

1. Thermal Comfort in Offices

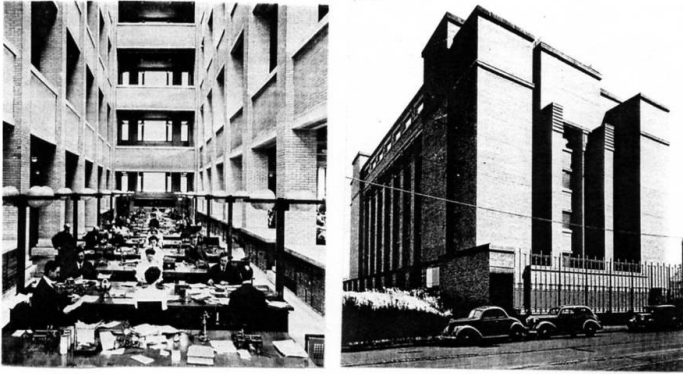


Fig. 6: The Larkin office building (1904), Buffalo, U.S.A. (as presented in Frampton, 1987)

Frank Lloyd Wright, Larkin building, 1904



Frank Lloyd Wright, Casa da Cascata

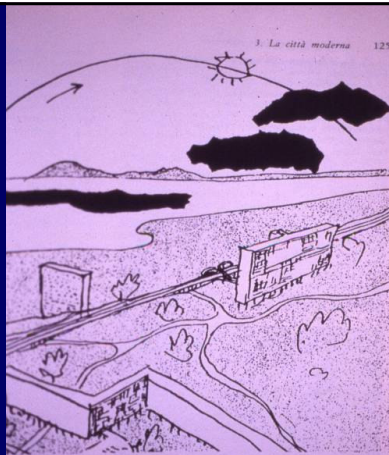
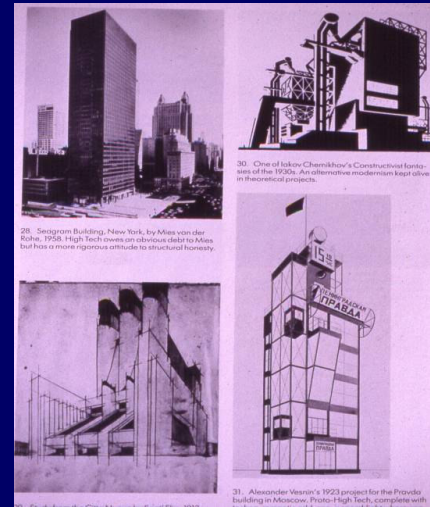


Fig. 179-180. Altri due disegni di Le Corbusier: i vari tipi di edifici, spaziosi nel verde, che formano la città moderna; il paesaggio della nuova città, dominato dal corso del sole.

Le Corbusier

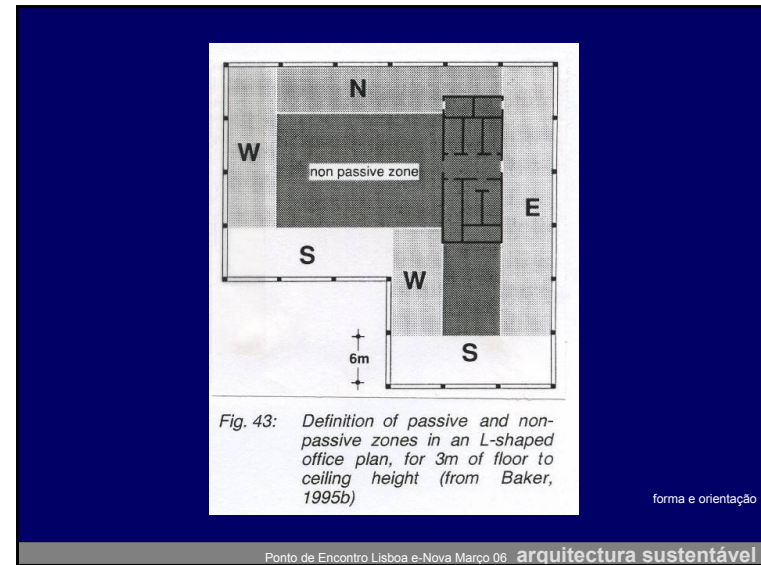
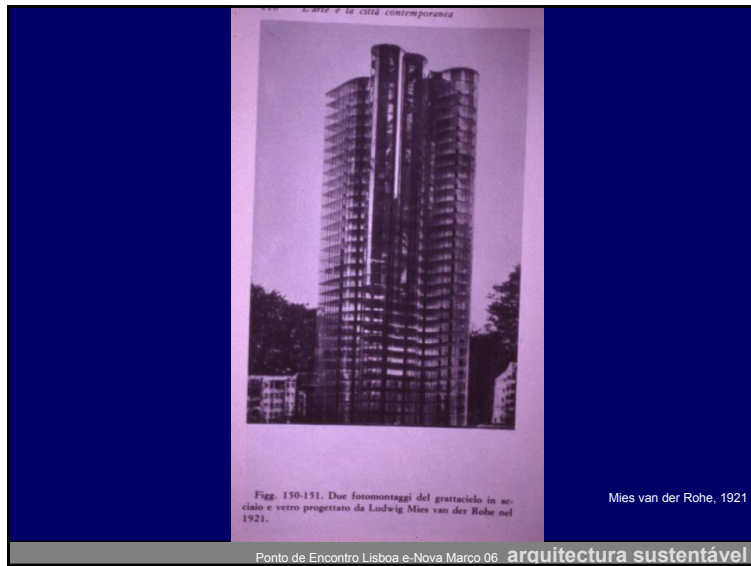


29. Seagram Building, New York, by Mies van der Rohe, 1958. High Tech owes an obvious debt to Mies but has a more rigorous attitude to structural honesty.

30. One of Yakov Chernikhov's Constructivist Fantasies of the 1920s. An alternative modernism kept alive in theoretical projects.

31. Alexander Vesnin's 1923 project for the Provincial building in Moscow. Proto-High Tech, complete with

1900's



Cellular office
 Nr. of storeys – 10
 Floor size – 1000sqm
 Building depth – 13.5m
 HVAC – Minimum use

Open Plan office
 Nr. of storeys – 80
 Floor size – 3000sqm
 Building depth – 18m
 HVAC – Centralised

'Bürolandschaft'
 Nr. of storeys – 5
 Floor size – 2000sqm
 Building depth – 40m
 HVAC – Centralised

Fig. 10: Typical post-world war II offices: Traditional British Cellular Office (top); North American speculative open plan office (middle); 'Bürolandschaft' office - bottom (from Duffy, 1963; Laing, 1997).

layouts

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glazing ratio = $\frac{\text{unobstructed glass area}}{\text{total facade area}}$

GR = $\frac{\text{unobstructed glass area}}{\text{total facade area}}$

GR 25% low GR 50% medium GR 75% high

Fig. 53: Definition of glazing ratio, from the LT method

area e tipo de envidraçado

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C. Pelli, Carnegie Hall Tower, NY, 1999

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Rogers, banco Lloyds, Londres, 1986

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Rogers, Londres

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Table 6.2 Broad comparative energy requirements of building materials

Material	Primary energy requirement (GJ/tonne)		
	Worldwide ²⁰	UK ²¹	UK ²²
Very-high-energy			
Aluminium	200–250		97
Plastics	50–100		162
Copper	100+	75 ^a	54
Stainless steel	100+		
High-energy			
Steel	30–60	50	48
Lead, zinc	25+		
Glass	12–25		33
Cement	5–8		8
Plasterboard	8–10		3
Medium-energy			
Lime	3–5		
Clay bricks and tiles	2–7	2	3
Gypsum plaster	1–4		
Concrete:			
In situ	0.8–1.5		1.2
Blocks	0.8–3.5		
Precast	1.5–8		
Sand-lime bricks	0.8–1.2		0.7 ^b
Timber	0.1–5		
Low-energy			
Sand, aggregate	<0.5		0.1
Flyash, volcanic ash	<0.5		
Soil	<0.5		

^aMore complete data is available in the reference cited.
^bLocal air dried.

energia incorporada

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Michael Graves, post-modern, 1994

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