Drawing

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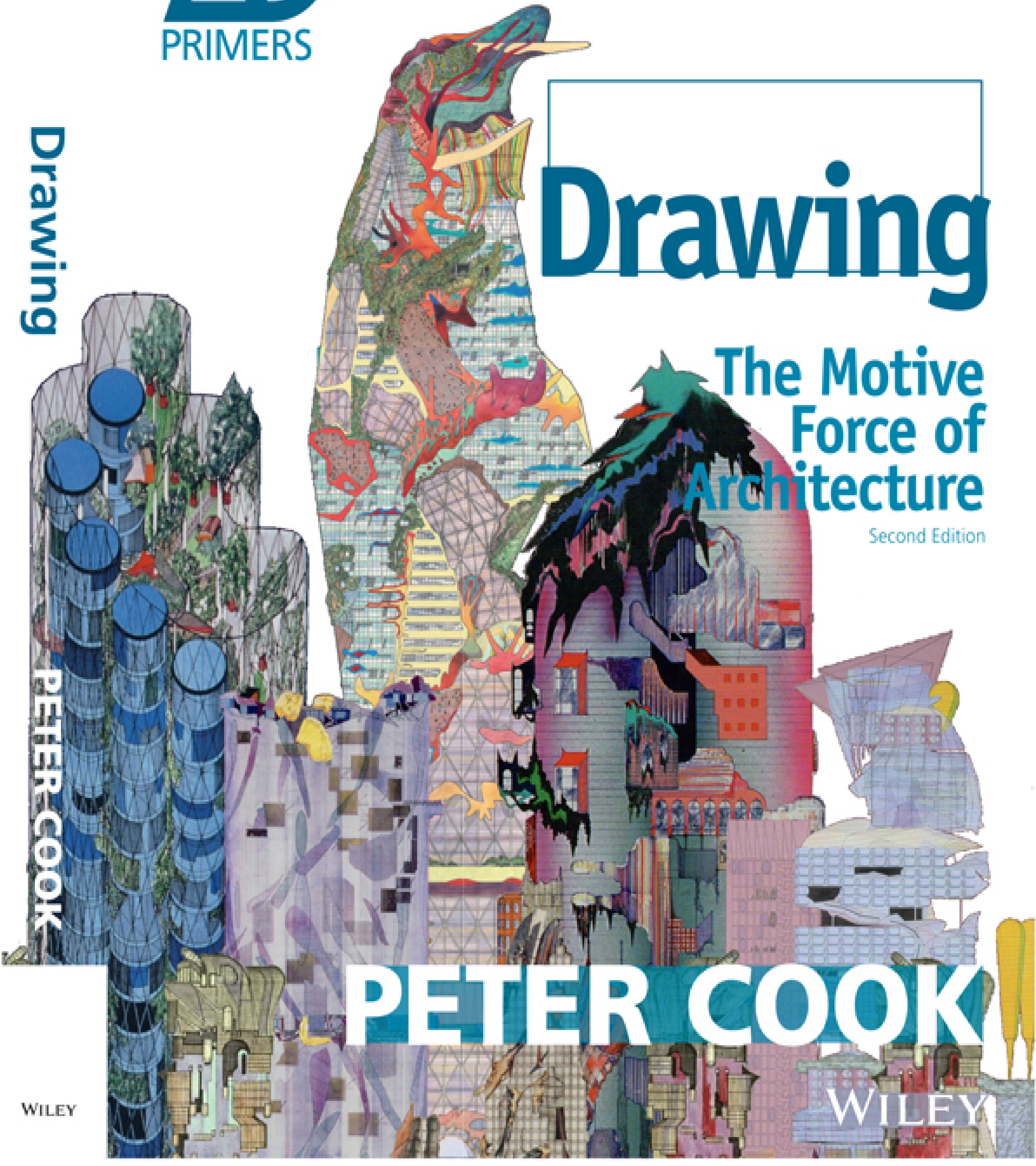

Drawing

The Motive Force of Architecture

Second Edition

PETER COOK

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Dedication

TO YAEL AND ALEXANDER who keep me chirpy

Acknowledgements

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Introduction

Perhaps the ideal way in which an architect can approach the act of drawing is to be unaware that he is actually doing it at all.

Is it not a spontaneous means of summarising immediate intention? A form of jotting-down. Of course, other antennae of the brain are less encumbered. Shouting, murmuring, kicking or the wandering of the mind are less impeded by the necessary use of an implement, such as a pencil. The many effects on our consciousness of such implements has led to ceaseless pondering, whether it involves the impact of a lead pencil or the use of a particular computer program. Here lie so many of the debates about drawings themselves especially in a civilisation that is obsessed by the process.

Another issue that we have to get out of the way is the question as to whether architects' drawings owe more to the demands of architecture or to an artistic inheritance where the particularisation of a building matters little. Into this come the issues of consciousness, state of mind and motive.

We know that the professional writer or journalist evolves towards habits of description and the ordering of information that parallel a written piece: the pre-edit, the trained mind and the articulation of key observations. We readily recognise and accept such symptoms.

So how do we deal with the undoubtable parallels in architecture? These easily cross beyond the thresholds of technique, preoccupation or style so that the priorities of an ideal emerge – to be described in drawn lines that may enjoy those priorities.

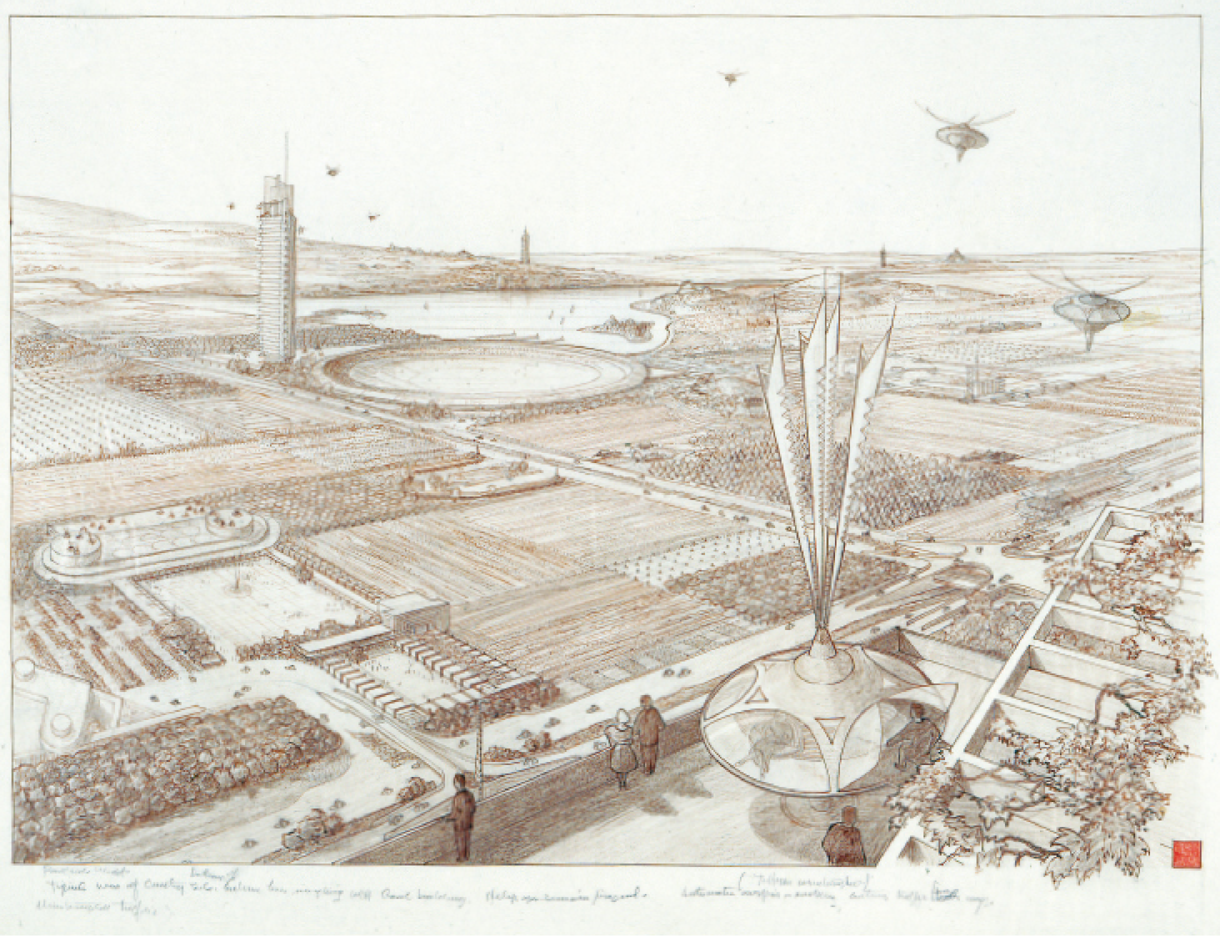
Chapter 1

Drawing and Motive

Much of the most memorable or most definitive architecture comes forth at a moment when a set of ideas exists as a form of attack: a retort to another set of ideas. The pressure of rhetoric or ‘drive’ needing to find an outlet, needing to shout loudly, to insist, awaken, reveal. The action will vary according to the temperament of the author and the means may well be highly conscious of the means used by the imagined adversary, whether this is an architect of an opposite persuasion or a sluggish and indifferent public. A parody of drawn mannerisms, or deliberately chosen ‘cool’ in response to ‘hot’, or sparse in response to complex, closely paralleling the architecture itself or its cultural background. Thus the extraordinary clarity, fierceness and buildable rhetoric of the work that came out of the immediate post-Revolutionary Russia attacked on all fronts through composition, graphics, colour, film, music, material and, of course, the power of the accompanying verbal rhetoric. As such, it can be seen as a coherent piece.

By contrast, one only has to glance at the kinds of drawings that accompanied Frank Lloyd Wright’s Broadacre City (1932–58) and the subsequent Living City (1958), with their implications of endless Midwestern plains and soft, crafted materials and gruffly polite Midwestern conversation and values. They sought a natural expression of this through the medium of the deftly stroked coloured pencil: itself a fairly direct product of the soil.

Frank Lloyd Wright, Living City, 1958. Aerial view: pencil and sepia on tracing paper, 89.5 × 107.3 cm. The Frank Lloyd Wright Foundation, Scottsdale, Arizona.



Delving into crazed territory, we realise that human will is an extraordinary phenomenon. If the desire is strong enough, the attack will be made – ideally with the same integrity as the two scenarios just described. But otherwise using whatever resources come to hand.

There may not always be any particular correlation between the significance of a powerful architectural drawing and its inherent ‘artistic’ merit, if we regard that in the illustrative sense. Such a relation between the representative aspects of illustration and selectivity will return as a central paradox in one’s discussion. This questions the tradition that if a child displayed a talent for drawing and a grasp of mathematics, he or she would ‘make a good architect’.

Finding the Appropriate Visual Register

The vexed issue of comprehension converting itself into reproduction will crop up throughout this survey, but for the moment one is relating only to the issue of motive. Herein lie thousands of moments of irritation and frustration on the part of (even) the motivated: when the concept – or maybe the image – of a project is sitting there inside one’s brain, but the drawn version is but a poor thing. Inhibited by technique, inhibited by clumsiness or inhibited because the imagined notion has no real precedent in familiar imagery.

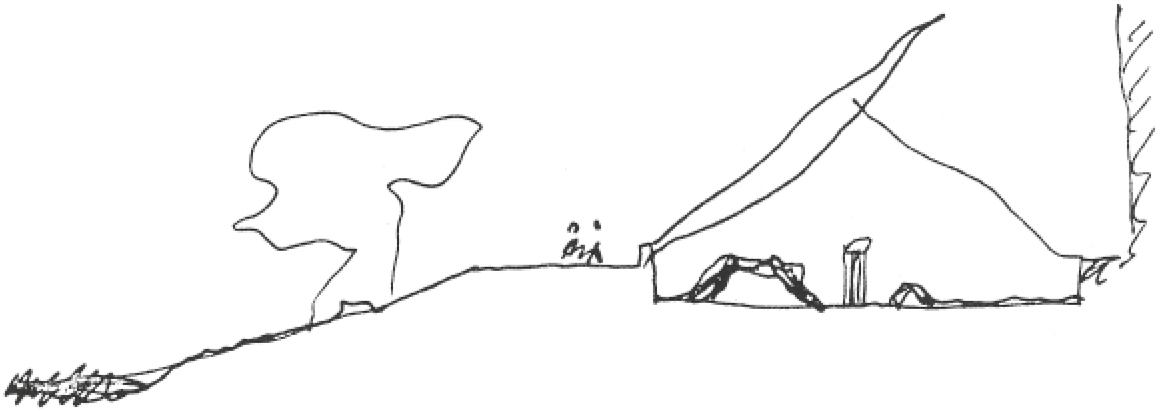
In parallel with the motive lies the link between a statemental notion and the assumed appropriateness of a visual accompaniment: another vexed territory that is perhaps the more so while we remain in a period in which philosophical and political motivation have the high intellectual ground for architectural commentators. It can be argued that during periods in which all drawn imagery, even the most visionary, was expected to refer to built or crafted form, the statement would gain power through the likelihood of the drawn image. Now it is likely that the spoken or written statement will have the acknowledged power and the drawing will be consigned to a supportive role. Could it be that this state of affairs has generated a subconscious will, on the part of the drawing makers, to run to more and more exotic forms, more and more provocative juxtapositions, in order to draw our attention?

Standing back from such complexities, we can admire the gentle power of the Norwegian architect Sverre Fehn’s sketches. To have heard him as a lecturer or critic gives clues to their succinctness. His buildings are characterised by a talent for placement that is both deft and subtle, anticipating the grasping and channelling of light. They are dependent upon a clarity of intention that is carried by the single-move drawings.

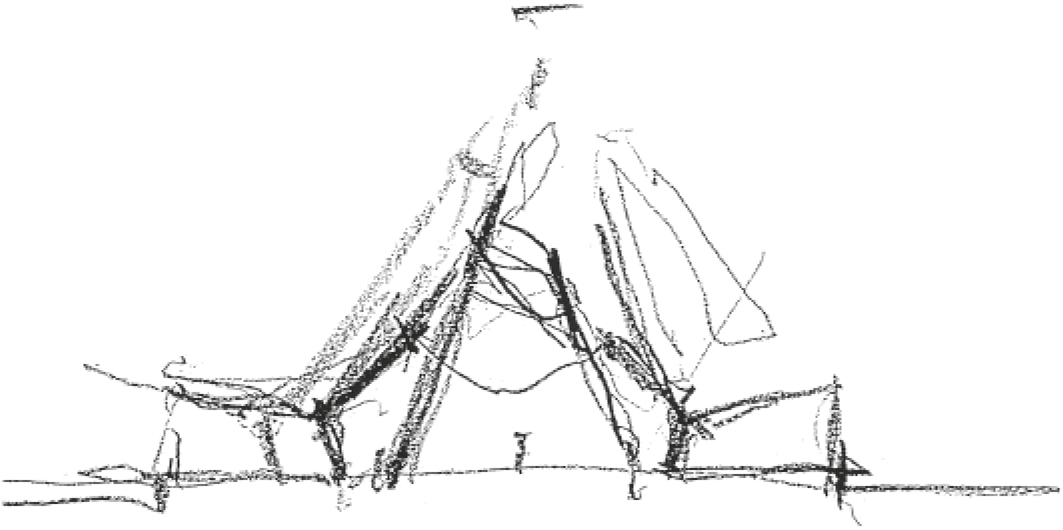
The city library for Trondheim in Norway was to be, simply, an opened book. It was to be a large space inhabited by some internal bridge-like structures. The drawing made in 1977 for this unrealised project is a summary of the siting: the relation to the downtown immediately behind, the river and its riverside park. All carried in a one-minute jotting.

The relative agitation of the Museum of History at Ulefoss (1995) is probably a smaller, even faster drawing, its more scribble-like dynamic suggesting that Fehn was here making a determined point about the channelling of light and the folding of structure. As a teacher, Fehn often had a pad of paper ready on an easel and, to make a point, would run a simple linear profile or two across it. Intriguingly, despite an acute sense of materiality and detail, he has refused to waste time on elaborating these issues outside the working drawings.

Sverre Fehn, Trondheim City Library, Norway, 1977.

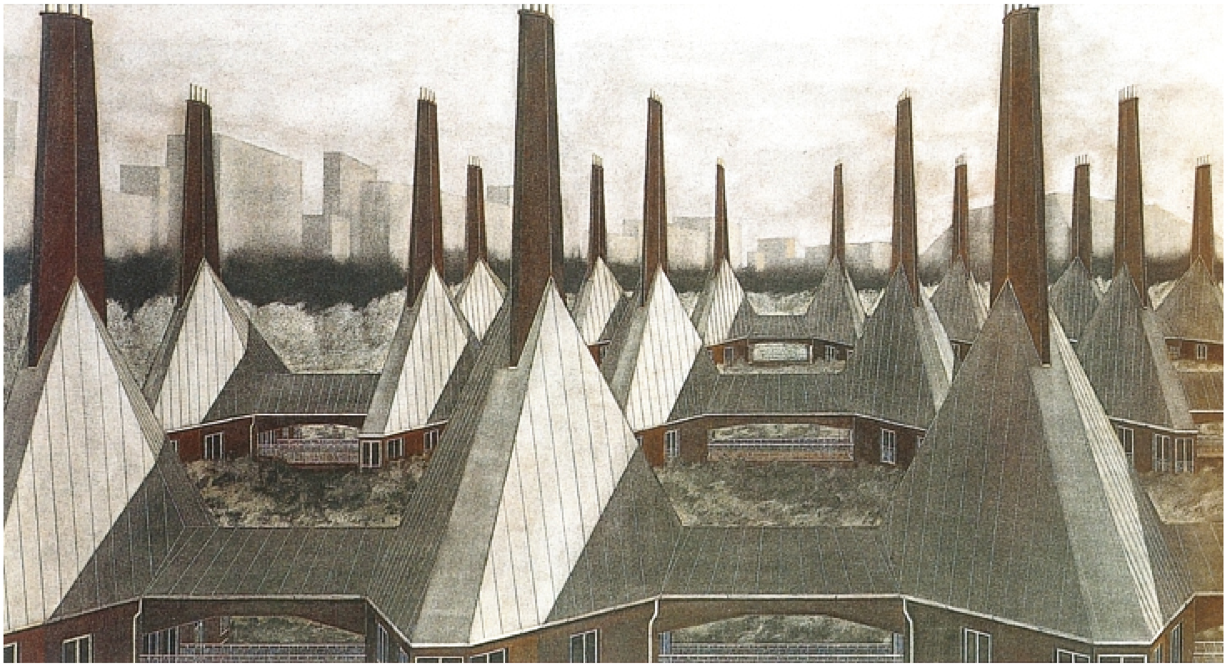


Sverre Fehn, Museum of History, Ulefoss, Norway, 1995.



Tectonics hardly seem to be the issue for Suburb of Tolbiac (1989) by Czech-born Swiss architect Miroslav Šik. The implicit cynicism or critique set up by the work is carried through the relative eccentricity of the chimneys and roofs, which are, after all, traditional elements. Furthermore, it is unequivocally at odds with any other Parisian suburb with its tight urban streams of buildings that are nonetheless reminiscent of the tradition of the cottage. The choice of colour and tone is not quite monochrome, nor pastel (that, after all, would be far too sweet), but uses enough brownish-black to create a brooding, angry atmosphere. Šik's mentor, Aldo Rossi, rarely went this far, his drawings being more reduced and concerned with the fundamental disposition of windows and edges, and sometimes even quite joyful.

Miroslav Šik, Suburb of Tolbiac, Paris, France, 1989. Colour pencil and Jaxon pastels, 120 × 84 cm.



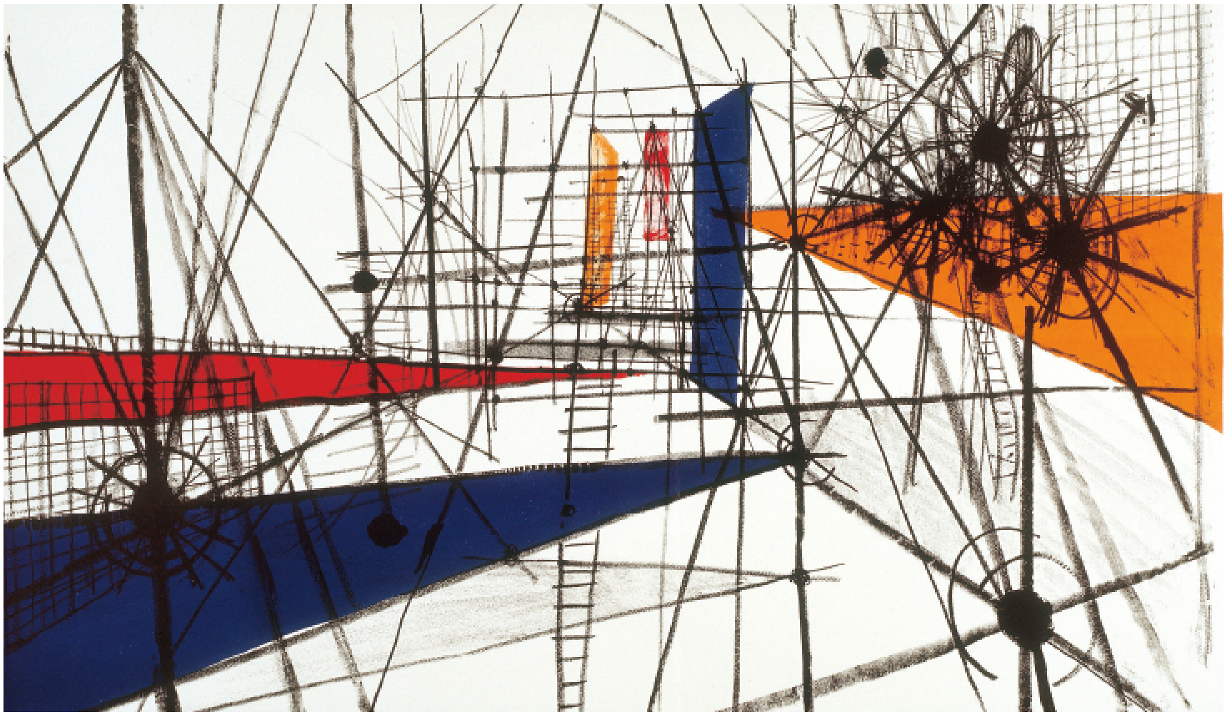
It is often worth noticing the parts of such a drawing that are not particularly emphasised; such as the city seen in the background. A basic light-side/dark-side indication on rectangular blocks says it all. The 20th-century city, whether Paris, Central Park East or São Paulo, lies behind a brooding woodland (or is it a fog?). The ultimate effect of the piece is to imply a fierce arrogance that has not seemed to resonate outside a small circle of admirers. In the late 1980s and early 1990s, the other members of the circle of Analoge Architektur, based in Paris, Berlin, Stockholm and Vienna, subscribed to the same palette and certain mannerisms, as did their students.

It is, of course, easily possible for societal critique to be sustained by a more positive mode of physicality than Šik’s. In the 1960s, the Dutch painter and Situationist Constant Nieuwenhuys sketched and formulated endless pieces of invention – almost all of them lively. They sit interwoven between the more proclamatory documents and graphics of his fellow Situationist Guy Debord on the one side, and his own models on the other. With those most seductive of all plexiglas platforms, webs of structure and occasional domed folds, it is these three-dimensional icons that stay in the memory as the accessible face of the Situationist International. So the question to what extent the little drawings were always intended for a supportive role, is intriguing. If one is already establishing the fact that mere simplicity or apparent unhurriedness of a sketch is no indicator of its position in the creative path, one must argue that the spontaneity of the sketch or scribble is potentially far closer to the moment of ‘idea’ than the considered, laboured presentation piece. It is possible that in such a long and sustained piece of work as Nieuwenhuys’s New Babylon (1956–74), the central motive was already established before most of the little drawings were made, yet they still carry in them a certain creative value: a ‘quality of thrust’ as it were. A dance to the theme of invention perhaps?

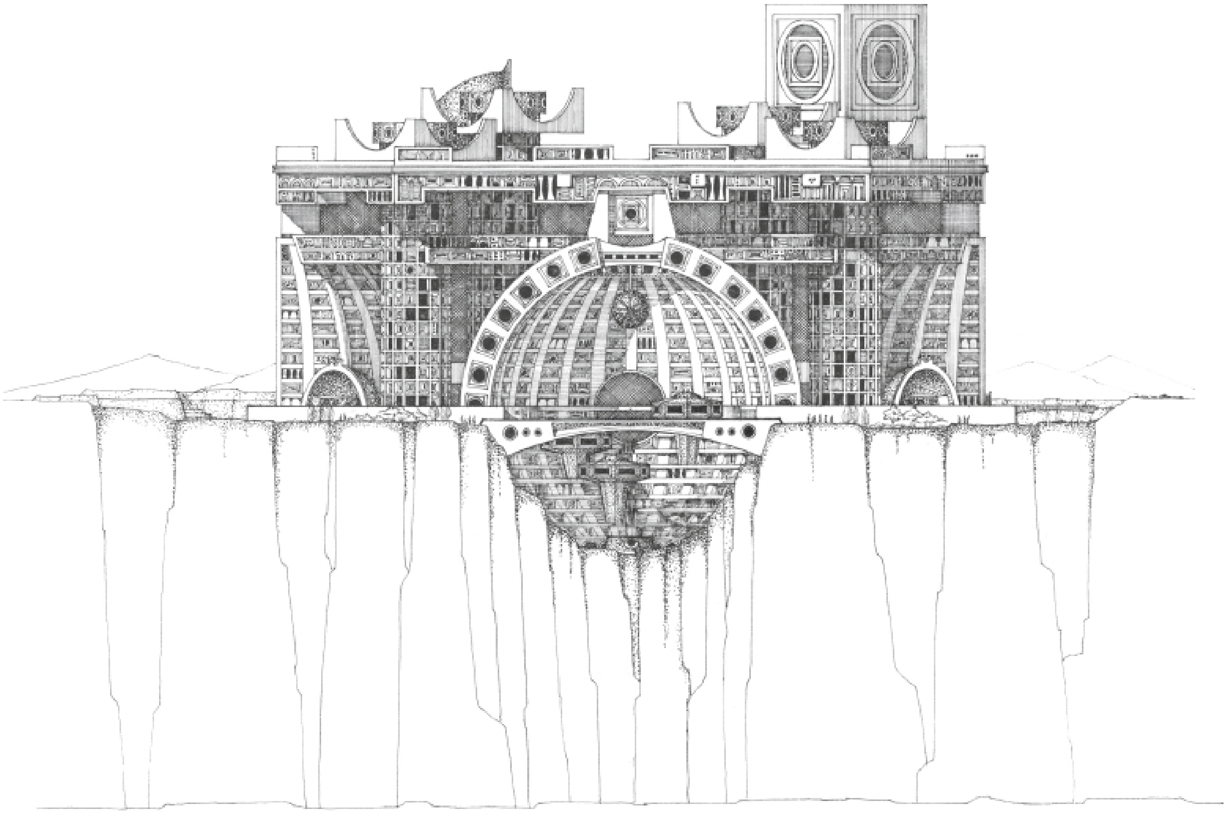
A vision that sustains more than half a lifetime and that even begins to be realised after many years may call upon the drawn evocation simply as the fastest way of suggesting the might and complexity of the thing. It is hardly the spearhead of the Arcosanti project, a city in the Arizonan desert, designed by Italian-born Paolo Soleri. After all, he has been a potter, a bell-maker and an architect. The power of Soleri’s objects lies in the spatiality of his vessels: of every scale. He gathers younger creative people around him; he is happiest when forming pieces. Yet the Arcosanti proposition is an ambitious, hierarchical complex. In the 1970s Soleri would inspire architectural audiences of several hundred with the power of this great city that he would make. Drawings would suggest its might and, most importantly, show its vessel-like quality. A certain type of drawing was necessary: not crude, yet essentially thick and powerful in order to carry the vessel. To many, these have remained the vision of that city, and the particle of it that has been built has the validity of actuality: the guy made it!

Yet the total ambition is a greater dream and many who appreciate the dream never make the journey to Arizona.

Constant Nieuwenhuys, New Babylon, 1963. Hardback book in a blue cloth-covered, slip case, H 41.5 × W 39 × P2.3 cm. Collection FRAC Centre, Orléans.



Paolo Soleri, Arcosanti, 1969. Black ink on paper, 27.9 × 41.9 cm.



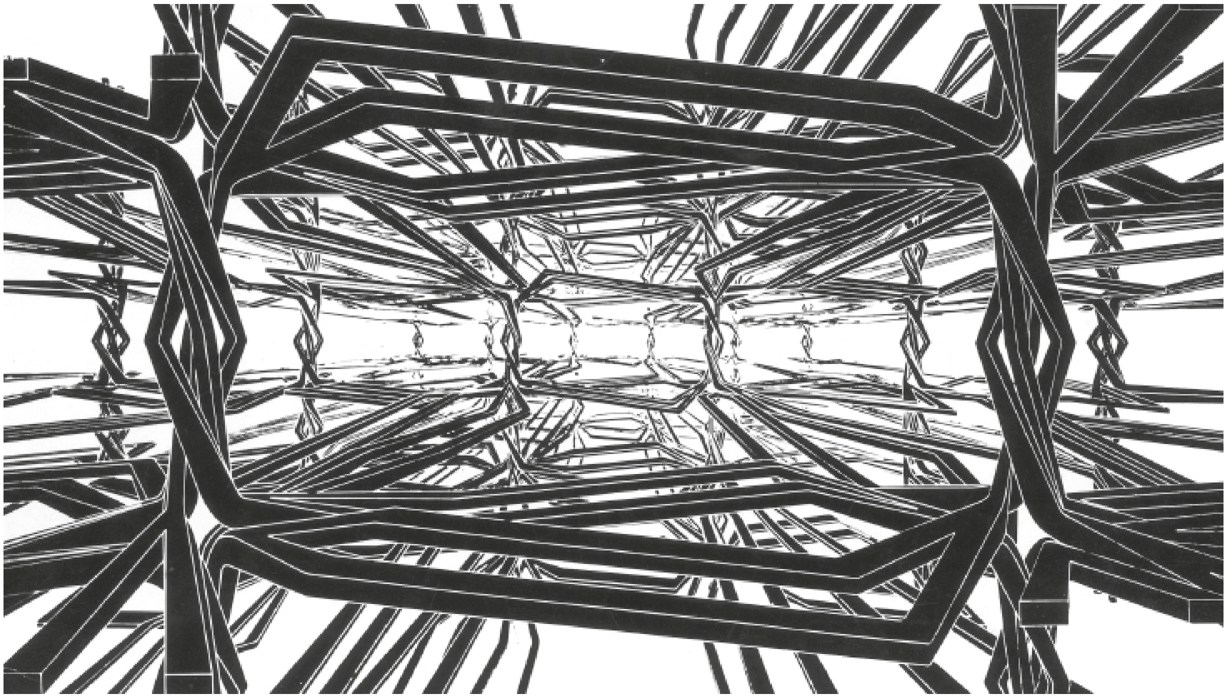
Experiment and Graphic Vision

At this point we must face a nagging suspicion: that the drawing can possibly be better than the reality. This clearly does not escape the world of commercial architecture where the cost of perspectives, ‘renditions’ and now – more often – fly-through movies can rival that to be spent on the actual design of the thing. In the case of Arcosanti, the drawings of the whole city were essential for the creation of the direction or thrust of the project and in the setting up of a surrounding euphoria – instances intrinsic to its initiation.

From the 1950s, the western American desert became a dream territory for another European architect, the German-Jewish émigré Konrad Wachsmann. Also initially a craftsman, Wachsmann envisioned giant hangar structures lying suspended over the seemingly endless territory. Yet as an adjunct to his more easily constructible propositions was his constant search for the ‘universal joint’ and a belief in the potential of structural fluidity. Anticipating the animated analysis that is now familiar to us, his twisted space structure has a shocking power. Its sinewy totality has become a key icon to the believers in a technological architecture who also resonate to its inherent lyricism.

Technically, it must have required painstaking concentration: of the tradition of Gothic tracery as much as of 20th-century positivism. It pointed the way towards the late 20th- and early 21st-century’s fascination with linear plasticity and the morphing of material. It may be relevant that Wachsmann was a close friend of Albert Einstein. It may be equally relevant that he started his career learning joinery.

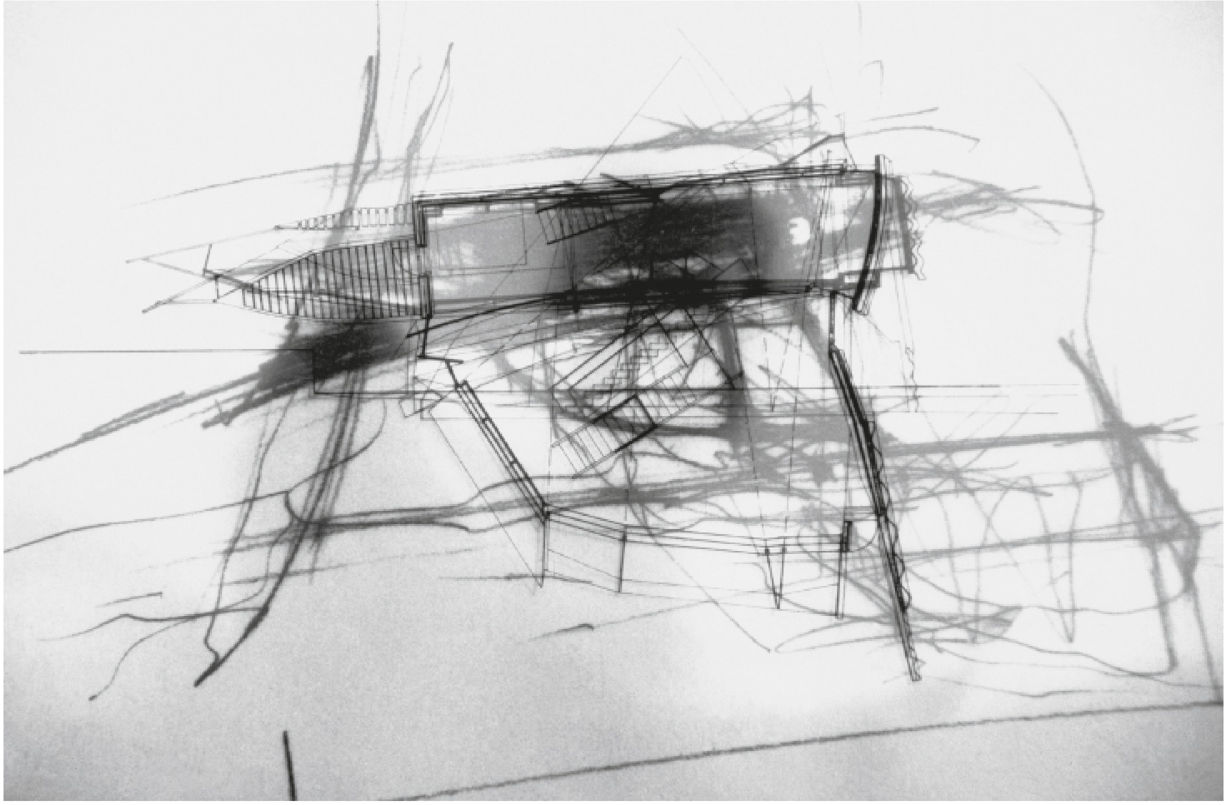
Konrad Wachsmann and students, Vinegrape, 1954.
Drawing, 12.8 × 22.5 cm.



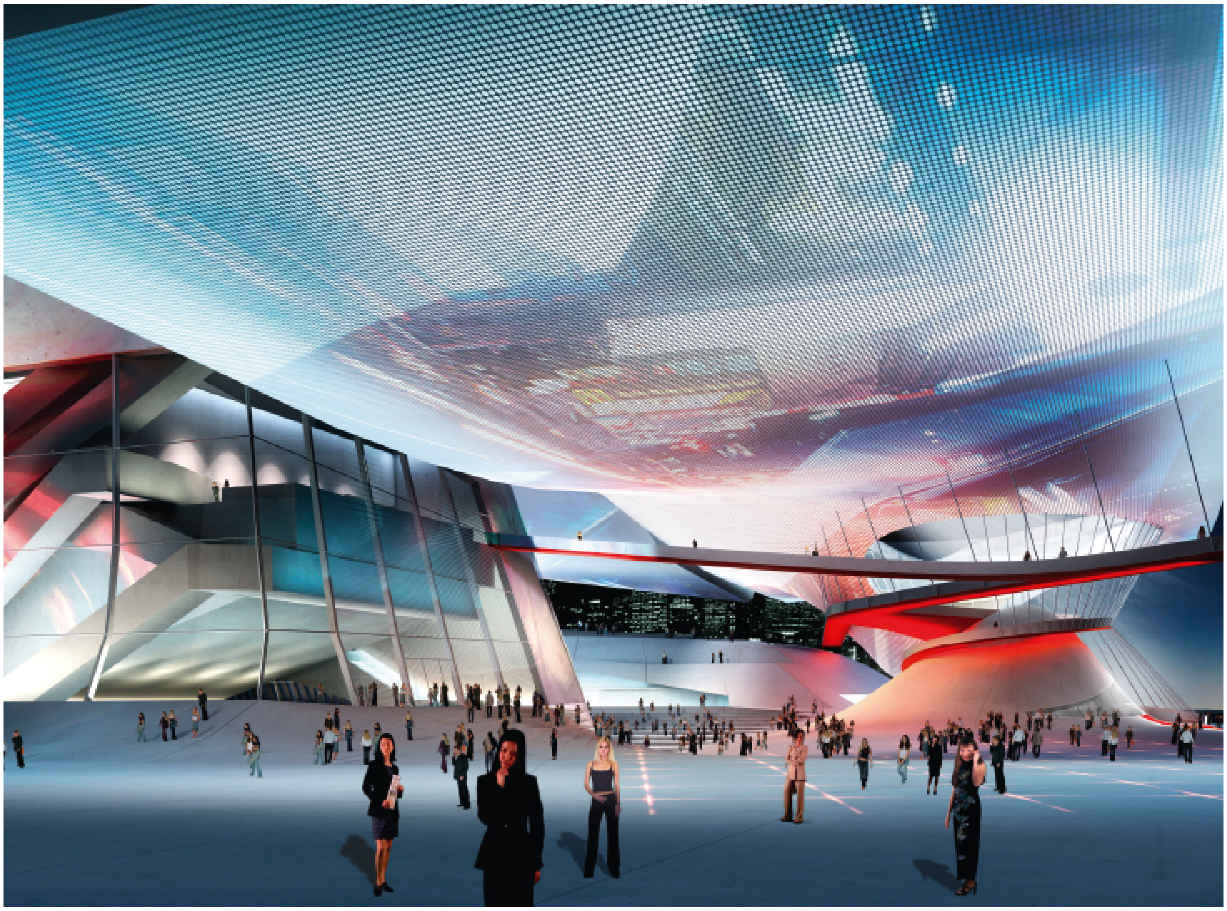
Vienna-based Coop Himmelb(l)au has successfully made an almost seamless transition from crazy experimentalists through an incremental series of built projects – few of which fail to intrigue us – and then to the making of large and complex buildings of great beauty. The sketches that have accompanied the work throughout come directly from two of its founders, Wolf Prix and Helmut Swiczinsky. On close examination, many of these sketches bear an uncanny closeness to the built object. In particular this applies to the work of the ‘middle period’ of the late 1980s and early 1990s in which a series of jagged spars thrust out in several directions. It is the surefootedness of these drawings that intrigues one, along with their sheer power.

Wolf Prix has admitted that as the fifth generation of architect-craftsmen he wandered around his father’s studio from the age of six, respecting the elder Prix’s ability to draw any detail precisely to size without measuring. One can reconstruct the progress from then on an artisan tradition of delineation that suits the Austrian precision with elements and the crafting of them. As the spokesman and the dynamo of the company, Prix has closely allied the mood of the rapier-like line, the stake in the flesh or ground (which we shall meet again in the work of Walter Pichler in Chapter 8), rhetorical battle cries such as ‘architecture must burn’, and the sheer élan that comes from the creation of extraordinary envelopes and extraordinary spaces.

Coop Himmelb(l)au, Open House, Malibu, California, USA. Collage of a plan (on translucent paper) and a sketch (pencil on paper), 1983 and 1988–9.



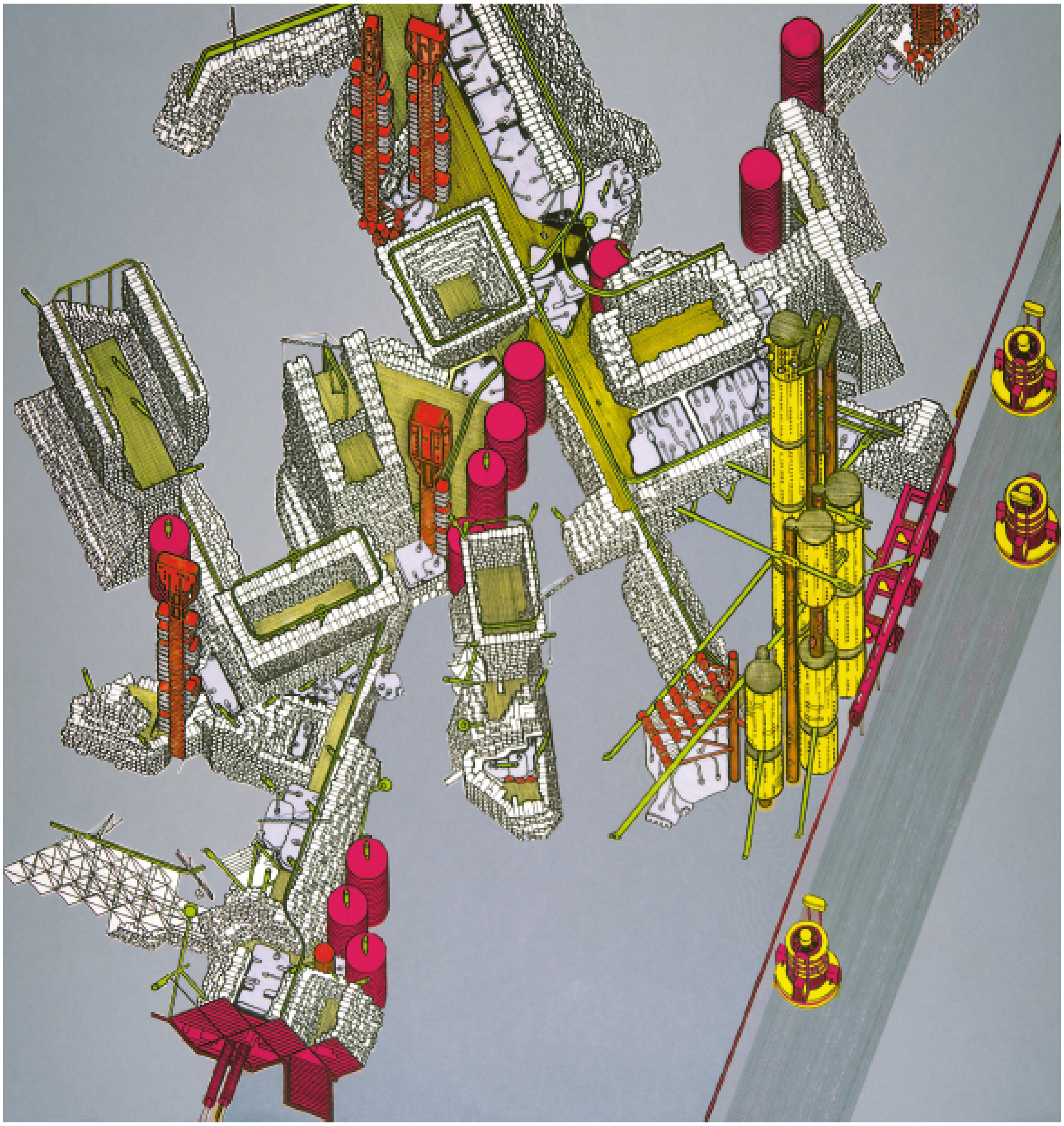
Coop Himmelb(l)au, Busan Cinema Complex/Pusan International Film Festival, Busan, South Korea, 2011.



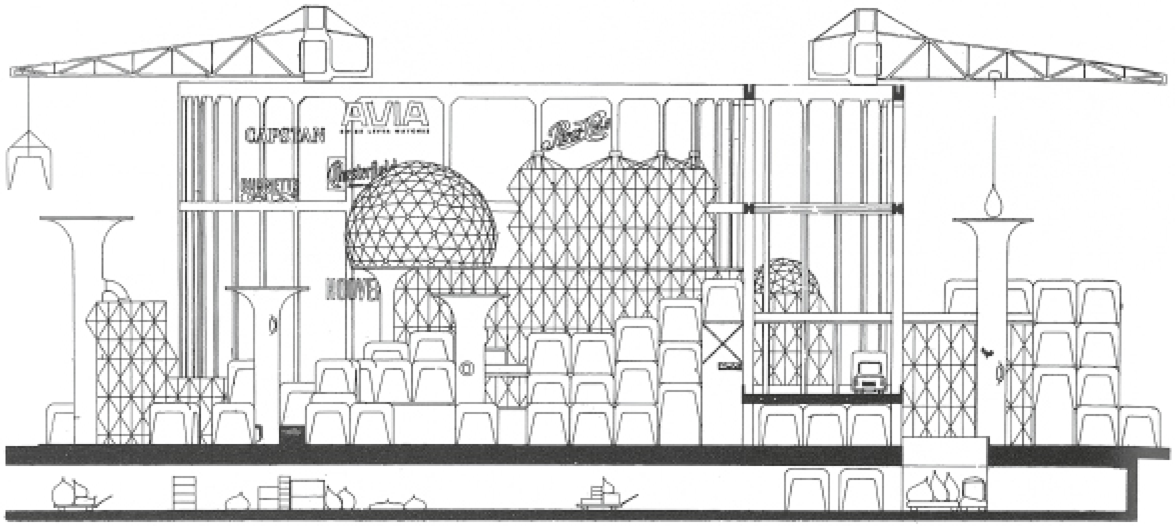
Models have always accompanied the work and now, of course, there are computer renditions that even use showbiz techniques, such as the 2005 competition-winning design for the Busan Cinema Complex in South Korea. From those classic Himmelb(l)au drawings remains a total understanding of the enclosure and the measure.

My own procedure towards a sustained portmanteau project had nothing of Prix's inherited reliability and my work has rarely strayed from a support territory of mechanical line-guides and wobbly stencils, compasses and constant measuring. The Plug-In City (1964) was a development out of two earlier Archigram projects – the Nottingham Shopping Viaduct by Peter Cook and David Greene (1962) and any competition-winning design for the Montreal Tower (1963). It started as a series of small cocktail-stick models that checked out the megastructure proposition, followed by the drawings of the system of working parts. Only after these did I feel confident enough to proceed with the key image: the axonometric view from above.

Peter Cook, Plug-In City, 1964. Axonometric: cut-and-pasted printed papers with graphite and clear and coloured self-adhesive polymer sheets on grey paper-covered board with ink, 69.5 × 75.9 cm. Collection of Modern Art, New York.



Peter Cook and David Greene, Nottingham Shopping Viaduct (precursor to Plug-In City), UK, 1962. Ink line drawing, 25 × 15 cm.



By this time, isometric and axonometric drawings had become a preferred mode of three-dimensionalisation (particularly in British circles – notably the axonometric projections of James Stirling’s work that became referential images of the 1960s and 1970s), beloved by those of us who relied upon the apparatus of the drawing table and, in particular, the adjustable set-square. Yet you will notice that the drawing itself is maybe 65 per cent freehand drawing. First, I made a plan on graph paper: this was essential for controlling such a complex piece and at the outset I realised that it would be an endless task if I were to draw every capsule from a stencil. Here I would have to risk my freehand abilities! There was another category that anyway needed to (symbolically) be more ‘floppy’, namely the inflatable covers to the public spaces with their (symbolic again) little air tubes feeding into them. By contrast the craneways and hovercraft track would need to be straight and determined: surely no place for freehand here.

The drawing was made in the evenings and at weekends, spanning many one- or two-hour sessions. Once under way, the thinking 90 per cent done, it became a steady task of moving across the drawing from one corner to the other: rather like painting the Golden Gate Bridge. From this description you will gather that such drawing is in no way spontaneous, but already a year or more into the thinking on the project and a season into its execution. Yet strategically, if the project was to be taken seriously (by myself, as much as by anyone else), it needed this total picture. Arguably, the long cross-section of the Plug-In City, Central Area, made a year later, has a wider range of architectural and systematic content, and the earlier, smaller section makes all the key decisions. Yet it is this aerial view that establishes the proposition – especially for non-architects. Its virtue is that it 'looks like something', and the City enters the history books.

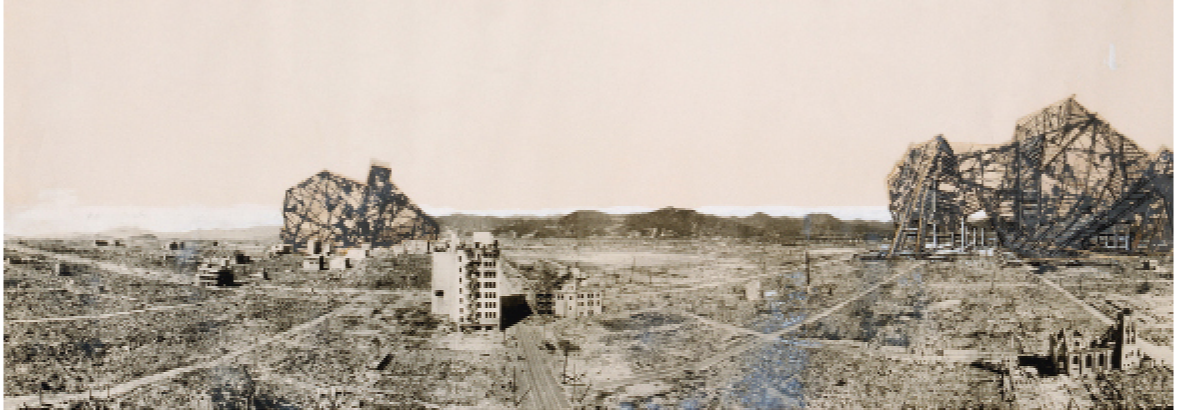
Communicating with Clarity

This question of whether the motive of a vision, a project or a building needs to be recognisable is another ground for debate and possible confusion. After all, the Plug-In City (unless you were a specialist on the subject of European megastructure projects … and even then?) was hardly a familiar built form. Yet somehow, most viewers get the main idea from it, hopefully appreciating the subplot of the scheme that implies that of prefabrication can be romantic. Sverre Fehn could make his points with much less effort. Miroslav Šik could insinuate his points almost theatrically. To make mine, I needed an assemblage of parts.

From whatever starting point, it seems that clarity of priorities is at the centre of the issue. The need for illustration comes into play, even if it has to be conscious illustration for the sake of communication. Or in other words, the revelation of the motive may have to involve the architect in an intermediary distancing from its thrust in order to calculate the possible impact.

Here, I am still avoiding the territory of those bland ‘visualisations’ that rarely contribute much to the motivation of the work. As I move on to the discussion of the work of Arata Isozaki, Andrea Branzi, Bernard Tschumi, Cedric Price and Wes Jones, I remain in the territory of full and intense involvement on the part of these instigators – yet in every case, there is crystal clarity of communication to anyone with half an eye.

Arata Isozaki, Re-Ruined Hiroshima, Japan, 1968.
Perspective: ink and gouache with cut-and-pasted gelatin silver print on gelatin silver print, 35.2 × 93.7 cm.



The collage will emerge within these pages as a critical tool of the 20th-century architect. Its continuation as a system of comprehension and as a creative trigger of lateral referencing, lateral thinking and morphed physicality is assured by the advent of the computer. We can now so easily combine, mix, melt or otherwise encourage the hybridisation of ideas, tectonics, materials and images. Yet it is collage, in the sense of Braque, Picasso, Schwitters, which has caused the shockwaves within a hitherto stable world of conformity or homogeneity. We expected the countryside to flow gently from hedgerow to hedgerow, for culture and language (of form, as well as everything else) to