city - tending instead to confirm further its dismemberment and decrepitude. I preferred, during the 1960's, to labour in obscurity and collect 2000 old books on the tabooed subject: the beautiful and strange architectural 'urbanities' of the wicked 'past'.

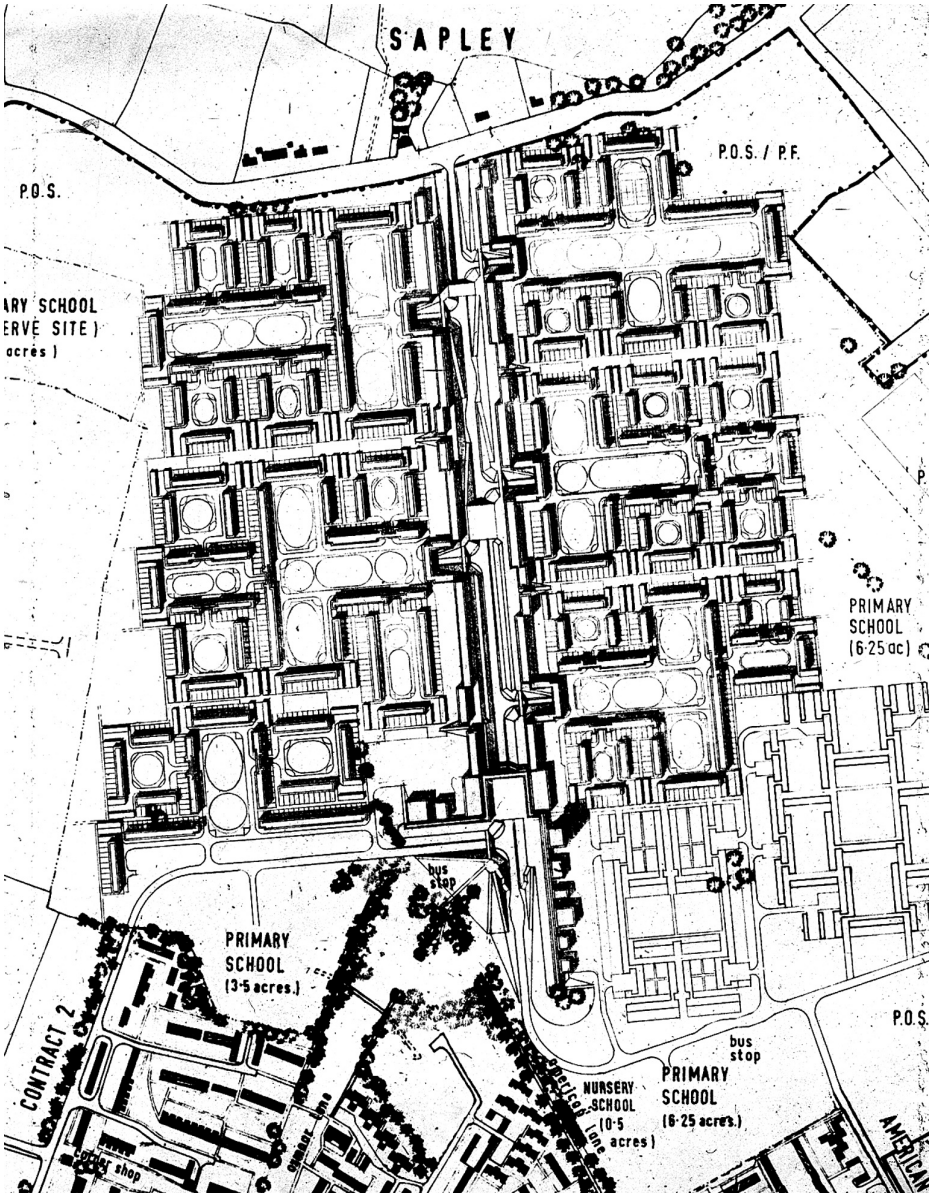
The further afield I took my researches, the more obvious it was that my Four Figures constituted an irreducible set of 'tectemes' which were the carrier-wave', the grammar of an 'architectural' speech. It was onto this tough, immemorial, 'deeply-structured armature, that times and places had hung the modulations of a lexicon of architecturally-extraneous stylistic figures. The reason for the current collapse of the 20C lifespace-design project into either cubic anomie, bionic hysteria or the puny genre-styles of Welfare, was an infertility brought on by the taboo on 'learning from History'.

By the 1960s after a close attention to the 9,000 years of the medium, I had extracted a phenomenology of Architecture which promised a technique of sufficient power to satisfy the Modernist ambition of a style-free lifespace-design technique.

But it had to provide more ontological density than the failing 'mainstream neo-modernism' of the 1960s.



Bucky Fuller' syntax deciphered! Shelteredness was his (very pedimental!) overhanging roof. Enclosedness was, as with Mies), revealed by transparency. Establishedness was inscribed by raising his 'pod' above the ground by wires which, perhaps coincidentally, graphically outlined a 'battered' base. Constructedness, was demonstrated by the highly articulated 'kit of parts' that were bolted together to hang off his 'service column'.
The analysis of his syntax reveals Fuller's 'stylistic lexicon'. They were the ships and planes he knew from his origin as an engineer of aeronautical and marine vehicles. Fuller's confusion of syntax with lexicon led to his failure. Buildings never move. It is their tenants who do that. It was, ironically, his promotion of his style into his syntax that vitiated his 'technological revolution!



My plan fulfilled every rational requirement of urbanity -defensible space, 'eyes on the street', car-access to the front door, a walk to the shops and schools free of roads, a sheltered microclimate and enough density (26 houses to the Acre - twice the 'Expanded Towns' norm) to support buses. Every house had a double aspect, through ventilation and close foot-access to both a public and a private outdoor space.

Of course this overall plan would need some variety. My intention was that these should be mainly 'ornamental' . Buildings lasted for decades, perhaps centuries. Cities last for millenia. To cut the turf of a green field, perhaps 'for ever' was too serious to be anything but absolutely rational.

In 1962 I joined the New and Expanding Towns Department of the LCC. During the 1950s and '60s, the 1,000-strong London County-Council Architect's Department was the London Graduate's 'finishing school'. Most Architects who went on to make an individual name left after a few months.

I stayed four years.

I found that the LCC was already brain-dead, even in the early 1960s. No signals (at all) came from its higher centres. Nor was anything received into it from the outer world. In four years I never met a Tenant. Elected Politicians almost never penetrated our 1,000-strong citadel of 'Professionalism'. Even its internal cybernetics were defective. My own Section Leader almost never came out of his cabin. In three years he neither participated in, or led, our work.

We all went our own anarchic ways. I discovered earth-moving equipment and (in the Royal Town Planning Institute's periodicals Library) American 'Hydraseeding'. A chopped straw mulch, seeded with legumes, is sprayed over raw clay, so as to induce it to become earth and support a binding vegetation. With these tools I ploughed a half-mile trench into the 'Oxford Clay' north of Cambridge enabling an heroic architecture of ramps and bridges. Round it I designed a linear city of the Soria y Mata kind but using, for my housing, the English Garden Square. House-design is always the most critical technology of city-planning. Steen Eiler Rasmussen, writing in his "London the Unique City" argued, correctly, that the Garden Square was Britain's prime contribution to Urbanity.

The circulatory axis was built. It was cheap and we (gardening) Brits do love 'shifting muck' (Silbury Hill is one of the globe's bigger muckheaps). But my garden-square layouts were refused on the grounds that "they were like the houses that the Tenants had already come from". Would that they had been so fortunate! Where are the garden squares in London's slums? The Decantees were handed a spade and packet of seeds and told "you're in the Country now! Lucky them! The heap of builder's rubble behind their little concrete-brick cabin was their 'garden'. They then began saving for an automobile and then another automobile, and then another, and then foreign holidays, etc. etc. - so as to make their escape. They were becoming good consumers, courtesy of their worthless civic parent - the 'Old Labour' GLC.

I shed no tears when the GLC was destroyed, It was an Institution which had pursued, for too long, a worthy project in an unworthy manner. 'Subdivisioning' (as it is called in the USA) can also be done by the commercial market. London's 'old' "narrow-gutted" houses (round garden squares) are now worth millions while the cosy concrete-brick cottages of 'Oxmoor (ex-Oxmire) Lane' are as (comparatively) worthless as that tawdry, GLC-inspired change of name.

There was no will, on the part of the huge, powerful, maternal London City Council to help their erstwhile Tenants to both retain and extend the urban culture that the Metropolis had already deeded to them. Our Tenants were banished from the city for their unbounded fertility. No one got decanted unless they had two, three, or more, children. One may count four primary school sites around my site. One was more likely to be run down by a fleet of prams, four abreast, filling the whole road, than by an automobile.

These fresh, unformed, children lost centuries of metropolitan culture in one generation. Post-War Planning was a 'cultural cleansing', supported by both sides of the political establishment, as brutal as the 17C Enclosures.

It became clear that none of these new estates were designed to consistently fulfil a single one of the common functions of Urbanity. Too dense to accommodate 100% car ownership (and use) and too empty to support buses, no one ever discussed the 'eyes on the street', the role of a square garden in community-formation, or the child's walk to school, street-microclimate and so on. Their over-riding imperative was to make the individual house-plots as large as possible so as to allow the Tenant to heap-up one of the millions of tiny worlds of consumerist fantasy so well satirised, in the 1950s, by N.F.Simpson.

Prefab costs 'twice normal construction'

Charlie Gates

One of the leading exponents of off-site manufactured housing has revealed that its prefabricated developments cost nearly twice as much as its projects that use traditional construction.

The Peabody Trust revealed this week that Feilden Clegg Bradley's Lillie Road housing development, which uses off-site technology, cost about £1,400 per sq m – nearly double the cost of Peabody's cheapest traditional construction housing projects.

Peabody's research manager Elanor Warwick said that Lillie Road was "twice as expensive as Peabody's normal housing", and admitted that it would be hard to get the costs down.

"We're going to have to work even harder to get the costs down," Warwick told *BD*. "We are improving costs, but there is still a long way to go."

Deputy prime minister John Prescott is keen to use off-site technology as a way to deliver new housing quickly and efficiently and Peabody's off-site projects are being watched closely by the government as early signs of progress.

Peabody's admission comes just two months after *BD* revealed that the housing association is experiencing delays of four months and budget increases on Raines Dairy, its north London prefabricated housing development and the largest factory-assembled housing development in the country.

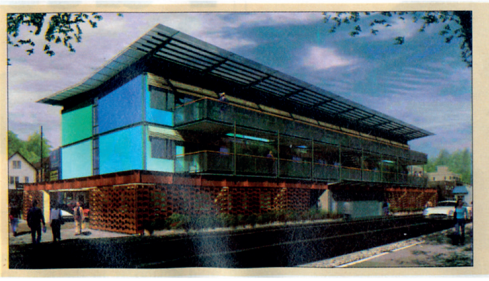
In response to the stubbornly high construction costs for Peabody's off-site projects, the trust has commissioned Surrey-based firm Spaceover to develop an off-site housing system that will come in at a much cheaper price – approximately £730 per sq m, making it suitable for key-worker housing.

The trust is hoping to use the new system for a prototype project of six flats near the Elephant & Castle in south London, but is also in talks to use it for a larger development of 40 flats in west London for NHS Estates.

David Gregory, single regeneration budget manager for Peabody, told *BD*: "We want to be able to offer a building system that can be put onto land offered at nil value by the public sector and built without a grant. We have to find a way of building more cheaply, so we are developing a low-cost building system."

The approach of developing a new off-site system customised for the narrow margins of the housing market was backed by John Miles, Arup partner and chairman of the government's Housing Forum.

"You can't use modular systems that were originally developed for fast-food restaurants or hotels," he said. "Second-generation products are needed to solve the problem and they have to be designed from scratch with the lower cost at the front of the architect's mind."



Cartwright Pickard Architects, the practice behind Peabody's prefabricated Murray Grove project, is exporting its expertise to the US. The practice has been appointed by a Chicago-based developer to work up ideas for modular housing above retail centre car parks.

Deja-vu - forty years on. A despairing cry from the 'New Labour' 'prefabricated house project of the 'noughties'. It takes a long time to build a new piece of the crowded English lifespace. Needless to say the time is not spent in either designing, or building, but in arguing what is to be built in a culture that has come, rightly, to fear and loathe the building of anything.

We found that Local Politicians like Prefabs. They can find a site, and demolish it quickly. Then, 'hey-presto', the photo-opportunity of newly-built housing for their constituents is available within weeks, perhaps even for an election campaign. Whereas to build solidly in brick is to give your opponents the chance of 'opening' the Estate that you facilitated!

The 'truth' which we, in the New and Expanded Towns, were asked to 'enflesh' was the Bohemian fancy that we all live on this Earth alone. This is the lie of suburbia - each house seeks to hide behind a screen of green.

During my first week in the LCC an avuncular Architect, of Polish origin, invited me into his office as I passed it on the corridor. "John" he said, in his still-strong accent, "what do you think is really important? Unsure of the purpose of this sudden, very un-English, directness, I thought of our exiguous budget and my own interests and replied, tentatively: "Site layout?" "No John", he kindly replied. "It is pre-fabrication".

Our Division had launched a prefabricated house. Made of wood, it arrived in two halves joined lengthways. English roads are too narrow to accommodate a whole bungalow. Joining it took as long as building the bungalows which, in those days, a brickie, plasterer, plumber, 'sparks' and tiler could mainly throw-up during their two week summer vacation.

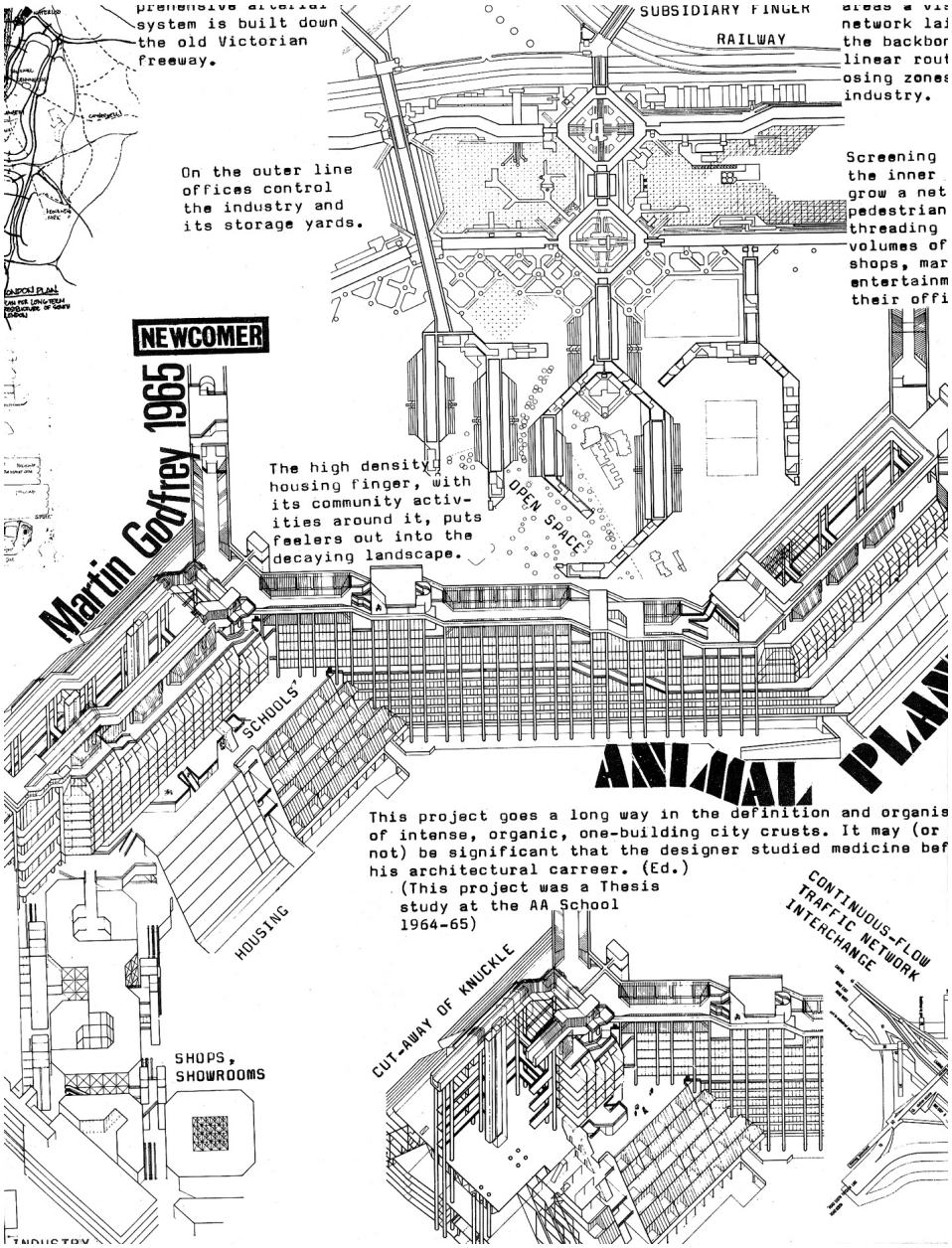
My solicitous adviser was giving me a "buzzword". I understood its use, later, when I saw that one's design was more likely to be accepted if it was drawn as an 'exploded axonometric'. Its dispersed 'elements' could be denoted a 'kit of parts'. These items were presented as ready to be bought, ready-made, from the catalogue-list of a (yet to be) industrialised building industry. They could then be hoisted up in minutes, rather than put together, brick on brick over a few days. I also found out, from the 'old sweats' who had done semi-detached estates before the war, and pre-fabs after it, that prefabricating a whole house and shipping it complete, doubled its cost. Everything, on our site of 500 houses, was lifted by hand. It was the cheapest way. Nor was one talking of factory production. Everything on a British building site, from bricks, to windows, to glass, tiles and cast-iron stoves, had all been 'factory-produced' for 100 years!

Buildings are amongst the biggest things Man makes. They are, ton for ton and cubic metre for cubic metre, amongst the cheapest things we make. Unlike most consumer expendables, we expect them to increase in value rather than drop to zero in 15 years. They do not need to move around, so gravity can be relied on to help keep them secure.

Weight is also useful for the thermal mass that irons out the temperature differences over day and night, and for acoustic privacy. The best sound separators are bricks in a soft lime mortar that allows each brick to vibrate separately, so diffusing sound energy into an acoustic chaos. Steel frames are like violin-strings, carrying sound-energy from floor to floor, far into a building. Nothing, today, is physically secure. But a brick wall does discourage casual entry through broken glass.

With all of this, why make a whole house in one place and then carry this wobbly, soft, heavy thing to another? It is bound to either double its cost or halve its value.

The 'kit of parts' is a materialistic mis-translation of the need to divide a large object like a building, and indeed the human lifespace, into conceptually denotable parts. These clearly individuated parts, like the components of any language, must be related to each other without losing either their individual sense, or the sense of the whole sentence. Without parts and wholes a simple sense can not be organised. Nor, and as importantly, can a complex and contradictory sense, or even a seeming non-sense, be ordered into 'sense'.

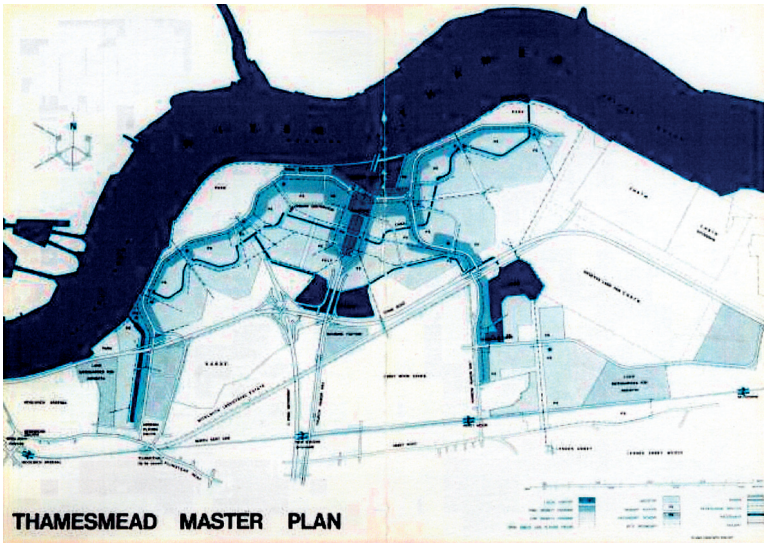


Just escaped from Fascism and now beset by America's burgeoning consumer-commercialism on the one hand and Russian Communist expansionism on the other, Britain, small, weak and newly stripped of her money and imperial properties, weak-mindedly wished that the good would happen 'naturally'. The island ethos became possessed of one of its oldest fancies, that good things grow 'naturally' via sequences of 'happy accidents'.

Thomas Jefferson, visionary of an American 'Saxon Democracy' of farmers, preferred the 'Enlightened' conceptual ambitions of Paris to the conservatism of the English. But he freely allowed that the "arts of instrument making and gardening had been carried, there, to perfection". What is English High-Tech / Eco-Tech but a symbiosis of these two native 'excellences' into the mad dream of Machines who are 'alive'.

The 'kit of parts' is a syntactic imperative and a semantic necessity. To reduce it to the pre-fabrication of cement slabs masqueradiing as walls, floors and roofs, some with 'wind-'oles', revealed the deep iconic illiteracy of the GLC's Top Politicos.

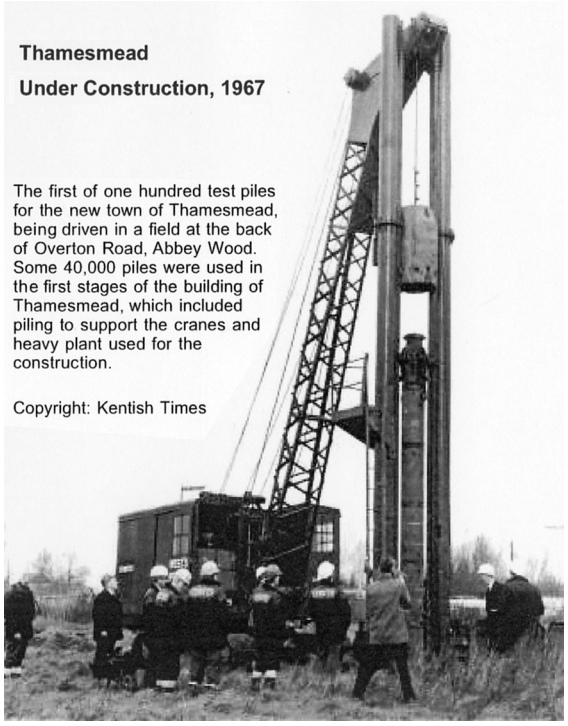
Thamesmead New Town was the largest example that I witnessed, while in the GLC, of this laboured architectural suicide. It was conceived by Martin Godfrey, an incontestable genius of Vitalist formality, when freshly graduated from the Architectural Association. Those who rose to 'lead' the GLC never designed anything. They were bureaucratic 'midwives'. It was Students, fresh out of College, that 'conceived'. Their offspring were then 'adopted and processed'.



Thamesmead was to be a New Town of 1200 houses. It lacked all splendour. There was not a single grand, simple, civilised and well-decorated space in it. Its cement lips leeched to the sad illusion that the natural, the mechanical and the beautiful are, effortlessly, inevitably and certainly one and the same. Whereas each is itself only - and only an Architecture of the largest and most powerful kind (of a sort entirely absent from the culture of that era), can bring them together into a reality that can do justice to the scale of the projects of the 1960s. Such works were the final insult that birthed 'Conservation'.

The cult of Total Prefabrication forced the adoption of a building system made from 'abstracted planes' that turned out to be slabs and planks of grey concrete. Born as sticks of balsa-wood, they were assembled, in real life, like houses of cards, to make up yet another Kasbah-Krumble world of informal, natural accidents. Finally, as can always be effected in the Garden that is England, copious planting was grown-up to obscure as much of this iconically cretinous lifespace as a (landscaped), fig-leaf can cover.

Godfrey set up a carved polystyrene base-board some 3M x 3M (10'0 x 10'0"). Teams of young architects snipped hundreds of lengths of balsa-wood to a few, regular, modules. Compositions always do better with limited elements. These lengths of 'housing' Godfrey assembled into a great heap, half beaver-lodge and half complex organic molecule of the sort he knew from his previous medical qualification. Like the serpents of the Laocoon sculpture this fantastic assembly twisted (organically and naturally) across the infinitely flat mud bordering the lower reaches of the Thames.



Even the back-garden footpaths and domestic drainage manholes were founded on deep piles. Nothing was 'Natural'. It was like Holland. This was the Delta, locus of erasure and rebirth by the powers of a lifespace-design culture. But who, in the Welfare ethos, knew of such things?

It was a formal masterstroke - seemingly both natural, already-built, and artificial. It was so large that it could not be carried into the hardwood-veneered meeting room of the Elected Members. They came, instead, against all precedent, to hold their meeting in the Architect's Department. The project was approved. Afterwards we coined a new managerial technique. Instead of 'Muddling Through' we talked of 'Modelling Through'. We all knew that a committee of laypersons preferred a model over 'orthogonal' drawings. We all knew that such models were misleading. One never saw a project as if one was a bird. But Councillors liked the Olympian view. Erith took this process to a new level of fantasy. Thamesmead was 'passed' ready-made, as a model, without any drawings at all. Not only was it obviously 'pre-fabricated' (had not the amateur model-makers of the studio cut the balsa-wood on a veritable production line?) but merely giving the model a quick jiggle so disordered the composition as to lend it that air of antique insouciance so typical of the beloved English Village.

My time in the LCC/GLC taught me the inexorable spatial economy of orthogonal site planning. It taught me that straight blocks, as presently designed, look like mere extrusions of a rational formula. It taught me that designers always lose the battle to make these raw sticks and slabs look charmingly informal by merely kicking them this way or that.

One did not have to be a genius to see that what was needed was an Architecture, of very low cost, that could raise the game of this not-so-new world of Big Projects to a level at which its raw reasonableness was infused with that 'something more' which the human spirit both demands and is capable of providing.

AFTERWORD for the FOURTH LECTURE: 'THE GREAT ESCAPE'.

This Fourth Lecture describes how the Architectural novices of the mid-1950s (denied ethical access to any aspect of their medium's culture, such as it had been in pre-WWII England - so far from its originating centres in Italy, or further, such as Egypt, India, Meso-America and China), turned to the 'toys-for-boys' of engineering and technology that had been given the Modernist Seal of Approval by the publications, if not the buildings, of Corbusier.

The 1958 lectures of Peter Smithson proved that there was a hard-edged, mechanistic, abstract German and U.S. Modernism which had been overlaid by the softer 'rational-village' style of Walter Gropius and the Swedish Moderns favoured by the Festival of Britain Architects. Smithson's aim was to discredit the Modernist credentials of Britain's post-1945 Architectural Establishment. The 'escapist' cult of 'Machine Age Mobility' was taken further by Buckminster Fuller, a 1940's naval aeronautics engineer turned prefabricated housing manufacturer, whose designs never sold one unit. Archigram promoted, during the 1960's, the designs of 'walking cities' in a similar mode, and with a similar ineffectiveness. Smithson, appalled by the eruptions of High-Tech, Vitalism and Pop-Archigram, said he regretted giving his momentous lectures. But he was never going to 'win' with his village-wonky gutters and half-timbered facades.

Neal Ascherson essayed, in the Observer, that when he was up at Cambridge, in the 1950s, the idea was that if calm and reason reigned (colour grey), wars and famines could be planned-out of History. Then, at the end of his essay he wrote: "when I came down from Cambridge I felt the presence of something out of sight, over my shoulder, which later turned out to be Pop". The Sixties, ten years on, through Architects like Piers Gough, reified what can be described as a 'Pop Architecture'. Leslie Martin, a generous, cultured and amiable man, had been high in the LCC and the Festival of Britain. He retired to a water-mill in Cambridge, whence he acted as a vital conduit for State Patronage. Martin persuaded the University Senate that Architecture could be placed, through the employment of advanced Mathematics, upon a "sound theoretical footing". What actually happened was that everything novel and vital was born 'ex utero' - outside the traditional high culture of Architecture, Literature, Music, Painting and so on. It was a sad performance by the Cultural Establishment which left them cowering in the shadow of the (fully chromatic) Pop that they had failed to forsee, shape and 'put to work' (in the sense used by Heidegger).

Later, seeing the 'Palladian' parti of the Pompidou, some of the disenfranchised Humanists, Classicists and Latinists turned to High-Tech as a way back for them into a 'popular' Architectural culture. It was, after all, an Historian (albeit with a stainless-steel prosthetic arm), who commissioned (the all-greyed-out, steel-and-concrete), Lloyds of London.