

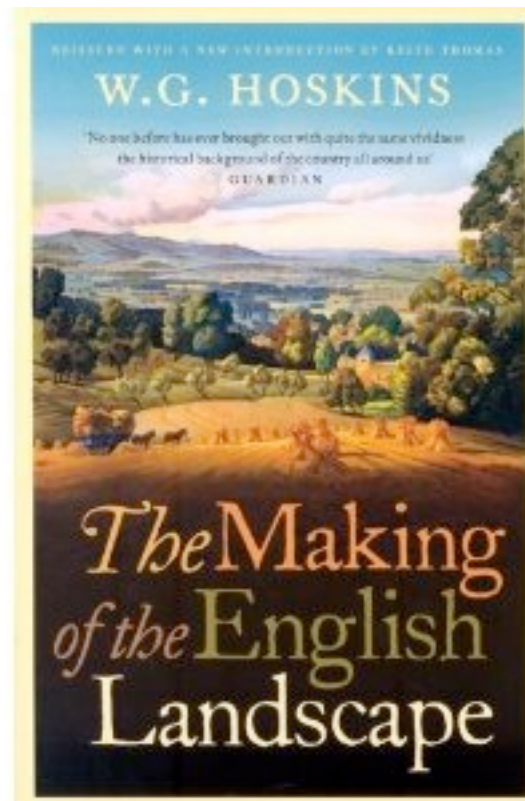
User Needs and Expectations

Adrian Leaman

Usable Buildings Trust | Building Use Studies

Presentation to USE, University of Northumbria, Thursday Nov 10, 2011

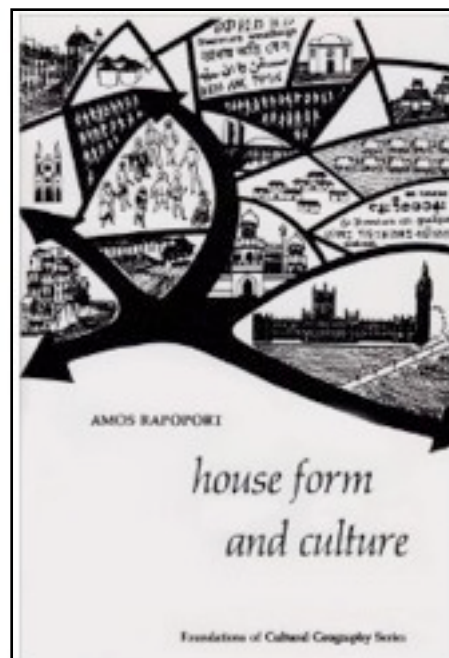
Influences ...



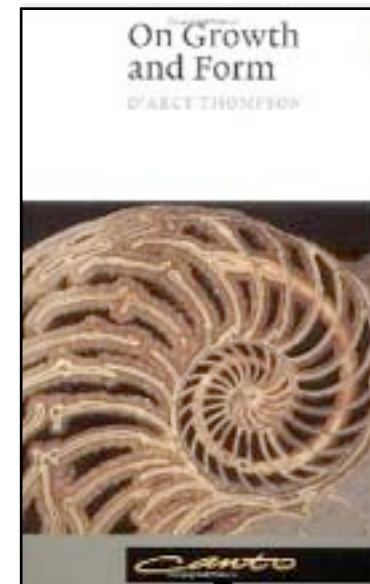
W.G. Hoskins



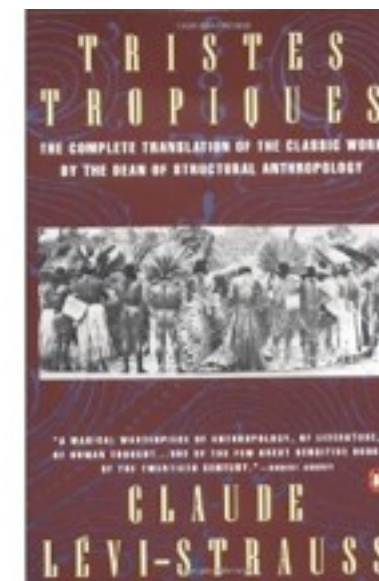
Tracy Kidder



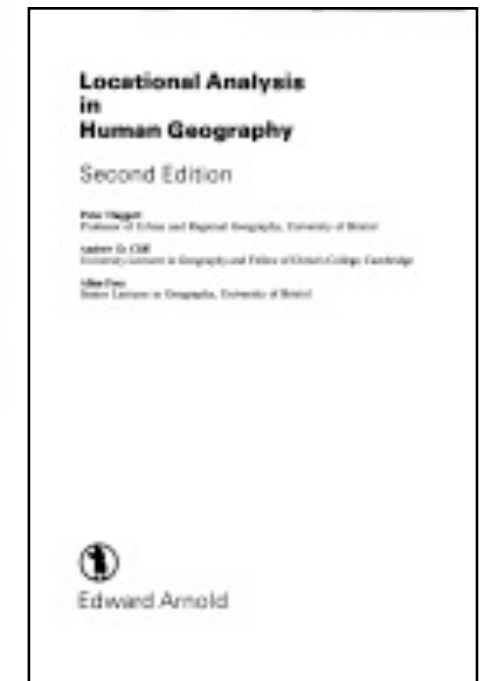
Amos Rapoport



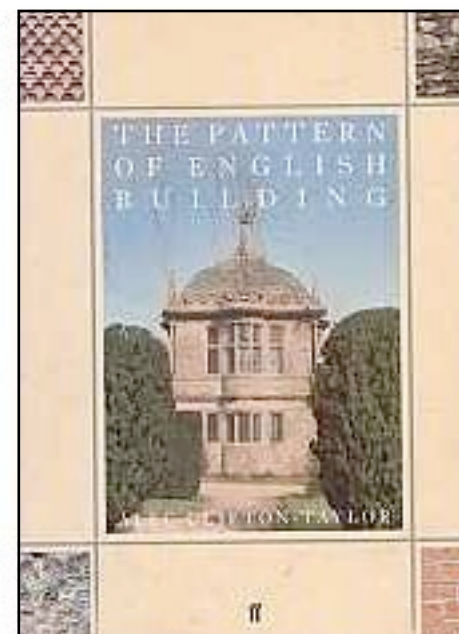
D'Arcy Thompson



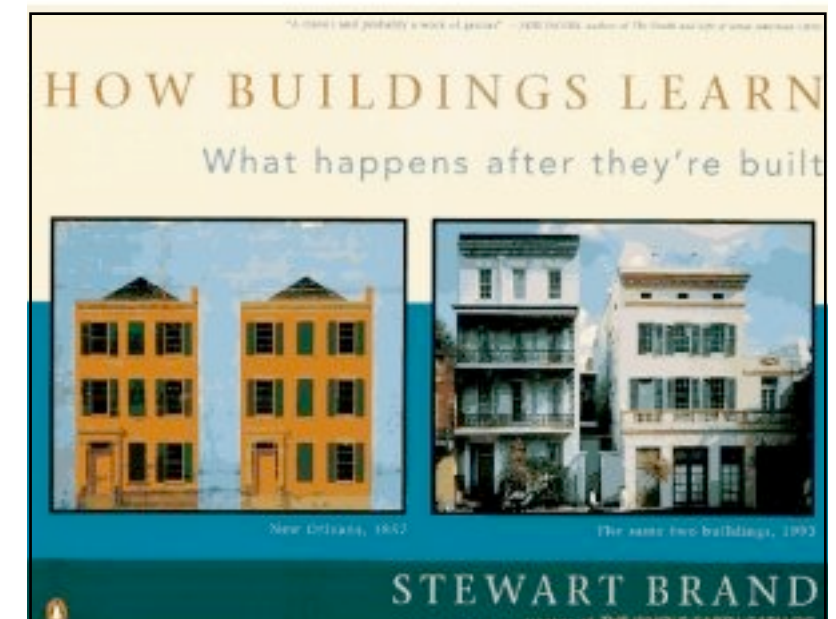
Claude Levi-Strauss



Peter Haggett and geographers like Bill Bunge and David Harvey.



Alec Clifton-Taylor



Stewart Brand

Likes ...



House at Grizedale, 1900 C.F.A. Voysey

“Never look at an ugly thing twice. It is fatally easy
to get accustomed to corrupting influences.”
C.F.A. Voysey



University of Sunderland School of Computing,
BDP, 1995



Kingsmead Primary School, Northwich, Cheshire,
White Design, 2004

... and dislikes



St John's House, Bootle
1971
Occupied 1981
Demolished 2001



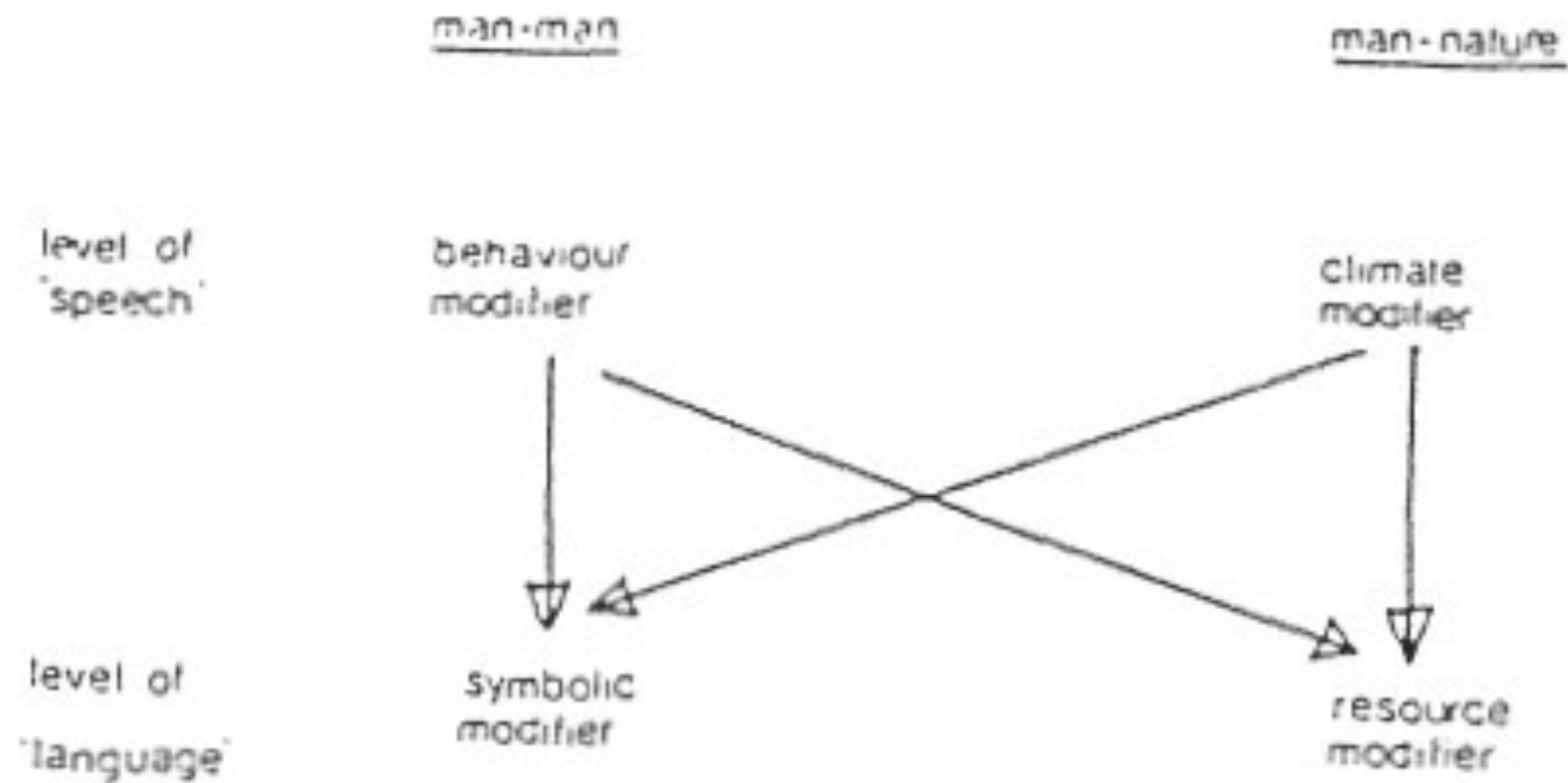
Trellick Tower, London,
1966-1972,
Ernő Goldfinger. Grade II* .



Seattle Public Library, Rem Koolhaas

What you see and
what you don't

1974



Source: Hillier W. and Leaman A., How is Design Possible? Journal of Architectural Research, vol 3, no 1, 1974, p8

Space, location
or what...?

1978

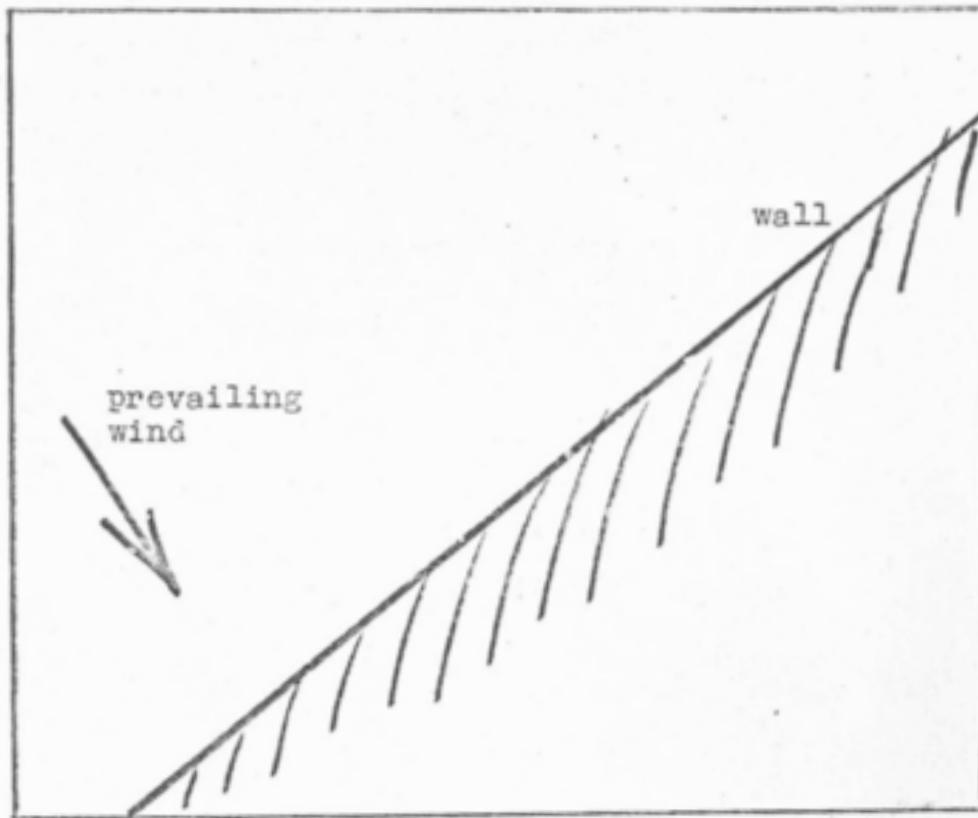


Figure one : Hypothetical landscape with minimal artifacts and simple climate

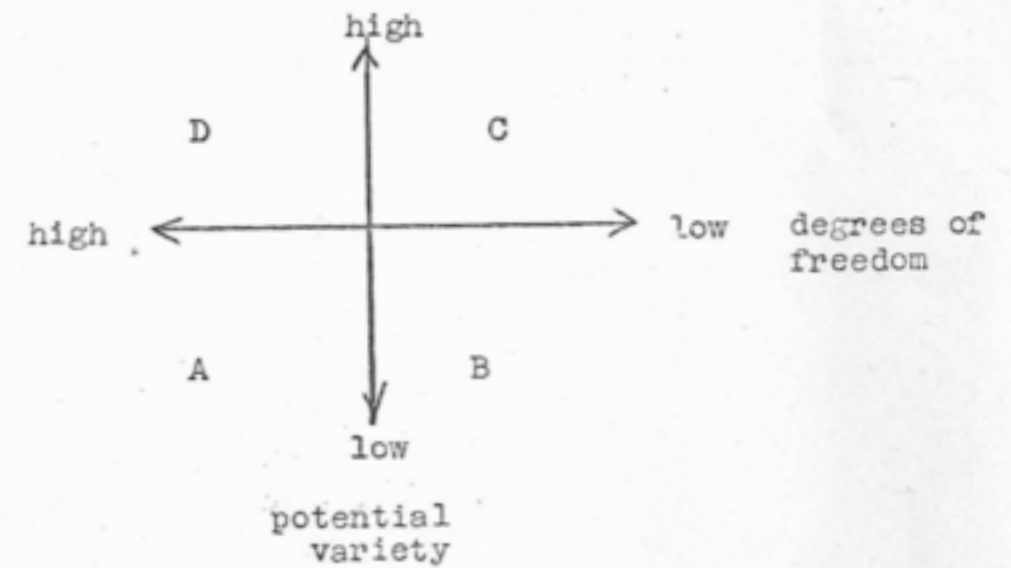
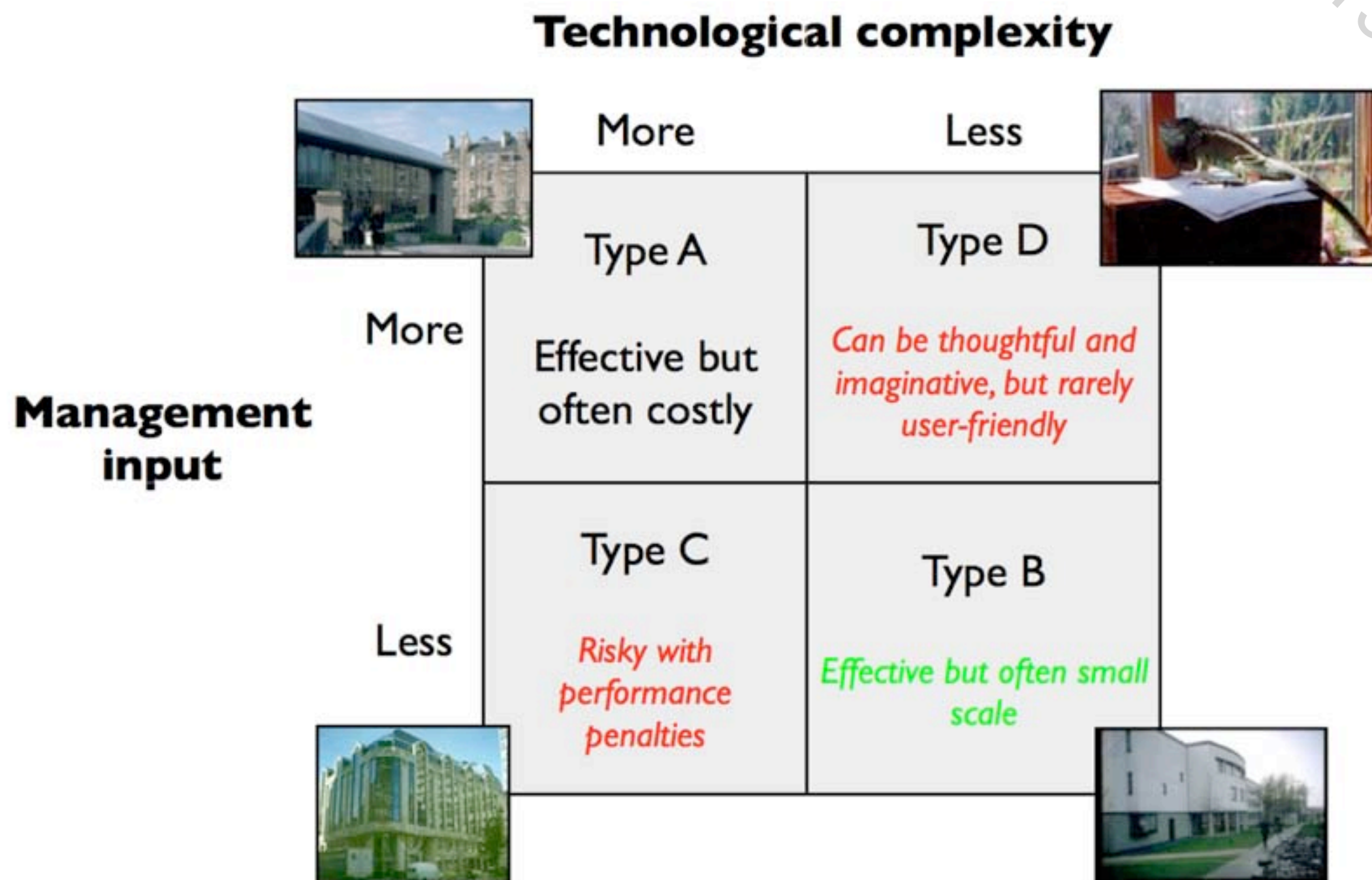


Figure two : Types of space given by degrees of freedom and potential variety

In the real world ...

Circa
1992



... but it depends on
who you are and what
you are doing ...

Figure 2i Complexity from the designers' point of view

Source: Authors

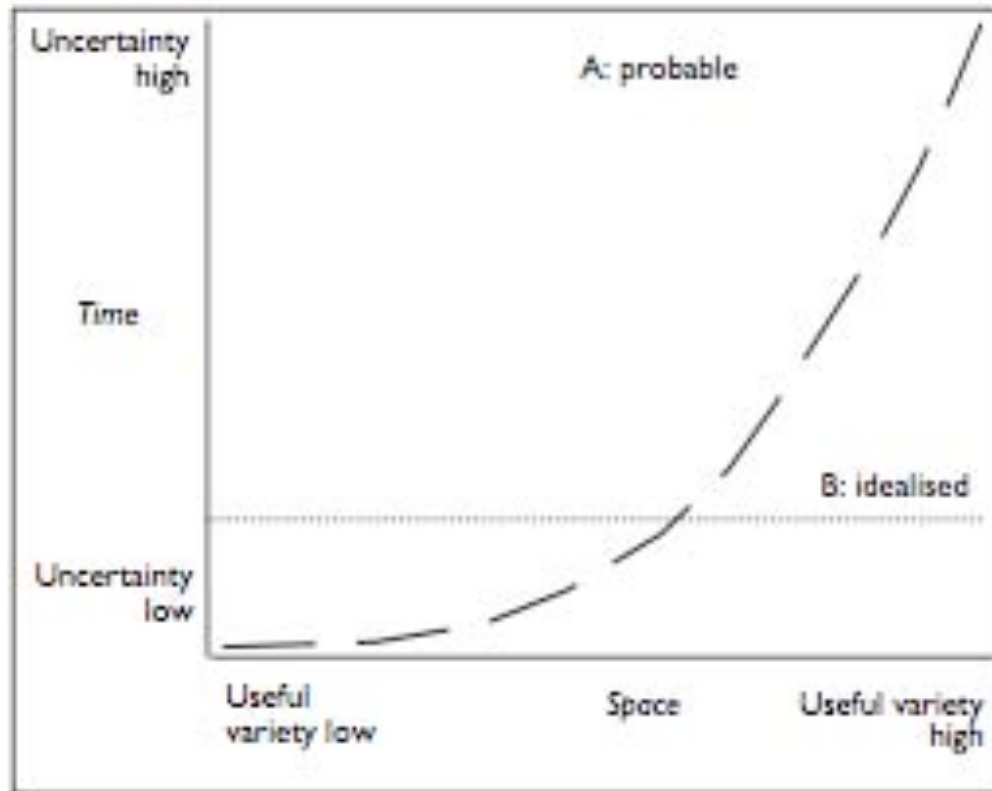


Figure 2ii Complexity from the managers' point of view

Source: Authors

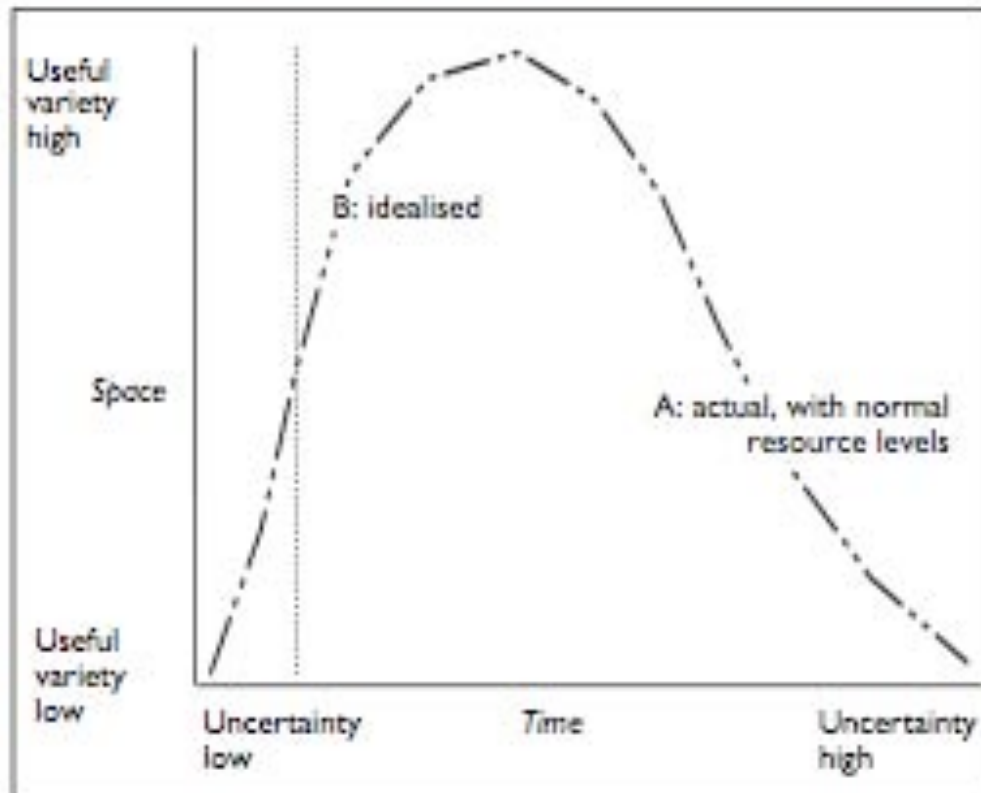
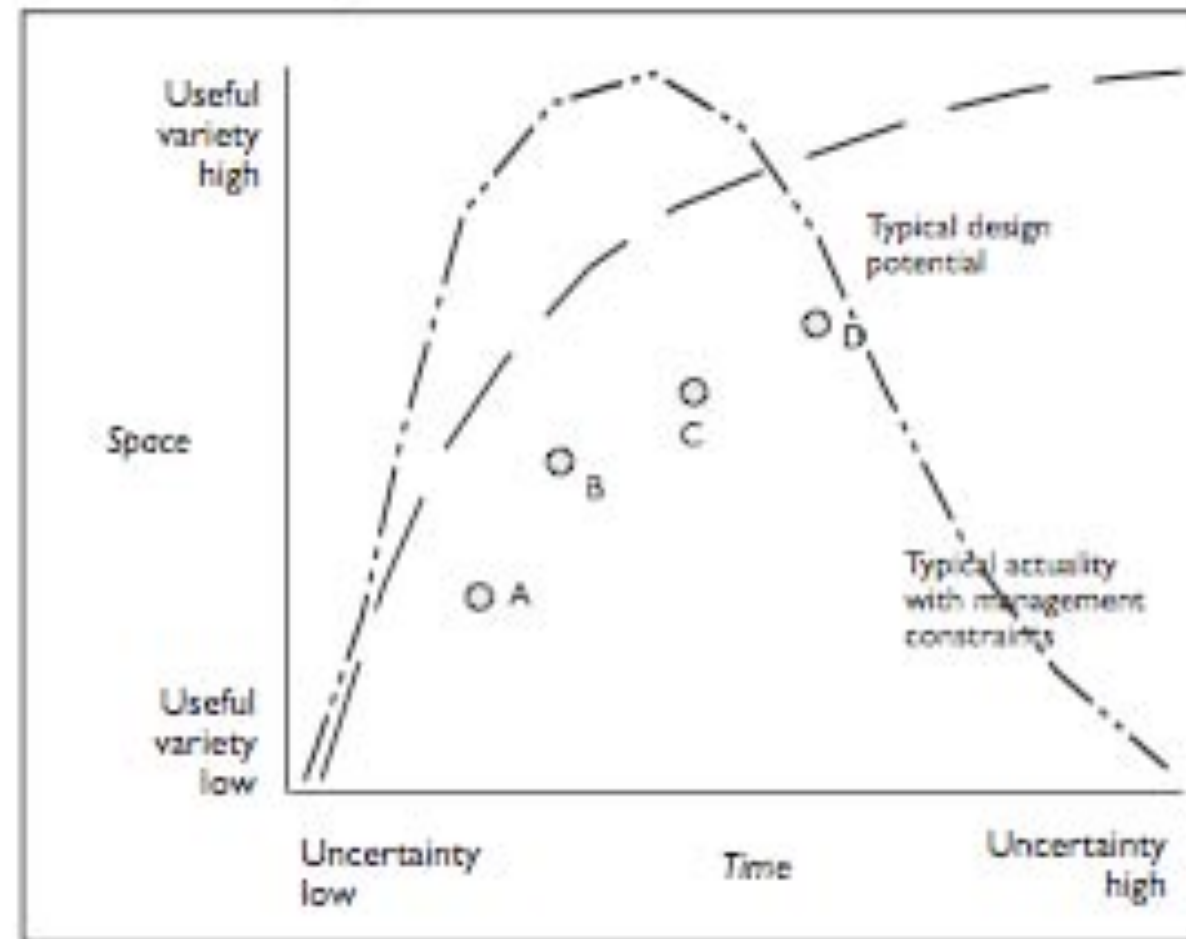


Figure 2iii Designers' J-curve and managers' inverted U-curve superimposed

Source: Authors

For explanation, see text.



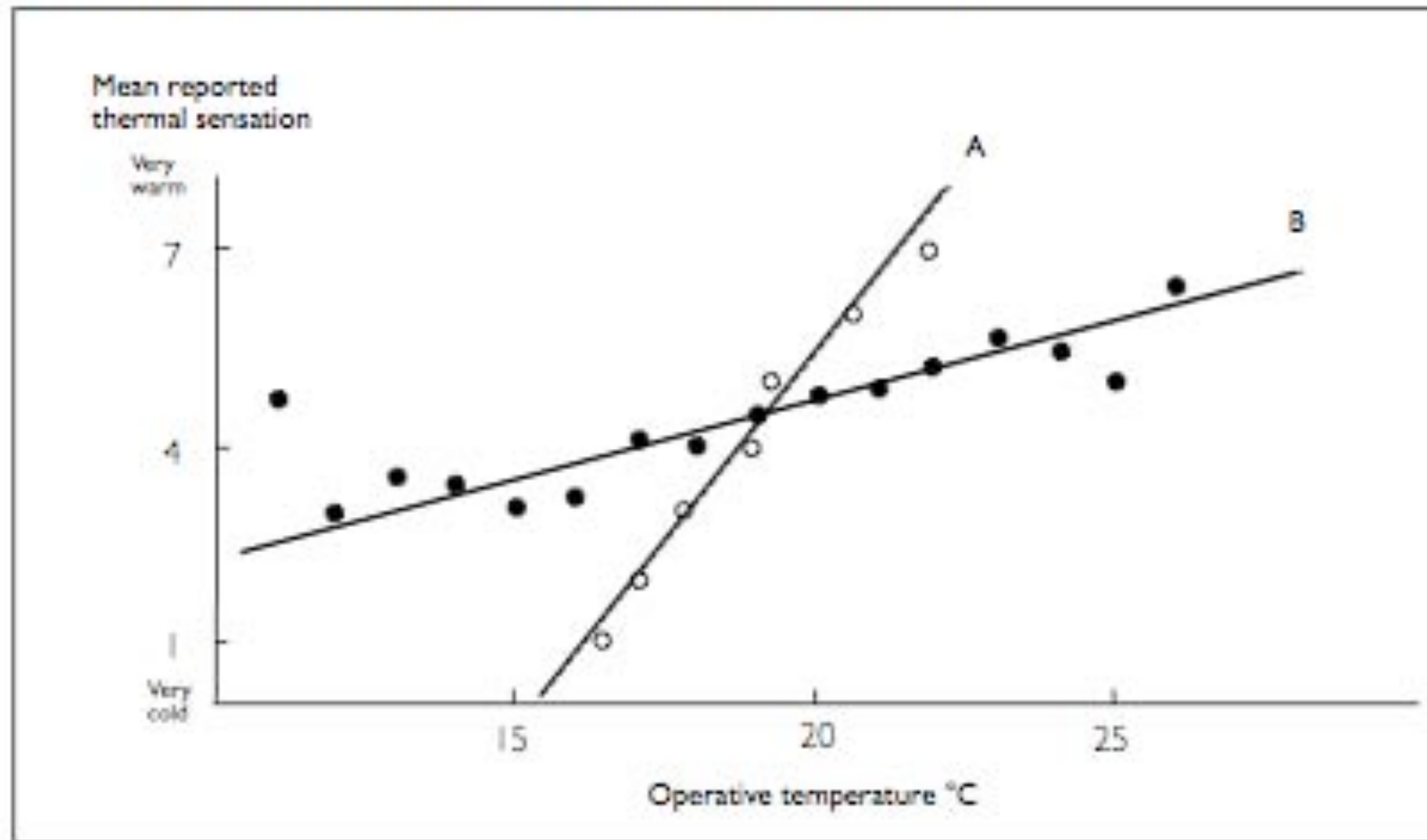
A; Cellular, naturally ventilated. B: Open plan NV; C: Open plan Mixed-mode hybrid; Open plan Air conditioned.

Source; Leaman A., and Bordass W., Comfort and Complexity, Unmanageable Bedfellows, Workplace Comfort Forum, RIBA, London, 22-23 March, 1995

Context is everything ...

Figure 4 The relationship between temperature and thermal comfort under constrained (dashed line) and unconstrained conditions in houses

Source: Nigel OSELAND Reference 10. See also De Dear et al Reference 6 Figure 3.17, p64.



Source; Leaman A., and Bordass W., Comfort and Complexity, Unmanageable Bedfellows, Workplace Comfort Forum, RIBA, London, 22-23 March, 1995

Dangers of received wisdom

1996

You can't tell if you have a good building...
unless you find out how it is working

Elizabeth Fry building has the last laugh

The story of the Elizabeth Fry building (AJ 23.4.98) contains a number of ironies. My favourite is that it didn't even make the shortlist of the Green Building of the Year Award in 1996.

DR ROBERT LOWE

Leeds Metropolitan University

When natural ventilation was all the rage, a novel form of mechanical ventilation was quietly slipping into Britain: the Swedish Termodeck system. One of the first buildings to use Termodeck and other Swedish detailing was an academic facility at the University of East Anglia. How has it fared?

BY THE PROBE TEAM

PROBE

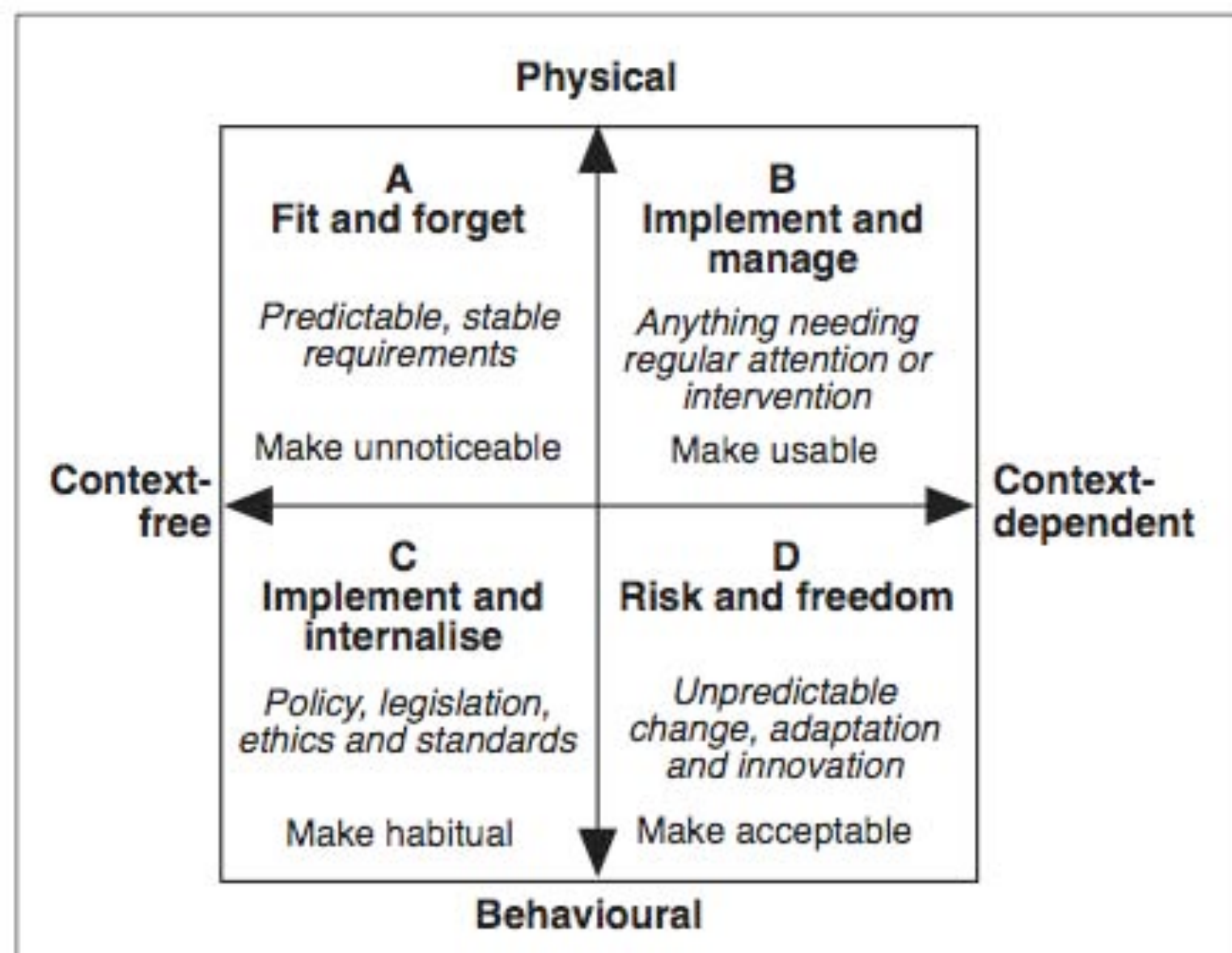


14: Elizabeth Fry Building

LETTER TO ARCHITECTS' JOURNAL

The good performers don't necessarily impress the judges

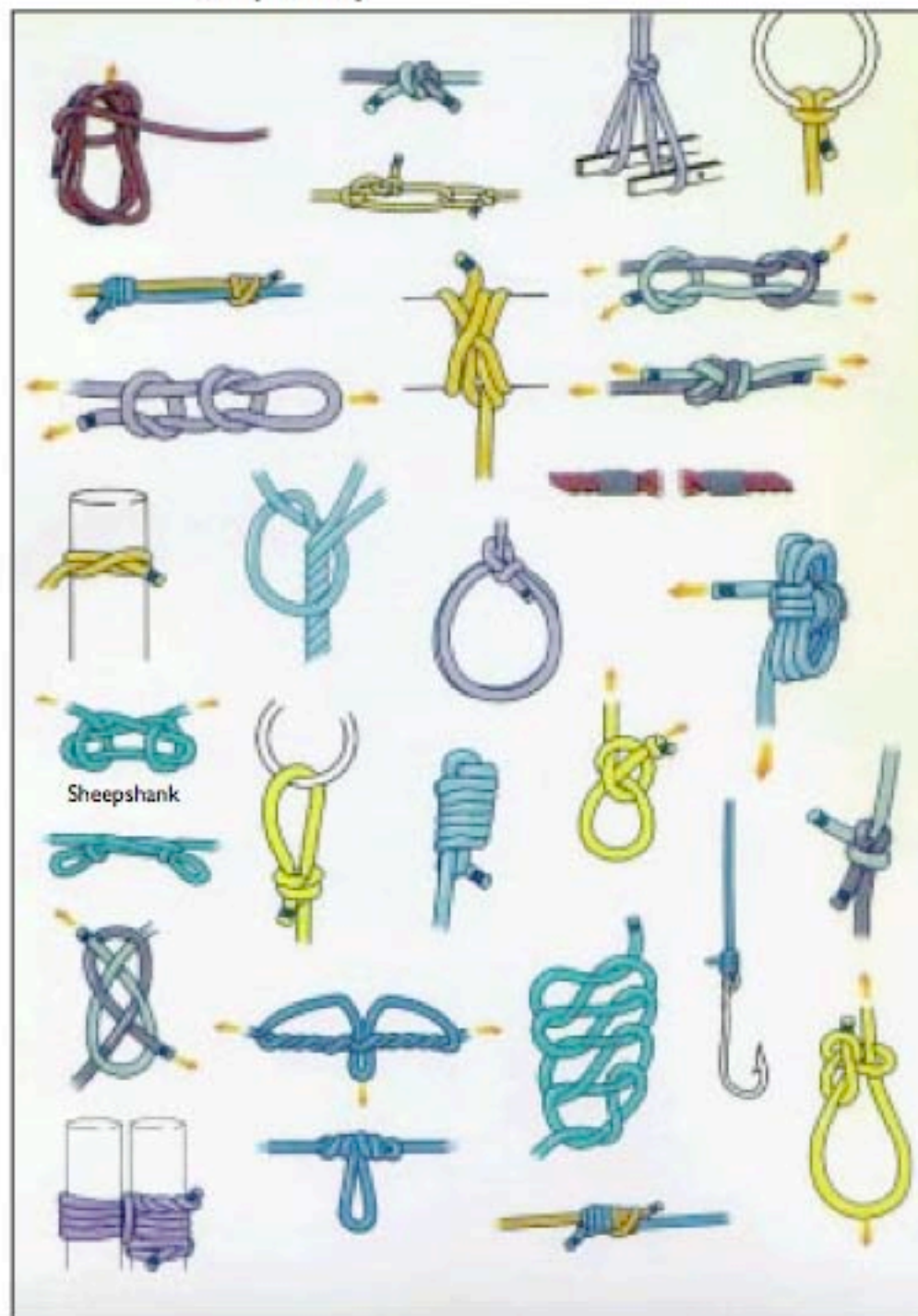
Think through the strategy ...



Source; Leaman A., Bordass W., and Cassels S., Flexibility and Adaptability in Buildings: the “killer” variables, Unfinished draft, 1998

Be wary of good intentions ...

Figure 1 Types of knot - literal examples of flexibility and adaptability



Source: Reference 1 Rope is obviously flexible and useful within governing parameters such as length and tensile strength. Its adaptability comes through how knots are applied and utilised.

Some knots, such as the sheepshank, are non-intuitive. The sheepshank allows a weak point in a rope to be bridged, but only works properly when under tension. So when climbing down a cliff on a rope it is possible to tie a sheepshank in the top end, cut through the rope (at a point between the "ears" of the sheep) while you are still attached to the rope, climb down, shake the rope free when you have reached the bottom, and retain the majority of the rope!! (p 64 "Sheepshank secrets").

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Figure 2 Types of event affecting buildings

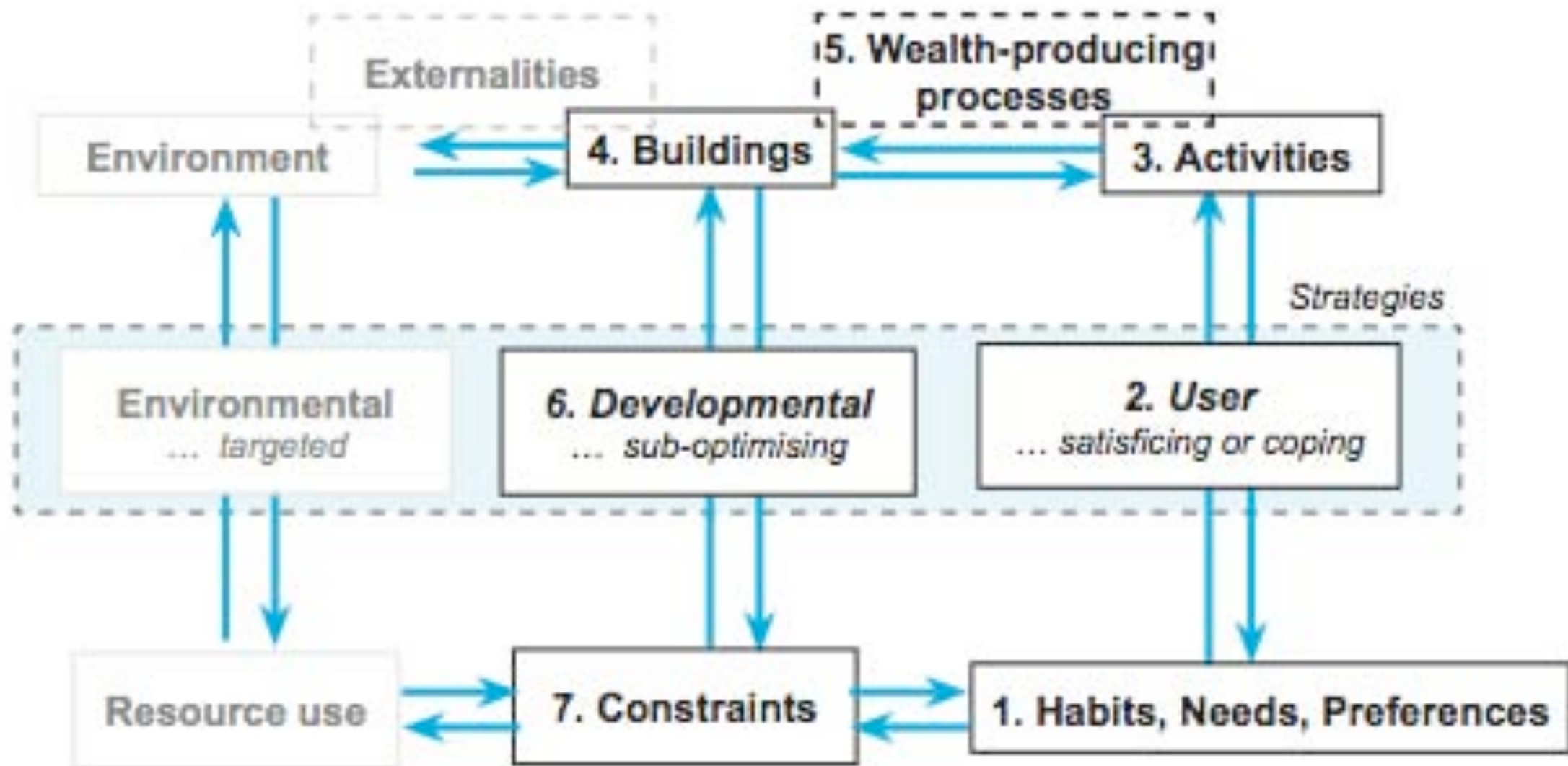
	Duration	
	Shorter	Longer
High magnitude / low frequency	Potentially catastrophic, eg. Structural failure, gridlock congestion. "Acute"	(Lack of) Adaptability
Low magnitude / high frequency	(Lack of) Flexibility	Insidious, eg. Inefficient technology, occupant ill-health. "Chronic"

Source: Authors

A wider world view ...

9: Cultural perceptions of risk and hazard

8. Social, technical and environmental flux



... and make it all open
source ...

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feedback
and
strategy

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