FOCUS

Return of the master builder

Report by Deyan Sudjic, Architecture Correspondent

AS BRITAIN'S architects gather this week in London for their annual conference, their mood is sombre. The immediate worry, rooted in the recession, is a dearth of commissions. But what hurts just as much for the members of the Royal Institute of British Architects is the dismal public image of their profession.

The memory of the Poulson scandal may be fading, but the tower blocks still stand as monuments to the planning disasters of the past two decades. And architects get the blame for them. George Nicholson, the Bennite deputy chairman of Greater London's planning committee, recently accused architects of "strangling the life out of communities all over Britain"; and many who do not share his politics would echo that sentiment.

Yet amid all the gloom, there are unmistakable signs of revival. Paradoxically, the international standing of British architecture has rarely been higher, largely because of the reputations of three men — James Stirling, Norman Foster and Richard Rogers — whose ideas are explored below. And there are other, general causes for optimism:

● In a curious echo of the 1930s, the depression has coincided with a marked improvement in building design. True, there are still too many dismal concrete filing-cabinets being created in the name of architecture, but the signs are that the grip of the "developer's architect," hired for his skill at sidestepping planning regulations rather than for any talent at the drawing-board, has been broken.

● Revulsion at the urban disasters of the 1960s and 1970s has made local authorities and the Department of the Environment pay at least lip service to good architecture. And a series of decisions by the environment secretary, Michael Heseltine, particularly his handling of the flood of projects mooted for the London embankments, has made it plain to developers that they are more likely to be given planning permission if they employ good architects.

● The Royal Fine Art Commission, the country's environmental watchdog, has become much more outspoken, castigating poor designs, speaking up for those it favours, and quietly urging developers to drop mediocre designers.

AFTER the excesses of the Sixties and the disillusion of the Seventies, many critics have pronounced modern architecture dead. Its death may well prove a release. The Eighties look like being a particularly interesting and challenging period when old dogmas have been abandoned and no new doctrines have as yet prevailed in their place. This is one of those rare times when almost anything is possible, from neo-classicism to high technology.

A powerful blend of aesthetic and moral certainty dominated architecture between the Thirties and Seventies: form had to follow function; ornament was crime; right angles and flat roofs were compulsory. The outcome was supposed to have been a better life for the occupants of the resulting buildings. As we know, the dream did not come true.

The initial reaction was a timid rush towards self-effacing design. In the late Seventies, everything from office blocks to fire stations was being camouflaged by a skin-deep layer of brick-and-tile domesticity. The most extreme example of the tendency was Hillingdon's new town hall, a mundane open-plan office block with an exterior resembling a giant row of suburban villas.

We are now seeing a much more full-blooded rejection of the fundamentals of modern architecture as many former disciples trample gleefully on the principles they once held sacred. Ornament is back with a vengeance, giving rise to forests of corinthian columns and mouldings. Architectural humour, of a sadly heavy-handed kind, has become fashionable. And architecture courses in the fundamentals of air-conditioning are being crowded out of the syllabuses by traditional studies in the measured drawing of old buildings.

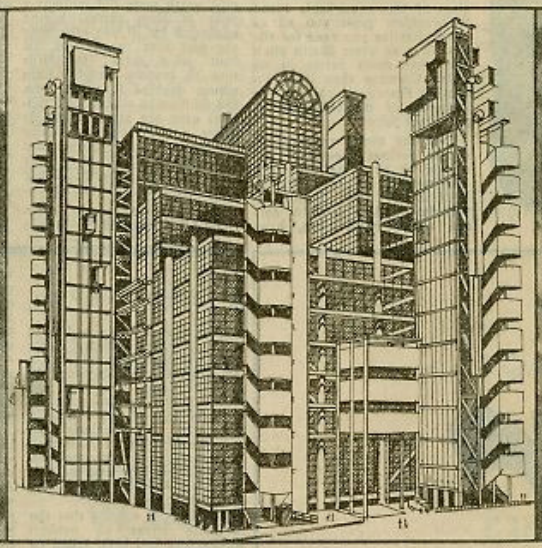
Right-wing architectural historians, led by David Watkin of Cambridge, are trying to demolish modern architecture's pretensions to social purpose. Architecture, Watkin claims, is simply a collection of isolated individual masterpieces, which can be judged only by the criteria of educated good taste. An immediate by-product of his polemics has been a sudden interest in the works of Albert Speer, and the rehabilitation of Edwin Lutyens. Lutyens, who designed New Delhi as well as a torrent of Edwardian country houses, will be the subject of a major exhibition at London's Hayward Gallery next month. He has been rescued from obscurity to be proclaimed as the upholder of the true English tradition of architecture, cut off in its prime by the intrusion of alien, left-wing refugees from Europe.

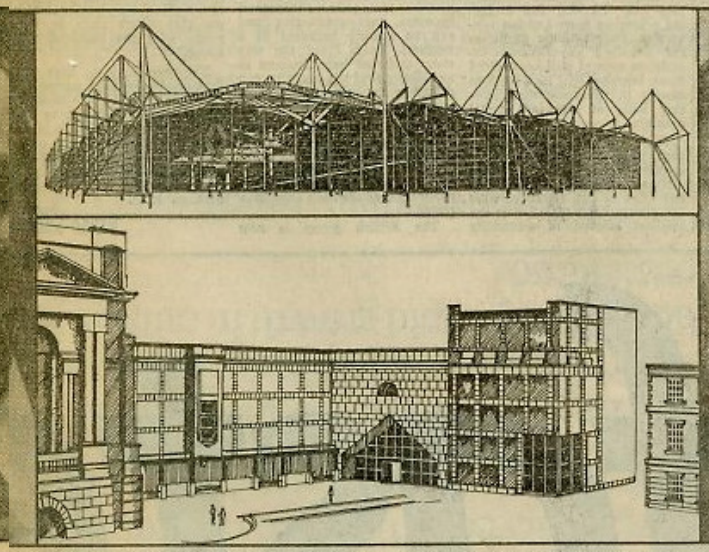
James Stirling has now become identified firmly with the historicist school, while Rogers and Foster are the principal surviving exponents of the modernist idea that architecture can change the world by improving the everyday quality of people's lives.

The supporters of these three master builders generate much sound and fury over the supposed battle of the styles, and a new orthodoxy may well emerge sooner or later, probably with stultifying results.

In the meantime, we should enjoy a stimulating variety of styles, changing Britain from an architectural backwater into a major international centre.

Drawings by Kenneth Robinson





Architects and their artefacts: left, Richard Rogers next to his design for the new Lloyd's headquarters; centre, Norman Foster with his planned Renault building (top); far right, James Stirling next to his Tate Gallery extension

RICHARD ROGERS

High tech

George Pompidou Centre at the Place Beaubourg in Paris, which has become a bigger crowd-puller than the Eiffel Tower and the Louvre put together. Rogers and his former partner Renzo Piano were rank outsiders when they entered the competition to design the centre in 1971. Their earlier work together had been on the outer leaving the nuts and bolts of the job to his acolytes. In fact he doesn't draw particularly well, and his main contribution is in ideas.

He uses a lot of unfamiliar materials and shapes, and his buildings tend to look like technological cathedrals. Artfully arranged plumbing is left exposed. Lifts and staircases

NORMAN FOSTER

No tears

furniture, and looking after a cold-store.

He went on to take a master's degree at Yale, where he and Richard Rogers were tutored by James Stirling. He spent two years working in the United States (he retains an admiration for the hard-nosed American style), and then returned to

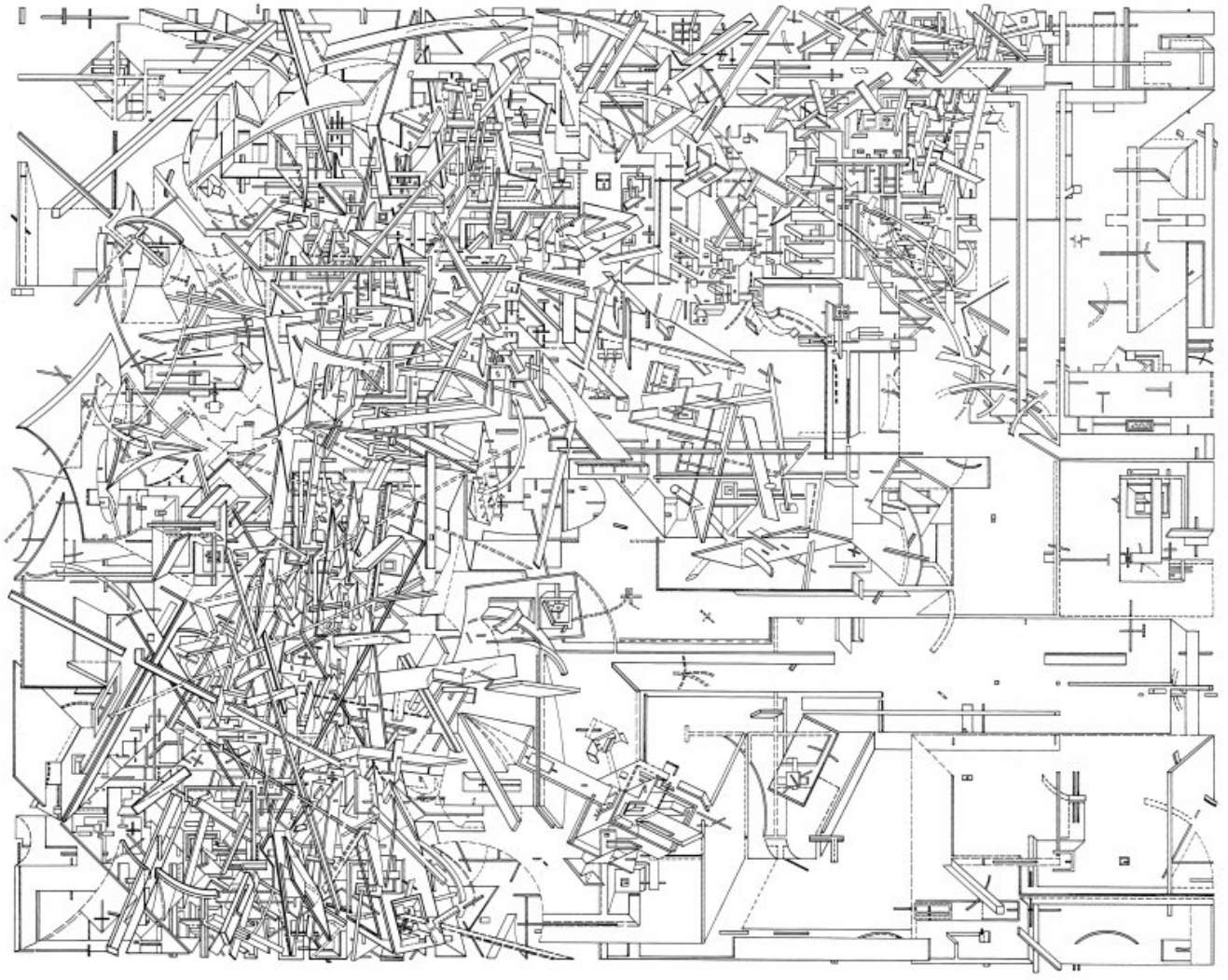
tions. He involved the strike-prone workforce in the design of the new building and used simple but effective ideas like a common entrance and carpeting on the shop-floor to destroy barriers between management and workers.

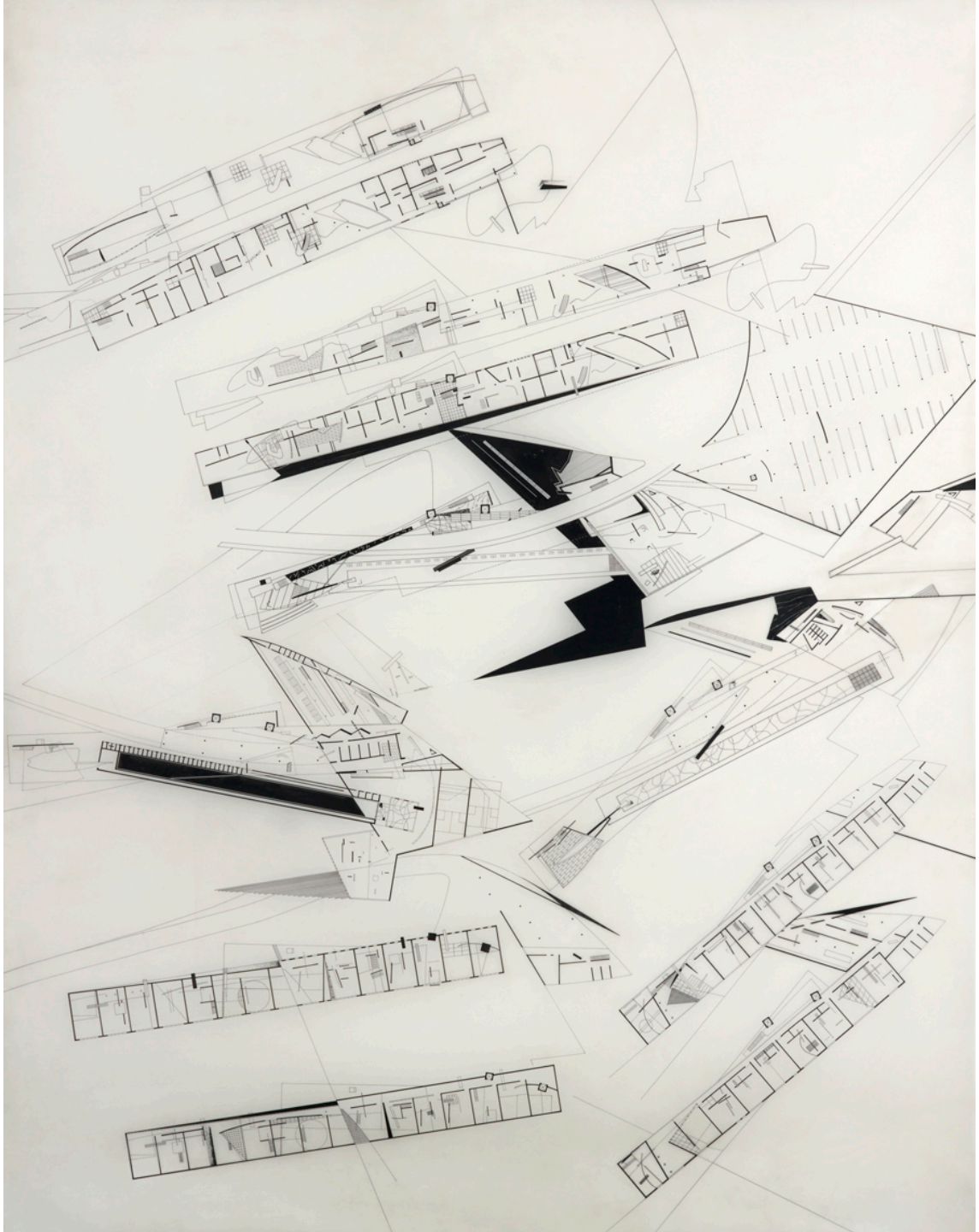
Foster's practice has engineers and technologists on the staff, as

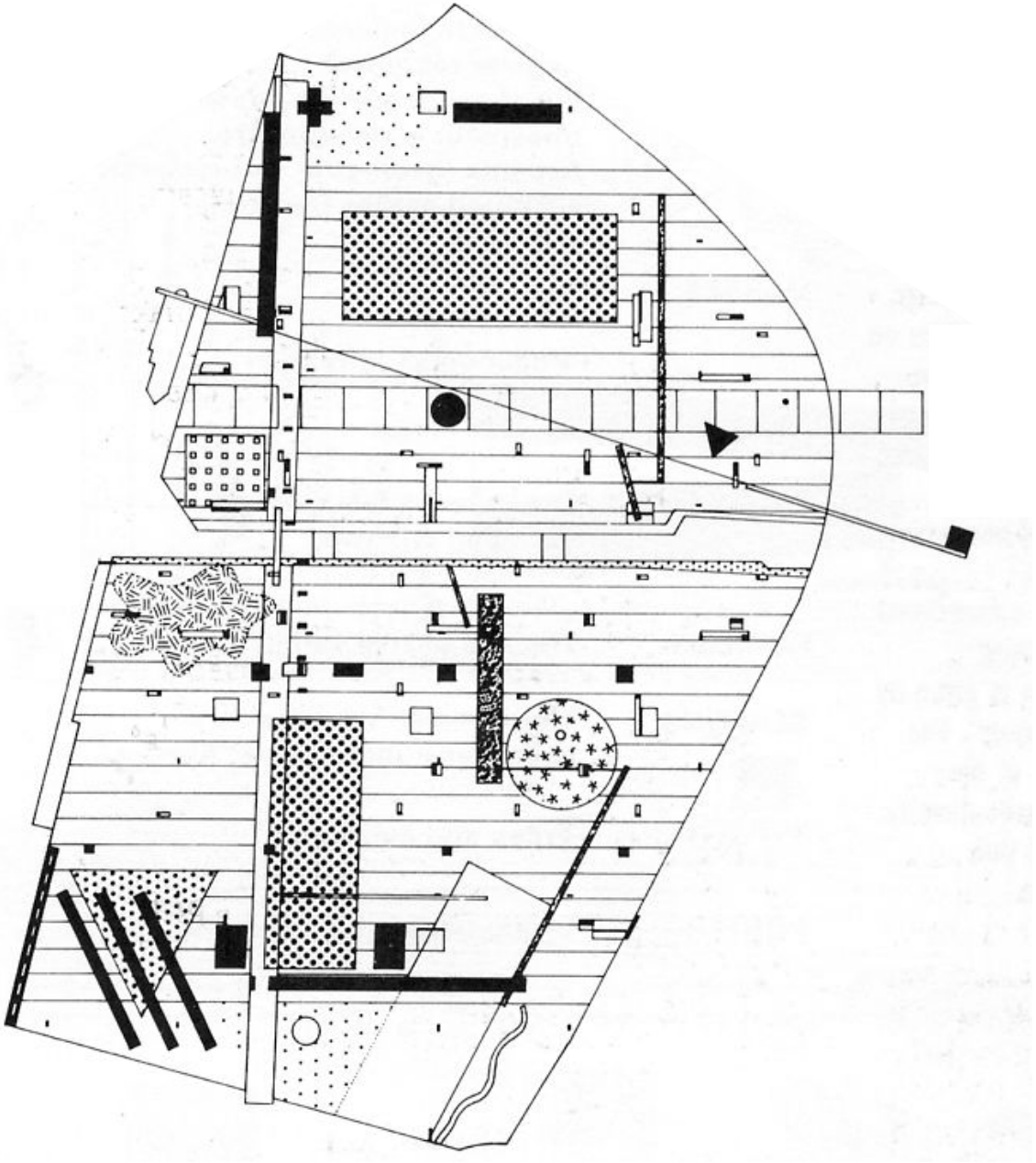
"I get more kicks out of what is happening now than from mummified monuments," he says. He sees the present as a time full of possibilities, "pregnant and bubbling with opportunity." For architects, "the energy crisis is probably the best thing that ever happened," because of the chance it gave them to look at building in a

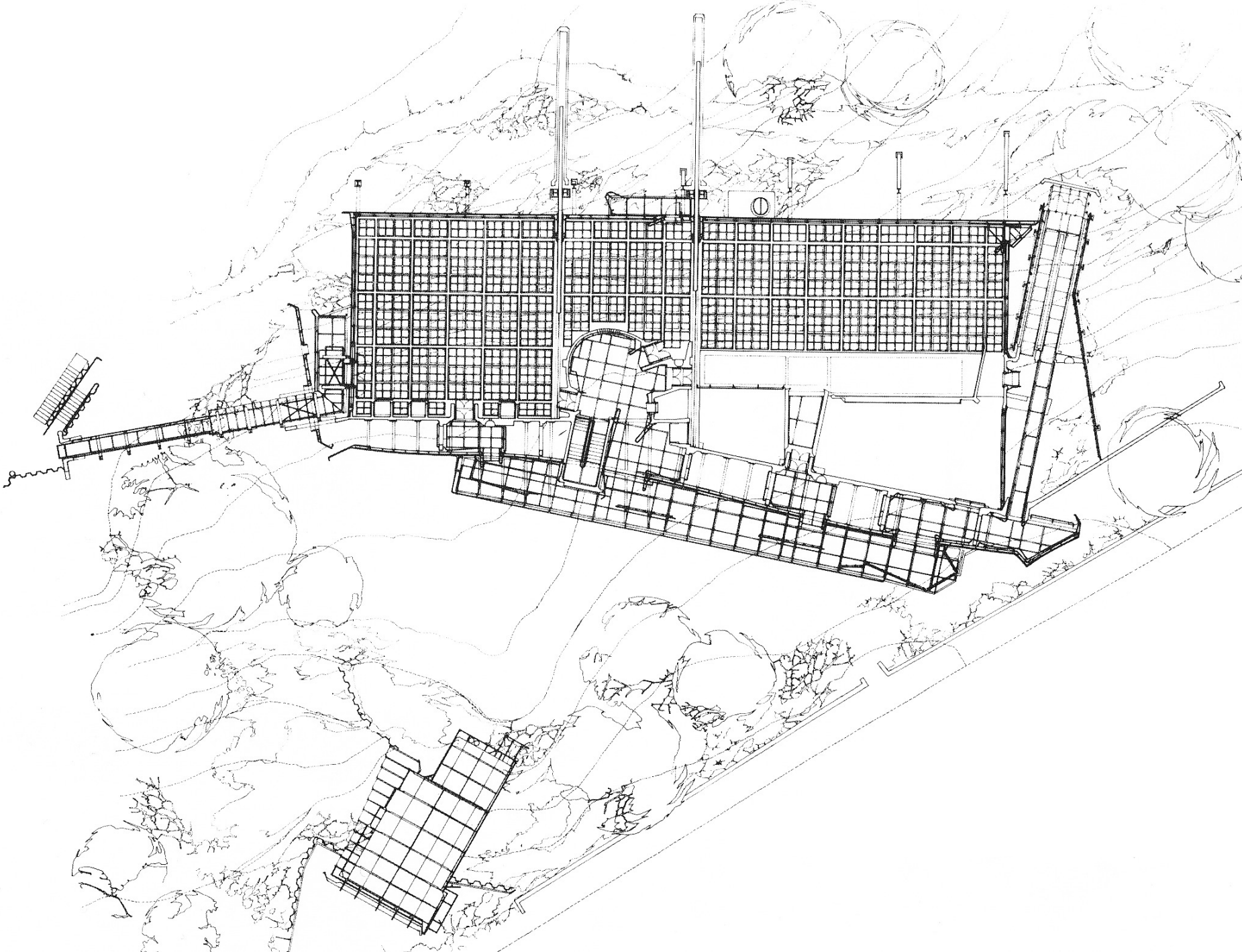
of my buildings I don't feel that it is necessary to open up and talk about beauty. My starting point is more often the way in which the engineering works." It is an approach that can make his buildings sound dull, but the buildings themselves are another matter.

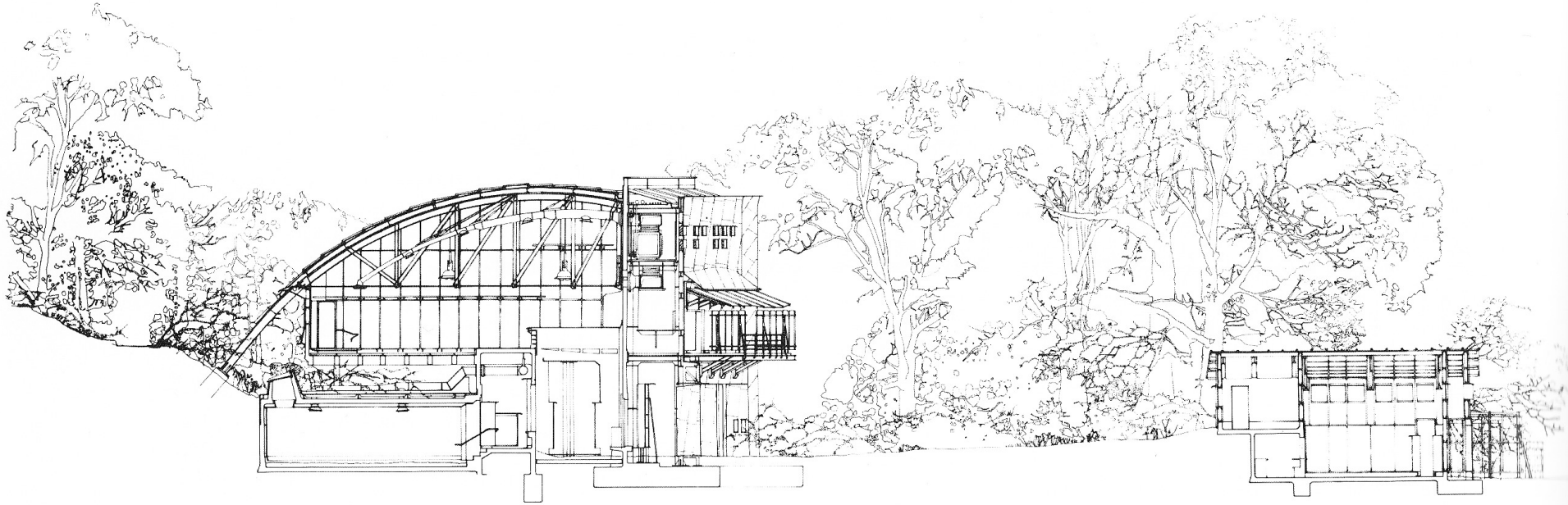
Foster was greatly excited

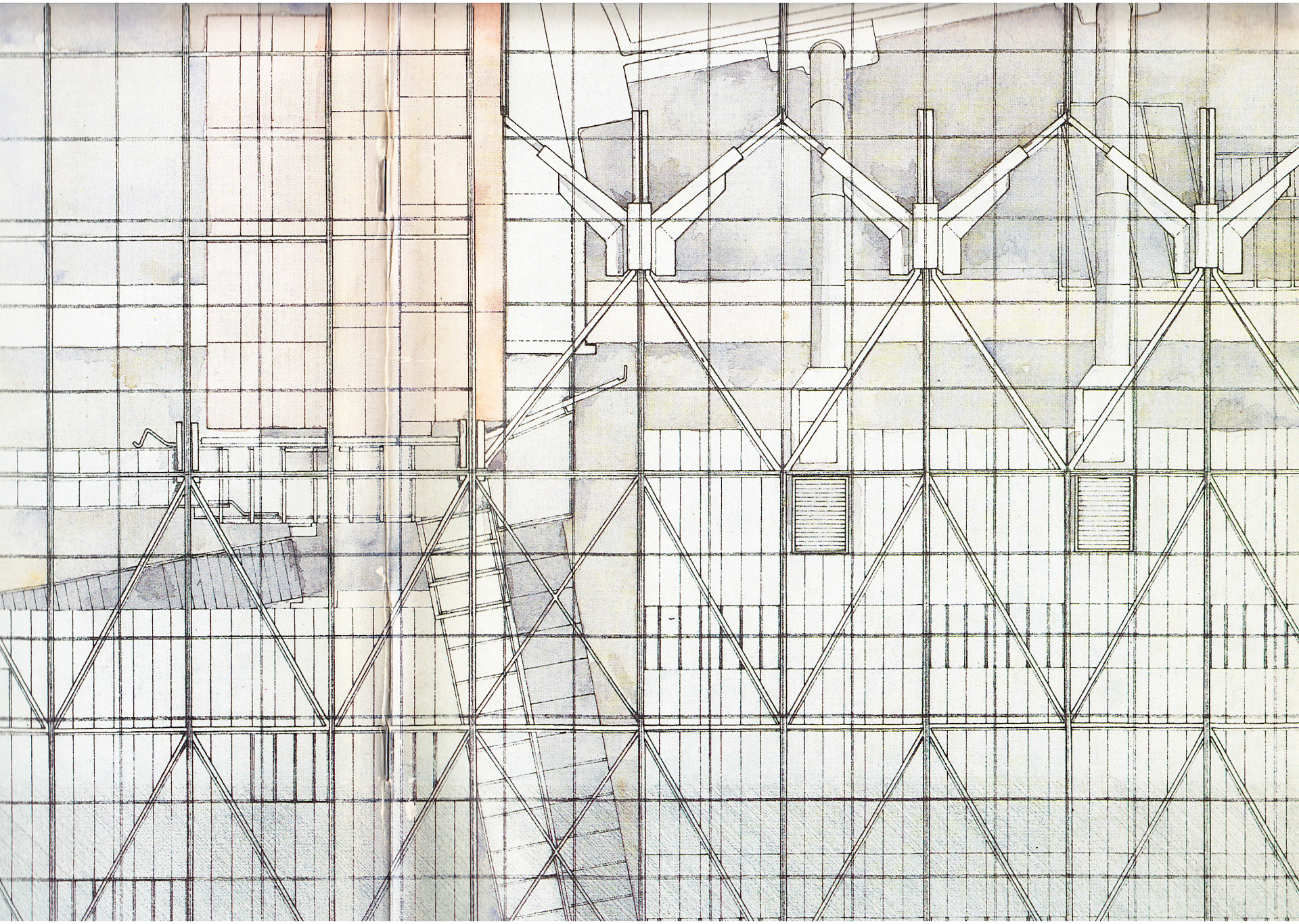


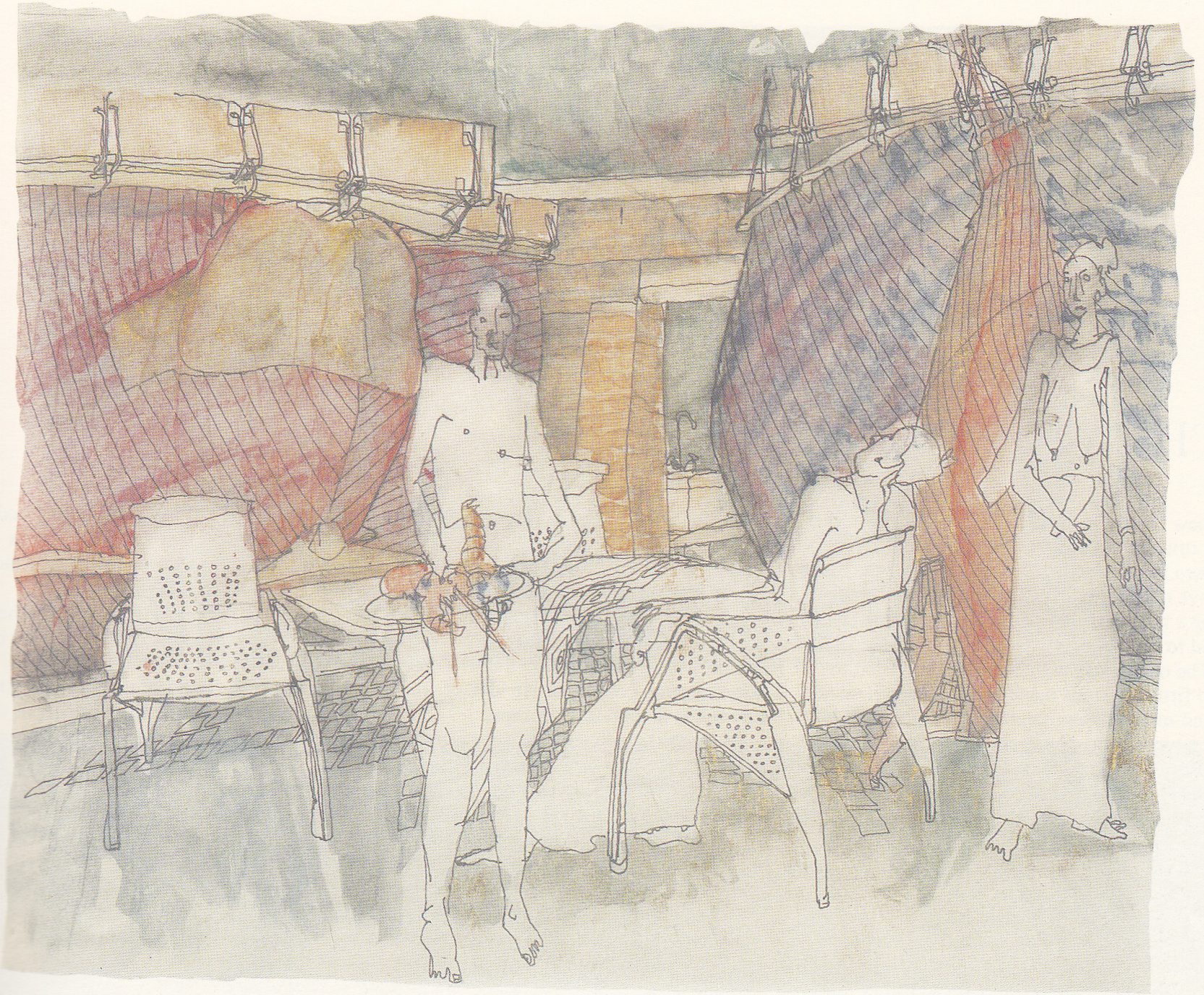


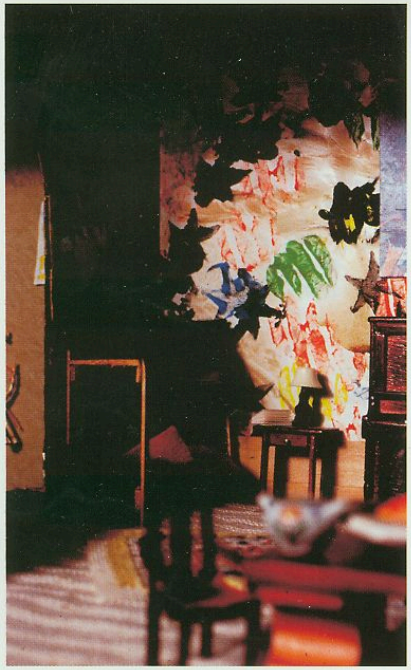


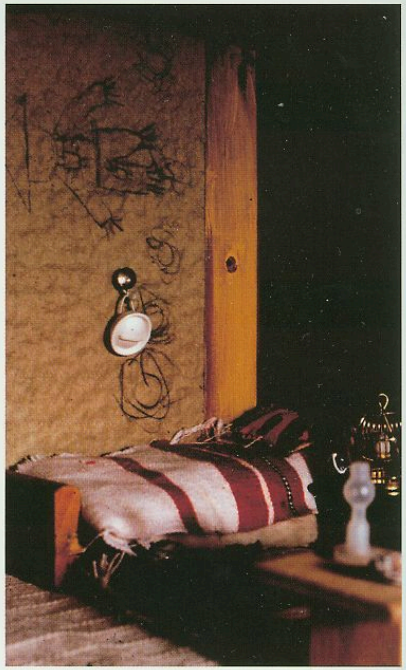













REVELL







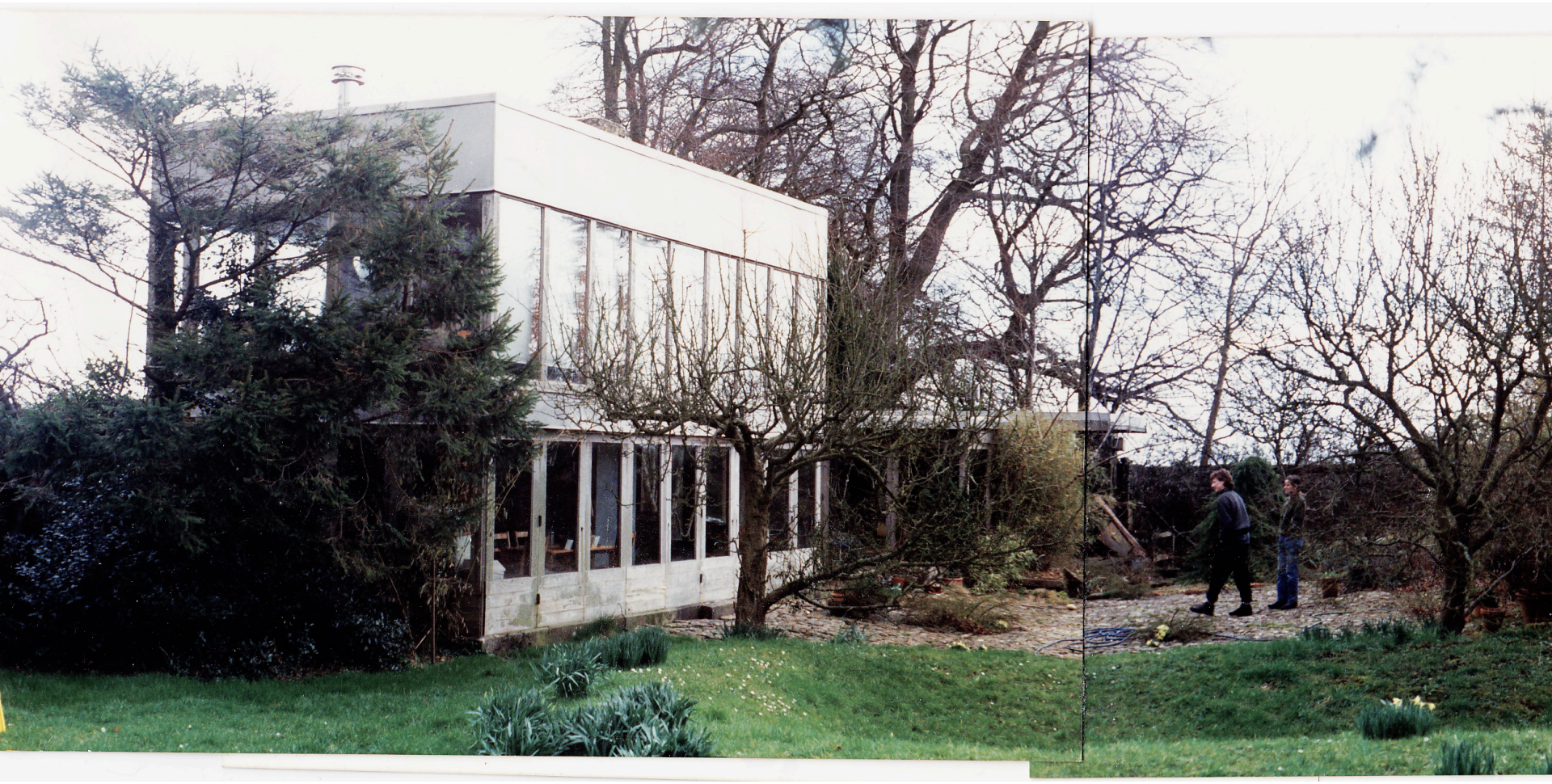


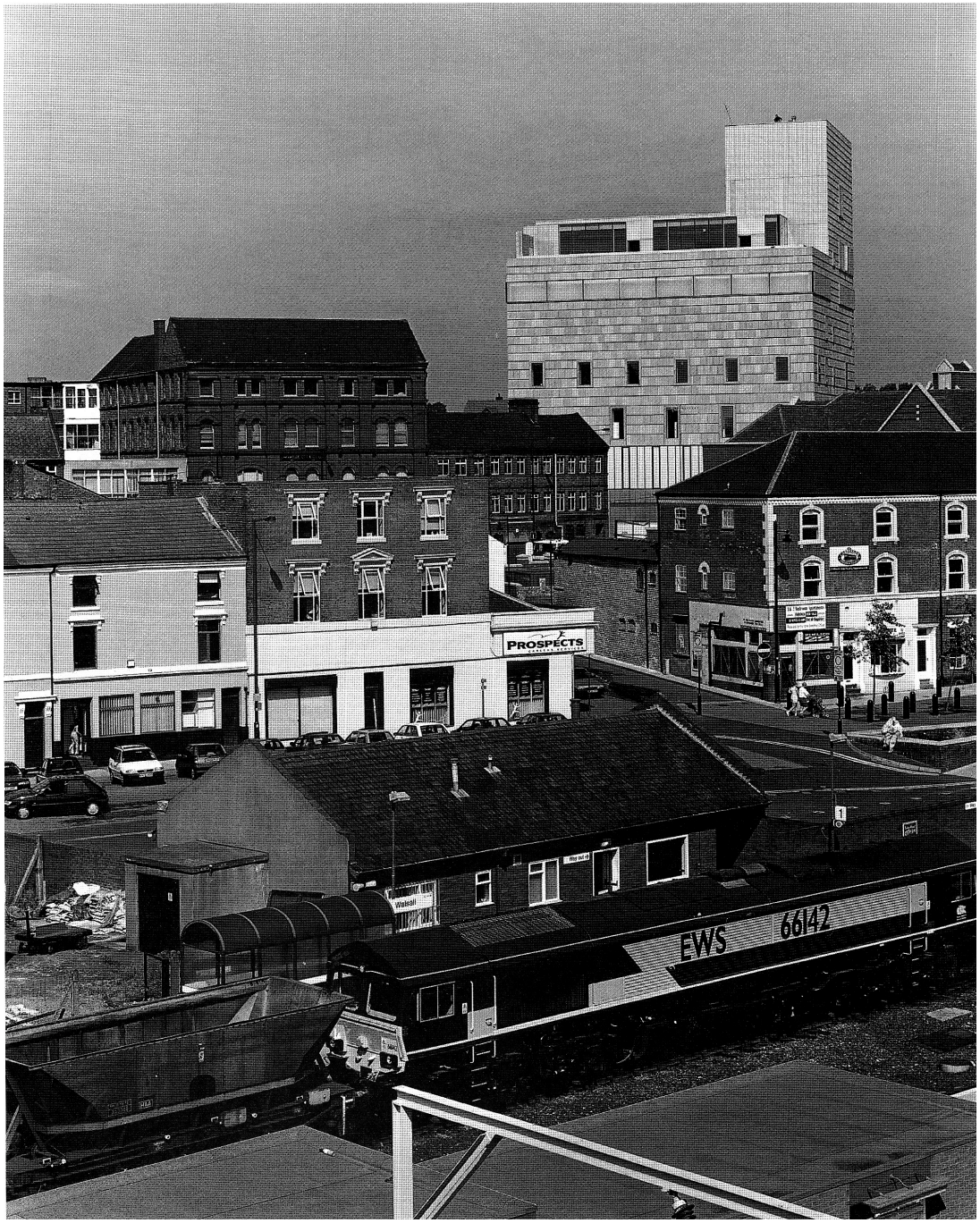






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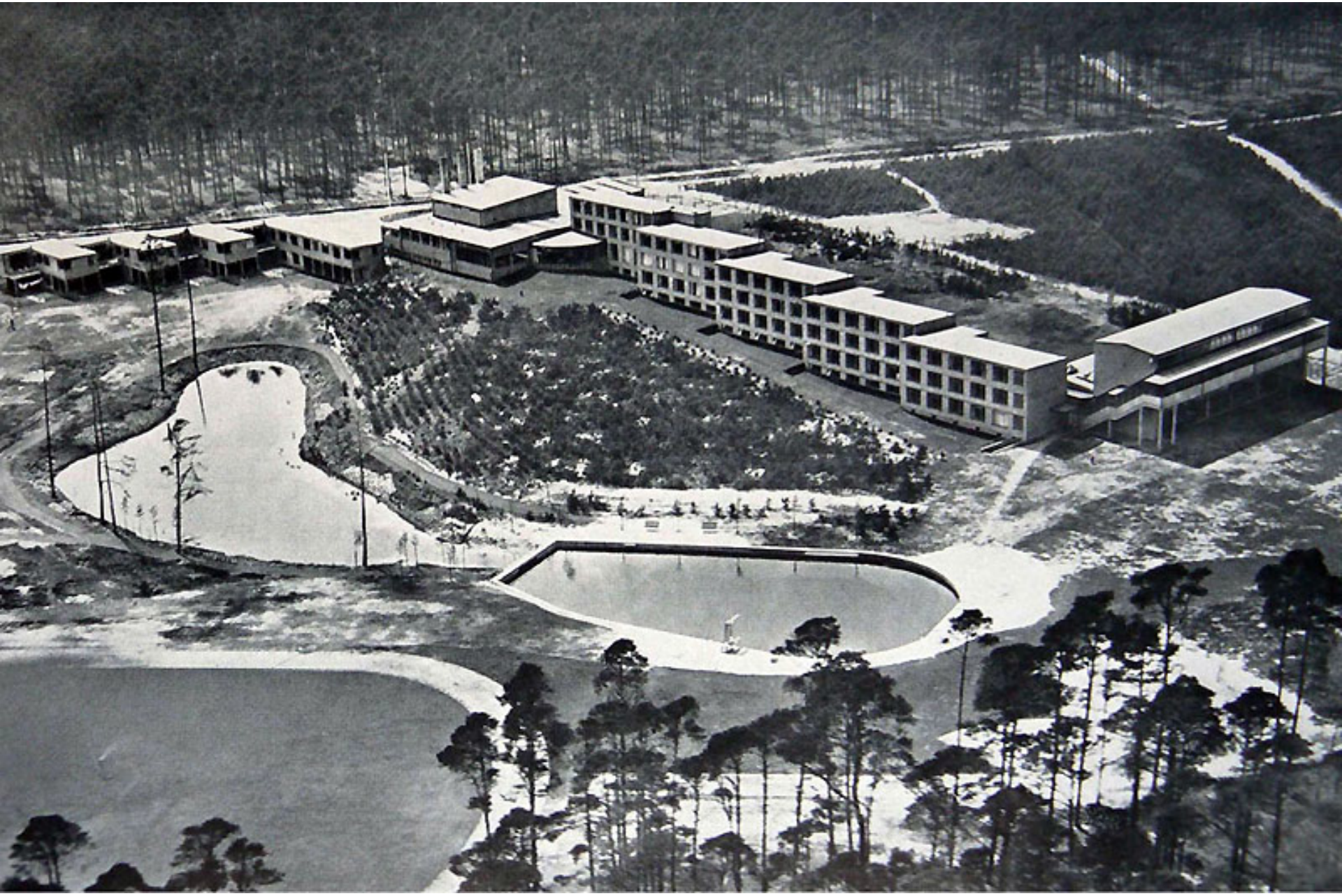
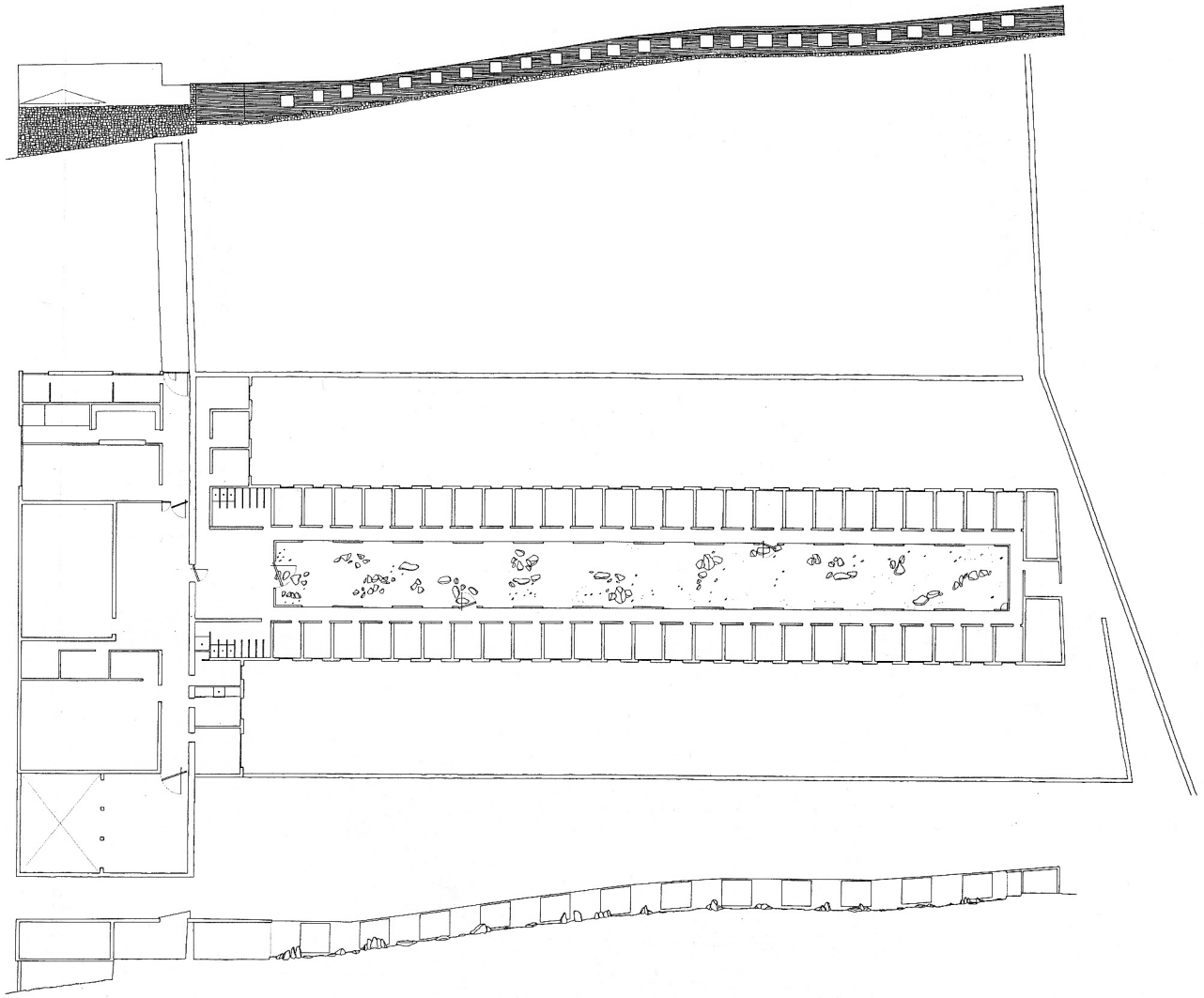
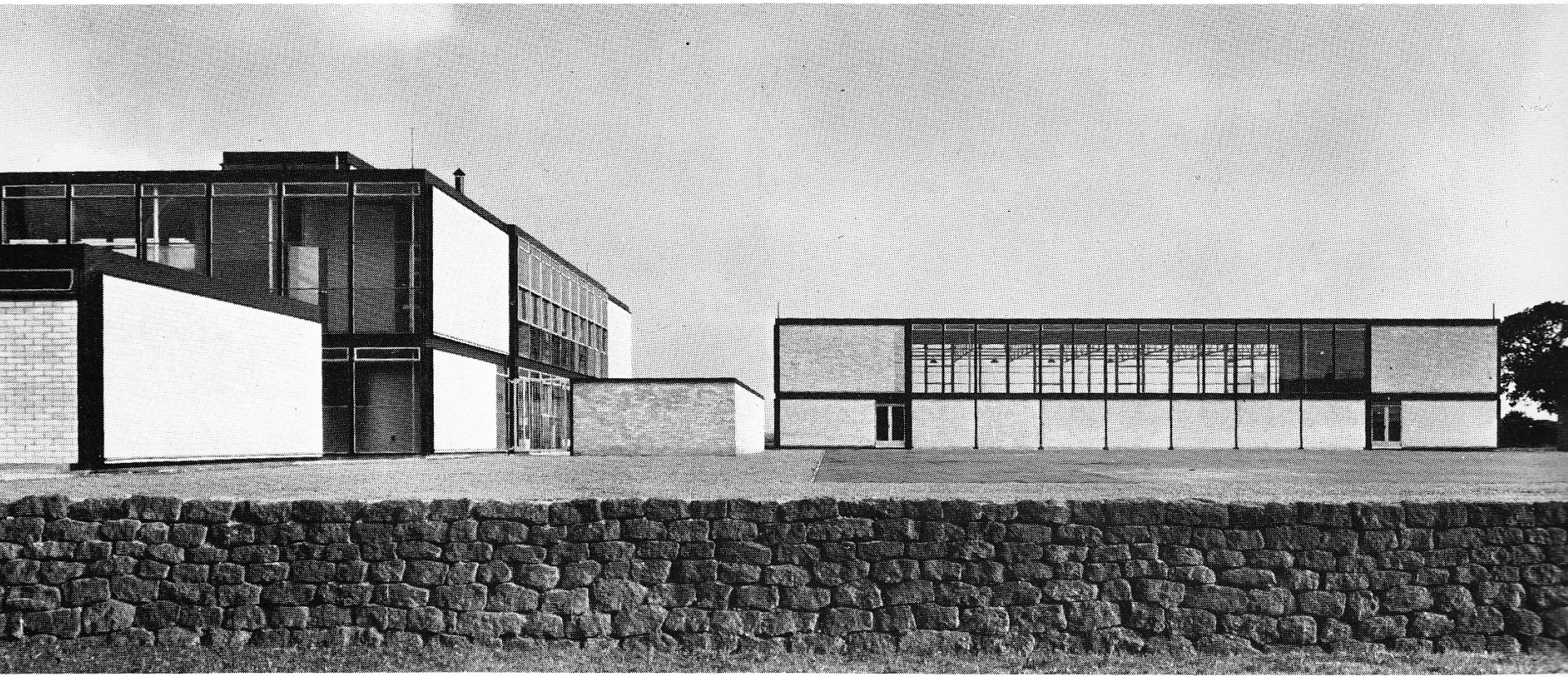
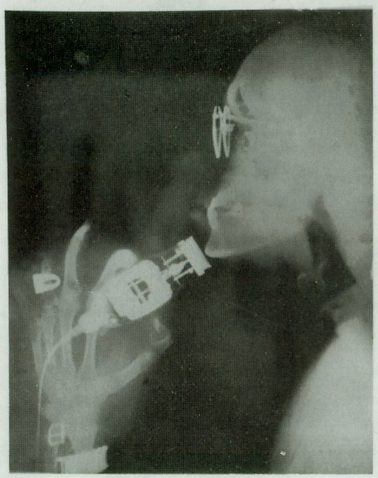








CATALOGUE OF THE EXHIBITION

Parallel of Life and Art

Held at the Institute of Contemporary Arts

September 11th to October 18th, 1953.

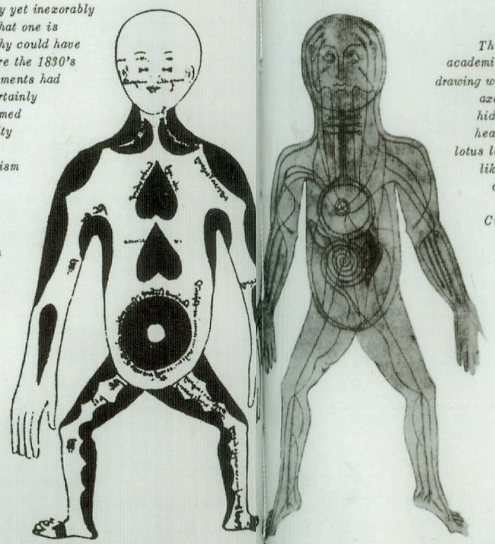
ANATOMY

1.	A Watch.	Cassells Book of Knowledge, Vol. 2.
2.	Two radio valves.	Trade Periodical 1936.
3.	Under side of TV chassis.	Zenith TV Corp. USA.
4.	Dissection of a frog.	Encyclopedia Montandon.
5.	Sections of a tree.	Thornton's Book of Vegetable Anatomy.
6.	Two Human Anatomies, 1298 & 1399.	Lancelot Hogben "Cave Art to Cartoon Art".
7.	Bark drawing of a native apearing a large black rock kangaroo (Australian Aborigine).	B. Spencer "Native tribes of the Northern Territory" publishers Macmillan.
8.	Locomotive.	"Merveilles de la science", Louis Figuier.
9.	Sections of an insect.	"Common Objects of the Microscope", Rev. Wood.
10.	Female bulb scale mite.	Ministry of Agriculture & Fisheries Bulletin No. 51 "Narcisaus Pests" with permission of the controller of Her Majesty's Stationery Office. Photo: A. H. Sherval.
11.	Diverticulum of colon X10 (photomicrograph).	E. Victor Wilmott, F.I.B.P., F.R.P.S., Post Graduate Medical School.
12.	Dismembered Typewriter.	Contemporary Future Magazine.
13.	Feature of coniferous wood (microphotograph).	Bulletin No. 22 (Identification of soft woods) Forest Products research laboratory, by permission of the controller of Her Majesty's Stationery Office.
14.	Radiograph of a jeep.	Courtesy Kodak Ltd.

ACKNOWLEDGEMENTS

The editors wish to thank Scaffolding (Great Britain), Mr. Denys Lasdun, Mr. E. C. Gregory, & Messrs. Entwistle Thorpe, who have helped to make this exhibition possible.

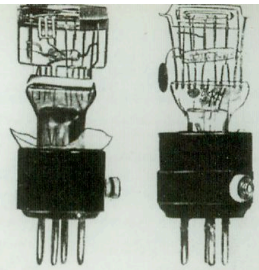
The eye of any age is so subtly yet inexorably a part of the mind of that age that one is tempted to wonder if photography could have been invented at any time before the 1830's in spite of the fact that the elements had been on hand for centuries. Certainly the photograph would have seemed a distraction of vicious curiosity to the mediaeval scrutiny of everything for possible symbolism and moral value. And the mannerist world, though it showed its liking for architectural perspective by assembling the camera obscura with lens, would have rejected most photographs of the human figure for being so far from its canon of proportion. But in the 1830's Balzac wanted to examine and record his surroundings down to the last item, and Ingres won applause with his paintings of clean-edged light and shade.
A. HYATT MAYOR, The Photographic Eye



There are ten ways, say the Chinese academicians, of depicting a mountain: by drawing wrinkles like the slashes of a large axe, or wrinkles like hair on a cow's hide; by brushstrokes wrinkled like a heap of firewood, or like the veins of lotus leaves. The rest are to be wrinkled like the folds of a belt, or the twists of a rope; or like raindrops, or like convoluted clouds etc.
Cited by Leo STEINBERG, The eye is part of the Mind.

Who shall criticise the builders? Certainly not those who have stood idly by without lifting a stone.
E. T. BELL, The Queen of Sciences.

One must be willing to dream and one must know how.
BAUDELAIRE

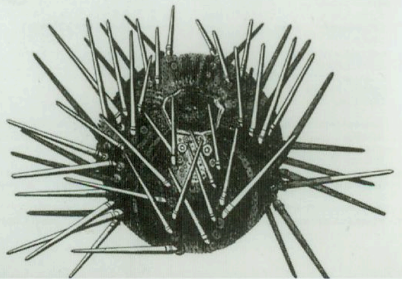


ARCHITECTURE

15.	l'Arme de Salut, le Corbusier.	2
16.	" "	
17.	UNO Building.	"Built in USA" MMA publication.
18.	Temple of Neptune, Paestum.	
19.	Ilots d'Habitations particulieres Pompei.	Gromert.
20.	Erbil, ancient Assyrian city over 4,000 years old (air view).	Aerofilms copyright.
21.	Skyscrapers. Wide angle lens photo.	George Strock, Life Magazine.
22.	Detail, Mask of Quetzalcoatl.	British Museum.
23.	Dublin bus garage, Ove Arrup & partners.	Irish Times.
24.	Eskimo settlement at King Island, Alaska.	National Geographic Magazine.
25.	Macchu Picchu, Peruvian Andes.	American Vogue.
26.	Sun worshippers temple.	Cassells Book of Knowledge Vol. 2.
27.	Different types of vegetable cellular tissue.	Thornton's Book of Vegetable Anatomy.

ART

28. Etruscan funerary vase.
29. Excavated figure, Pompei. — F. Romano, Naples.
30. Tribal tattooing of Eskimo bride. — "The Book of the North" 1922, Leipzig.
31. Minahassa ideographic script. — "The Alphabet" David Diringer, Hutchinson's Scientific and Technical publications.
32. Funeral of the late King George VI. — Newspaper image.
33. Corps de dame, B. Dubuffet, 1950. — Collection of A. Ossorio.
34. Disintegrating mirror (contact print). — Collection N. Henderson.
35. Painting, Burri. — Arte Estive, 1953.
36. Jackson Pollack in studio. — Hans Namuth, America.
37. Porous whalebone mask of a man's head. Vicinity of Point Hope, Alaska. — Stanford University Press, California "Native Arts of the Pacific North West".
38. Racing cyclists crash (news photo) — Keystone Press.
39. Radiograph of a cat batting a ball. — Dr. Slack and L. F. Erhke, Westinghouse Electric Corporation, Lamp Division, Research Department, USA.



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CALLIGRAPHY

40. Figures of men, animals, animated objects, and symbols from California, Arizona and the Bahamas. — "The Alphabet", David Diringer. Hutchinson's Scientific and Technical publications.
41. Paul Klee, 1909, Verlassenen Garten. Pen Drawing.
42. Japanese writing.
43. Column of contemporary Japanese type. — The Kenchiku-Bunka.
44. Patterns in mud, Grimsby (air view). — Aerofilms copyright.
45. Proteus (stained). Micro-photo X1250. — Mr. Smiles, Optics Section, Medical Research Council.
46. Iron nickel chromium alloy (Electron micro-photo). — Courtesy of the Director, National Physical Laboratory, Teddington. Crown Copyright.
47. Ploughed up air-field (air view). — Imperial War Museum. Crown Copyright.

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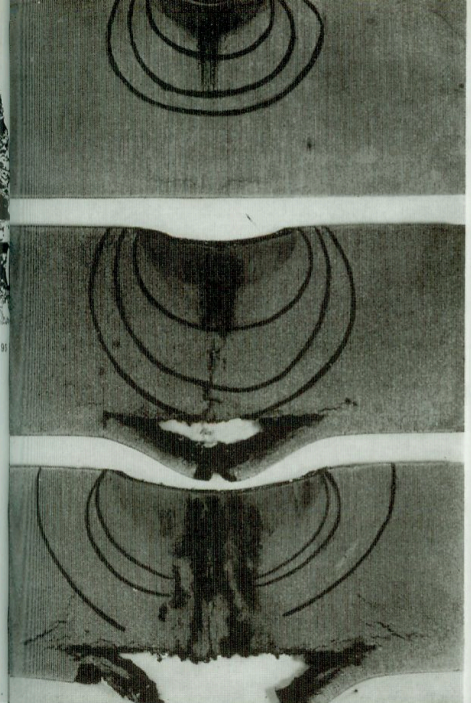

DATE 1901

48. Watercolour, Kandinsky. — Art News, USA.
49. Roe triplane. — By courtesy of the Director, Science Museum, South Kensington.
50. Villers-sur-Mer, La Plage. — Period post card.
51. In a 1910 gymnasium. — "The Revolt of the American Women" Oliver Jensen, Harcourt, Brace.

LANDSCAPE

52. Marbled paper. — Anonymous.
53. Coffee grounds (photo-image). — Nigel Henderson.
54. Hand print. — Nigel Henderson.
55. Coquille de mer. — Encyclopedia Diderot, 1773.
56. Japanese wood-cut.
57. Fossil fish. — "The Fossils of the South Downs" Gedeon Mantell, F.L.S.
58. Geological diagram.
59. Well formed hypereutectic graphite flakes (micro-photo). — Journal of the Iron & Steel Industry.
60. Low power magnification of squamous celled papilloma micro-photo. — "
61. South Stack Anglesey, the great folds of the South Stack series, Pre-Cambrian Axes of major folds nearly vertical. — National Geological Survey. Crown Copyright.
62. Zyggurat, remains of an ancient temple. — Aerofilms copyright.
63. Burnt out forest in California. — Negative kindly lent by William Pagones, Esq. Los Angeles.

MOVEMENT

64. The Deluge Formalised, Leonardo da Vinci. — Royal Collection, Windsor.
65. Pigeons flying. — National Geographic Magazine.
66. Prize fighting (high speed flash). — Newsphoto, Look Magazine.
67. Single fringe interferogram of cylindrical projectile. — Courtesy Journal of Applied Physics, USA.
68. Study of vertical entry of missile into water. — "
69. Ultra high speed X-ray, Golf club at instant of impact. — Dr. Slack and L. F. Erhke, Lamp Division, Research Department, Westinghouse Electric Corporation, USA.
70. The Cyclist , circa 1888. — E. J. Marey.

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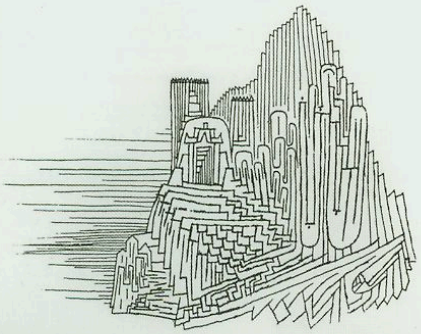
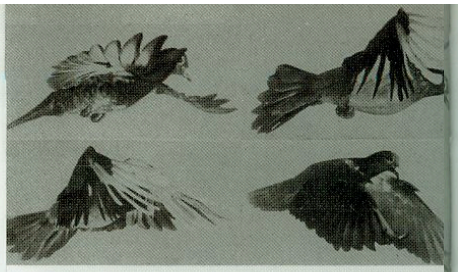
NATURE

71. Specimens of ventriculites radiatus expanded on the chalk. — "The Fossils of the South Downs" Gedeon Mantell, F.L.S.
72. Sea Urchin. — Diderot, 1773.
73. Cross section of a stem. — Thornton's Book of Vegetable Anatomy.
74. Guillemot's eggs. — "Handbook of British Oology" A.J. Butler.
75. Male bulb scale mite. — Ministry of Agriculture & Fisheries bulletin No. 51 "Narcissus Pests" with permission of the controller of Her Majesty's Stationery Office. Photo A. H. Sherval.
76. Chest of rat embryo, showing heart (photo-micrograph). — E. Victor Wilmott, F.I.B.P., F.R.P.S., Post Graduate Medical School.
77. Muriform weathering of granite. — National Geological survey. Crown copyright.
78. Mile wide crater, (wide angle lens photo). — J. R. Eyerman, Life Magazine.





PRIMITIVE

79. Prickle the Clown, Paul Klee etching 1931. — Collection, Museum of Modern New York.
80. Aymara ideographic script. — "The Alphabet" Dr. David Dirin
81. Carved wooden grave figure, Kwakiutl Tribe. — Photograph V.E.S., University British Columbia.
82. Child's painting. — Les Arts, 1953, Paris.
83. Lunatic drawing (film still from Images de la Folie). — Professor Enrico Fulchignoni.

SCALE OF MAN

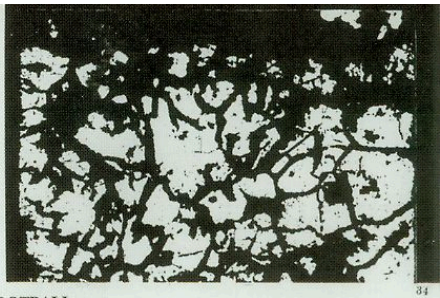
84. Locomotive. — Zinc Type 1903.
85. Children in Space suits. — Associated Press.
86. Mummy of Mut-en-mennu. — British Museum.
87. M. Henri Farman in flight, Jan. 13th, 1908. — Period Post-card.
88. Clog Almanac.
89. Building a waste beach of rubble from Purbeck Beds. — National Geological Survey. Cr Copyright.
90. Orange Plantation, Letaba, North Transvaal. Air view. — Aerofilms copyright.
91. Man shaving with an electric razor (radiograph). — Dr. Slack and L. F. Erhke, L Division, Research Department, W inghouse Electric, USA.
92. Portrait of a jet pilot. — Wayne Miller, Life Magazine.
93. 2,000 gns. classic, Newmarket, 1953. — Courtesy of Race Finish Recor Co. Ltd.

STRESS

94. Stranded steam boat "JIM WOOD" — "Missippippi Stern Wheelers" Kalmbach Publishing Co.
95. Marbled paper. — Anonymous.
96. Paul Klee, Handzeichnungen Erschienen im insel-verlag.
97. Distortion of Victorian Lantern slide. — Nigel Henderson.
98. The Bathers 1923, Picasso. — Collection of Walter P. Chrysler.
99. Stresses produced by exploding charges. — Courtesy Journal of Applied Physics.
100. A benign tumour made up of proliferated cells X53 (microphoto). — E. Victor Wilmott, F.I.B.P., F.R.P.S., Post Graduate Medical School.
101. Shore of N.N.E. of Rhudha Seanach, Kerrara, Oban, Argyllshire. Folded and puckered black slates and lime stones. — National Geological Survey. Crown Copyright.
102. Quilted mud bank, Weston-super-mare (air view). — Aerofilms copyright.
103. Electron micro-photo, iron nickel chromium alloy. — National Physical Laboratory, Teddington, Crown Copyright.
104. Moment of Kick (exposure one millionth of a second). — Dr. Slack and L. F. Ehrke, Lamp Division, Research Department, Westinghouse Electric, USA.
105. Polarised stress analysis of railway chair. — Courtesy Kodak Ltd.
106. Helsinki 1952. Woman 100 Metres Semi Final. — Race Finish Recording Co. Ltd.

STRESS STRUCTURE

107. Leaf of the grape tree. — Thornton's Book of Vegetable Anatomy.
108. Plaster Blocks, Eduardo Paolozzi 1952. — Photo, Nigel Henderson.
109. Klee drawing, 1928.
110. Seal's skull, under and side view. — 19th cent. engraving.
111. Coarse & fragmented hypereutectic graphite near top of vacuum melted ingot (micro-photo). — Journal of Iron & Steel Industry.
112. Packing found in films cast from a polyvinyltoluene latex. — Courtesy Journal of Applied Physics. USA.
113. Tension specimen of molybdenum pulled at extremely high pressure. — "
114. Section of nodular goitre. — E. Victor Wilmott, F.I.B.P., F.R.P.S., Post Graduate Medical School.
115. Weathered surface of acid dyke in the Gabbro showing tortuous flow structure. — National Geological Survey. Crown Copyright.
116. Large iron carbide particles in an iron matrix x 4,500 Electron micro-photo. — National Physical Laboratory, Teddington, Crown Copyright.



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FOOTBALL

117. News Paper Image. — Der Kleine Sport. Hamburg, 1953.

SCIENCE FICTION

118. Interplanetary War. — Walter Bloch, Age 8. (From "Transition").

MEDICINE

119. Section of Thrombosed Pulmonary Artery. X19. — E. Victor Wilmott, F.I.B.P., F.R.P.S.

GEOLOGY

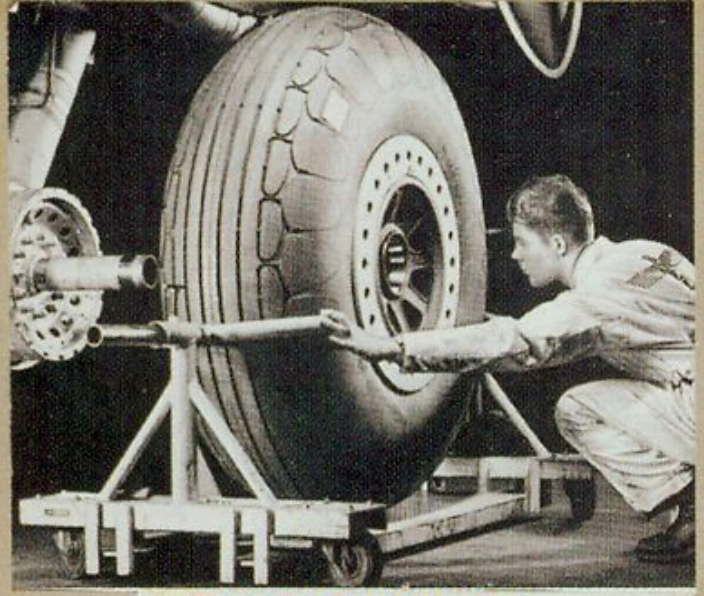
120. Glacial Sands & Gravels showing irregular lenticular bedding (Hamilton Lanarkshire). — National Geological Survey. Crown Copyright.

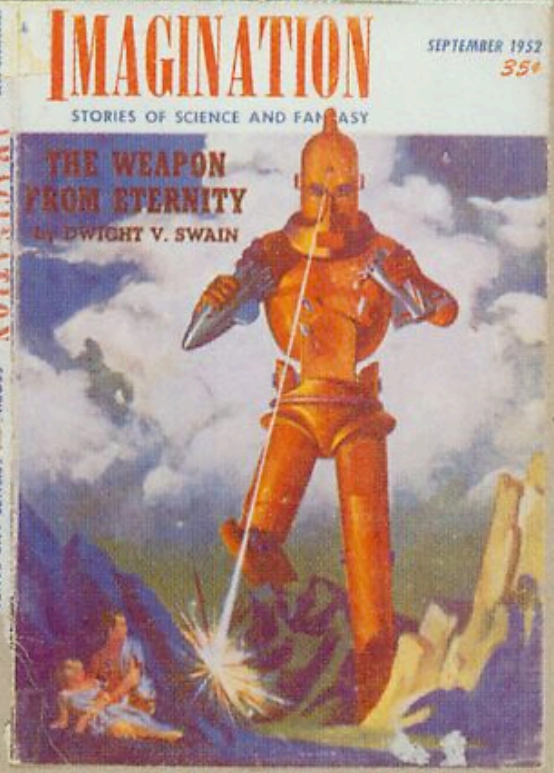
METAL

121. Electron micro-photo. Iron-nickel-chromium alloy. — Courtesy of Director, National Physical Laboratory, Teddington. Crown Copyright.

CERAMIC

122. Early 18th cent. Staffordshire dish. — Victoria & Albert Museum.



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The solid skeleton is confined, in all these cases, to the boundary-lines, or edges, or grooves between adjacent cells or vesicles, but adsorptive energy may extend throughout the intervening walls. This happens in not a few Radiolaria, and in a certain group called the Nassellaria it produces geometrical forms of peculiar elegance and mathematical beauty.

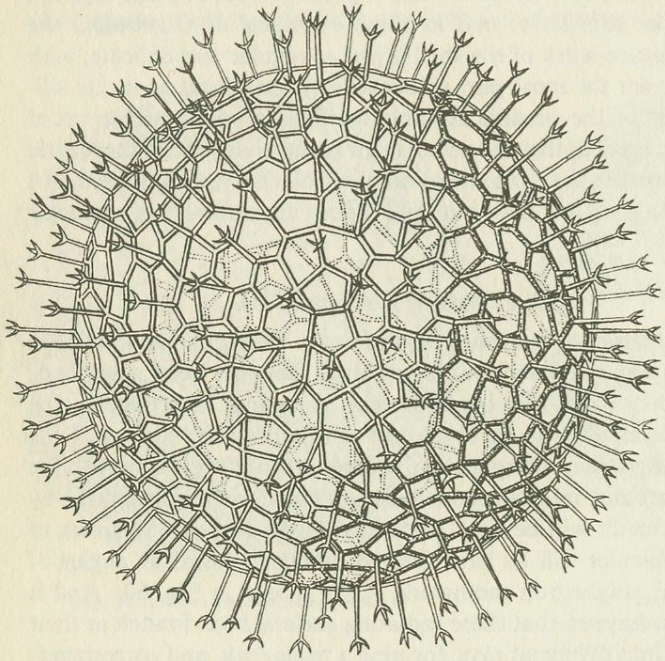


Fig. 60. *Aulastrum triceros* Hkl.

Fig. 61.

When Plateau made the wire framework of a regular tetrahedron and dipped it in soap-solution, he obtained in an instant a beautifully symmetrical system of six films, meeting three by three in four edges, and these four edges running from the corners of the figure to its centre of symmetry. Here they meet, two by two, at the Maraldi angle; and the films meet three by three, to form the re-entrant solid angle which we have called a 'Maraldi pyramid' in our account of the architecture of the honeycomb. The very same configuration is easily recognised in the minute siliceous skeleton of *Callimitra*. There are two discrepancies, neither of which need raise any difficulty. The figure is not a rectilinear but a *spherical tetrahedron*, such as might

be formed by the boundary-edges of a tetrahedral cluster of four co-equal bubbles; and just as Plateau extended his experiment by blowing a small bubble in the centre of his tetrahedral system, so we have a central bubble also here.

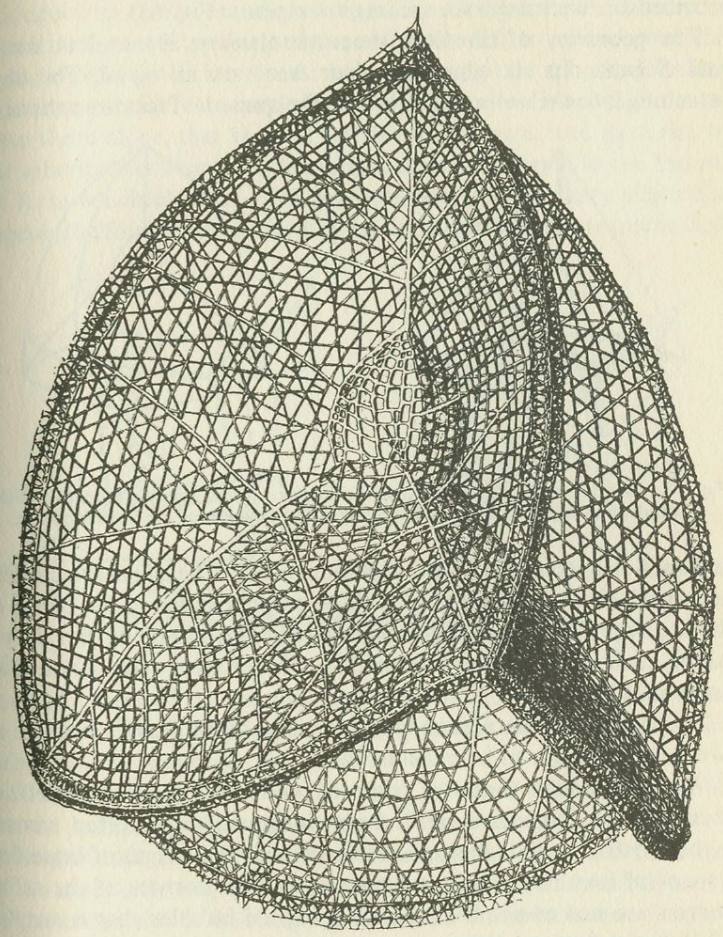
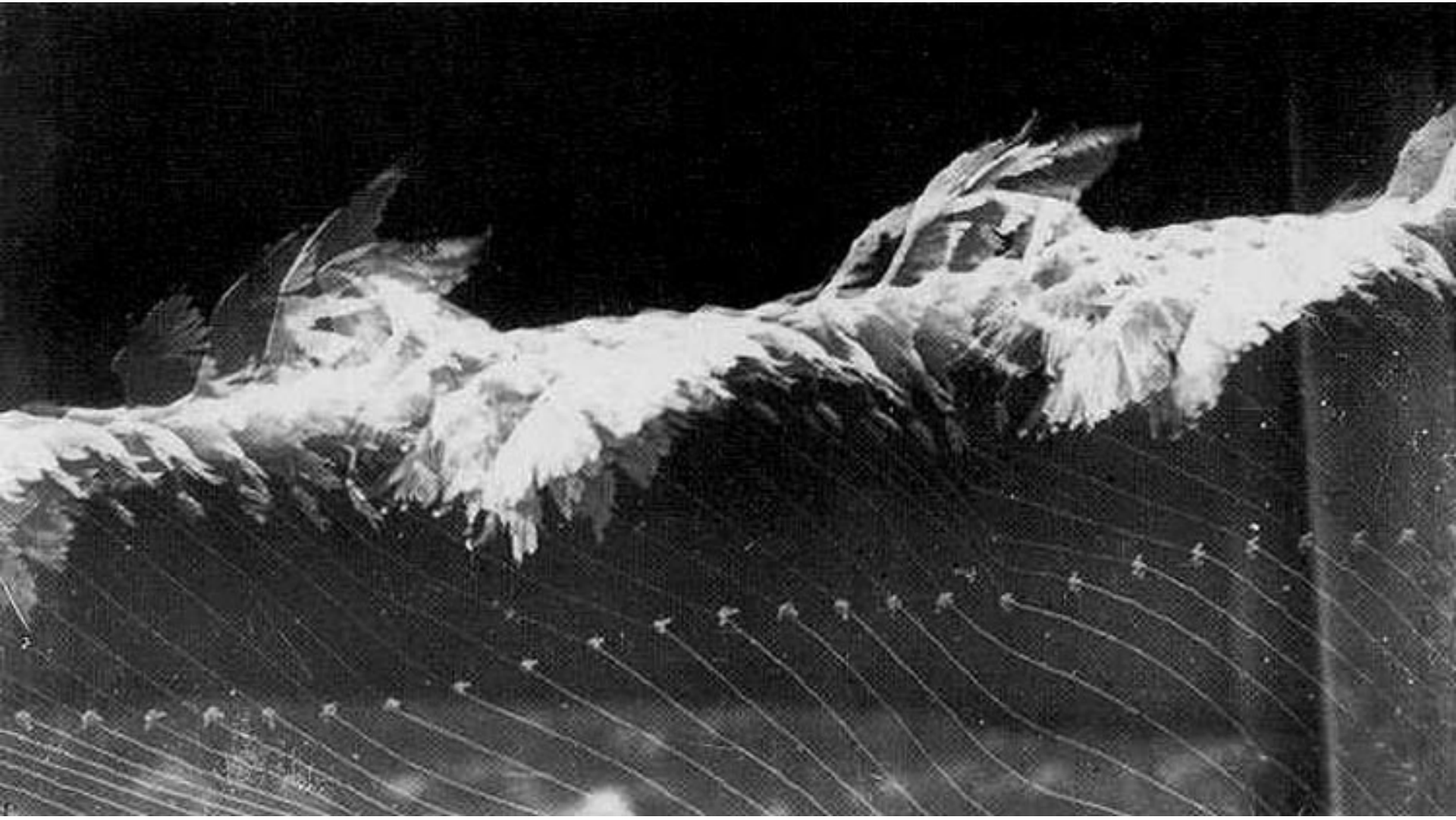
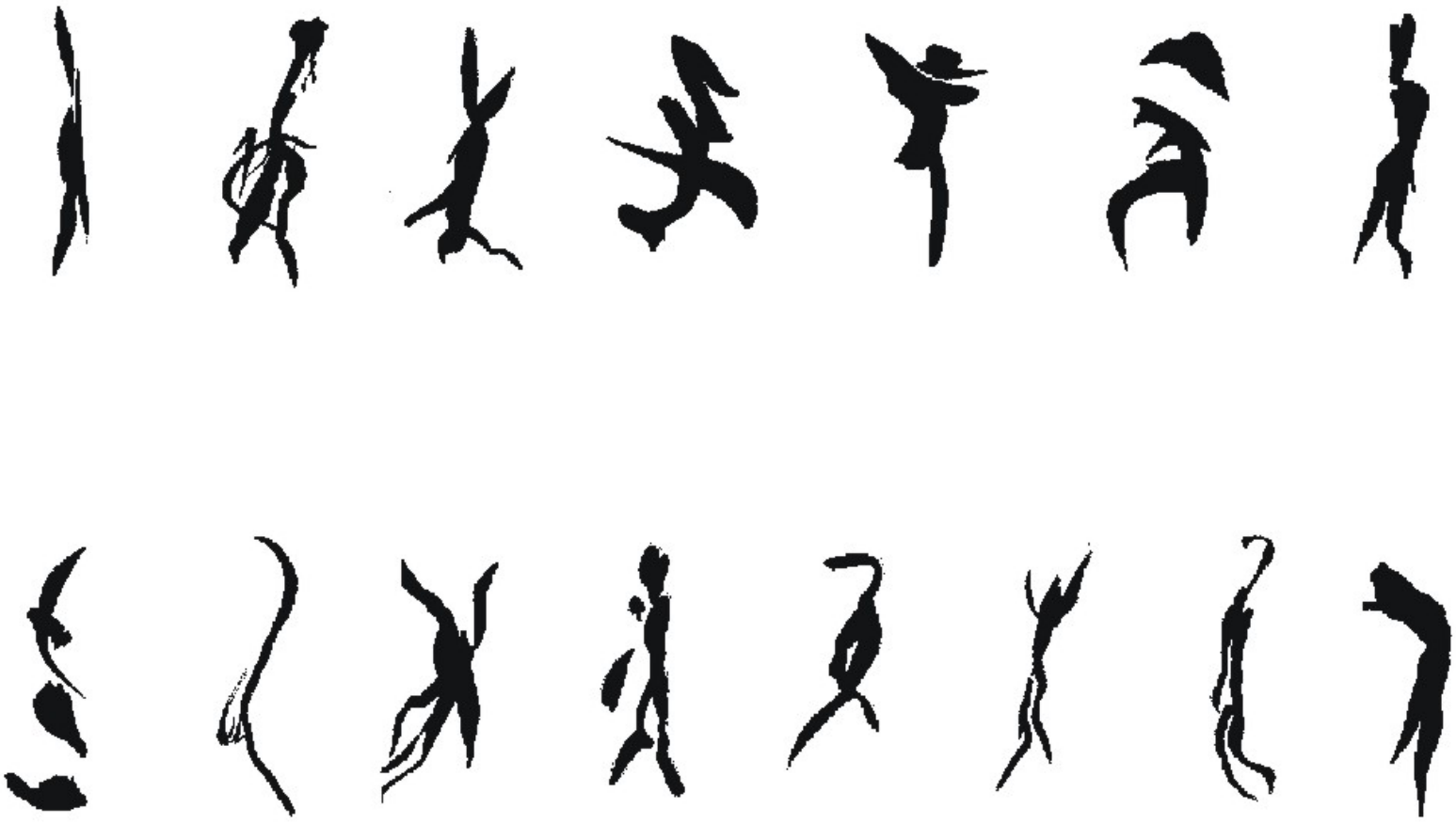


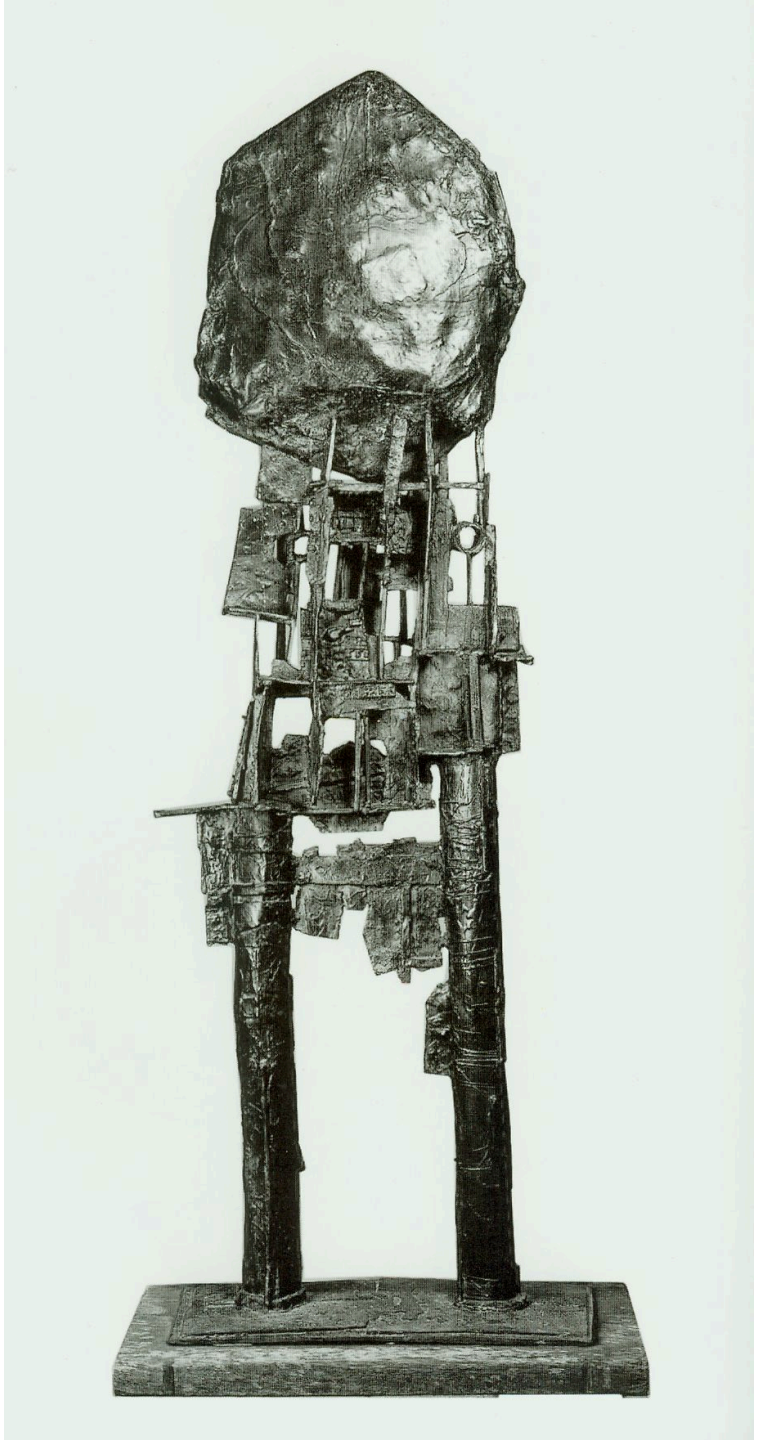
Fig. 62. A Nassellarian skeleton, *Callimitra agnesae* Hkl. (0·15 mm. diameter).

This bubble may be of any size;[1] but its situation (if it be present at all) is always the same, and its shape is always such as to give the Maraldi angles at its own four corners. The tensions of its own walls,

[1] Plateau introduced the central bubble into his cube or tetrahedron by dipping the cage a second time, and so adding an extra face-film; under these circumstances the bubble has a definite magnitude.








J. Dubuffet
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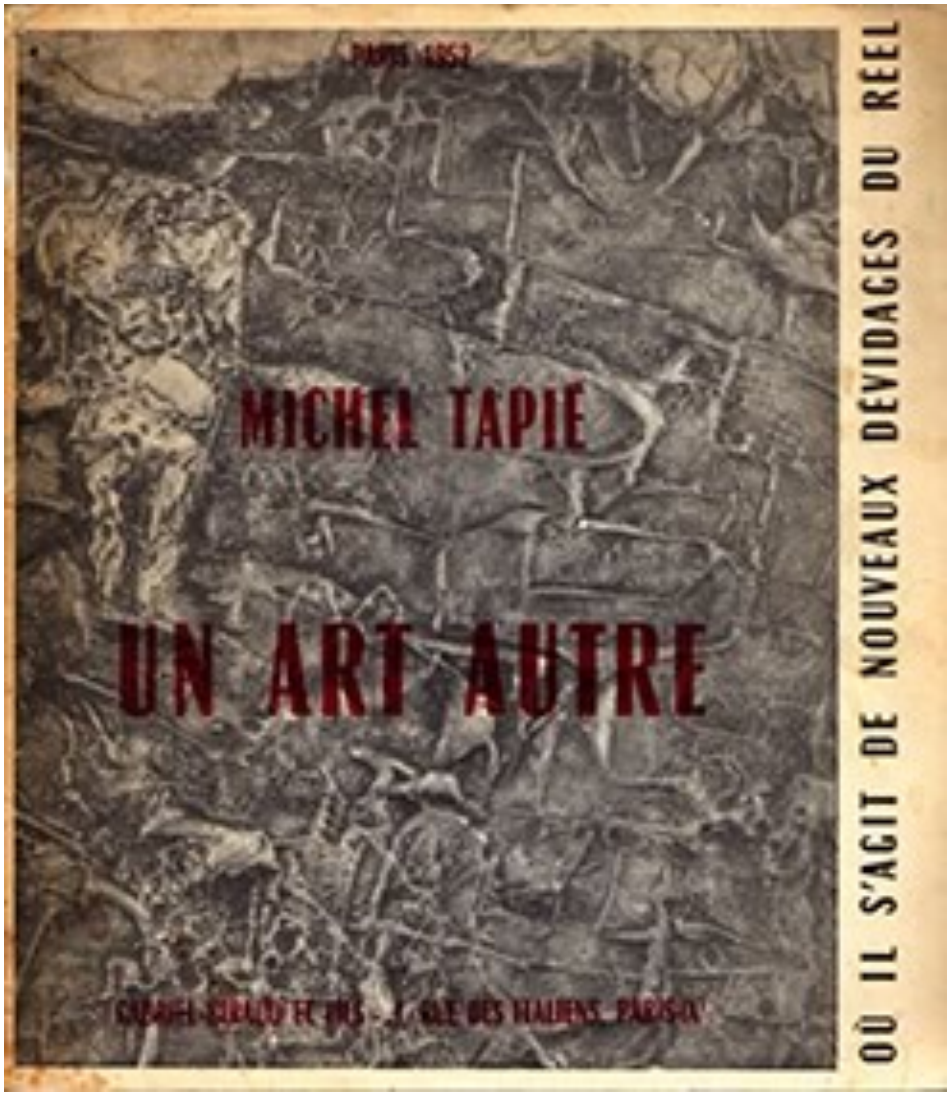
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