TRANSITIONS IN PRACTICE

climate change and everyday life

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ESRC climate change leadership fellowship

E·S·R·C
ECONOMIC & SOCIAL RESEARCH COUNCIL

Display Energy Certificate

HM Government

How efficiently is this building being used?

A Government Dept
12th & 13th Floor
Jubilee House
High Street
Anytown
A1 2CD

Certificate Reference Number:
1234-1234-1234-1234

This certificate indicates how much energy is being used to operate this building. The operational rating is based on meter readings of all the energy actually used in the building. It is compared to a benchmark that represents performance indicative of all buildings of this type. There is more advice on how to interpret this information on the Government's website www.communities.gov.uk/epbd.

Energy Performance Operational Rating

This tells you how efficiently energy has been used in the building. The numbers do not represent actual units of energy consumed; they represent comparative energy efficiency. 100 would be typical for this kind of building.

More energy efficient

- A 0-25
- B 26-50
- C 51-75
- D 76-100

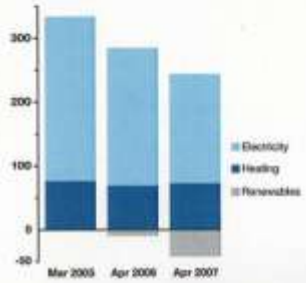
100 would be typical

- E 101-125 ◀ 108
- F 126-150
- G Over 150

Less energy efficient

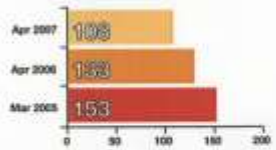
Total CO_2 Emissions

This tells you how much carbon dioxide the building emits. It shows tonnes per year of CO_2.



Previous Operational Ratings

This tells you how efficiently energy has been used in this building over the last three accounting periods



Technical information

This tells you technical information about how energy is used in this building. Consumption data based on actual readings.

Main heating fuel: Gas
Building Environment: Air Conditioned
Total useful floor area (m^2): 2927
Asset Rating: 92

	Heating	Electrical
Annual Energy Use (kWh/m^2/year)	125	129
Typical Energy Use (kWh/m^2/year)	120	95
Energy from renewables	0%	20%

Administrative information

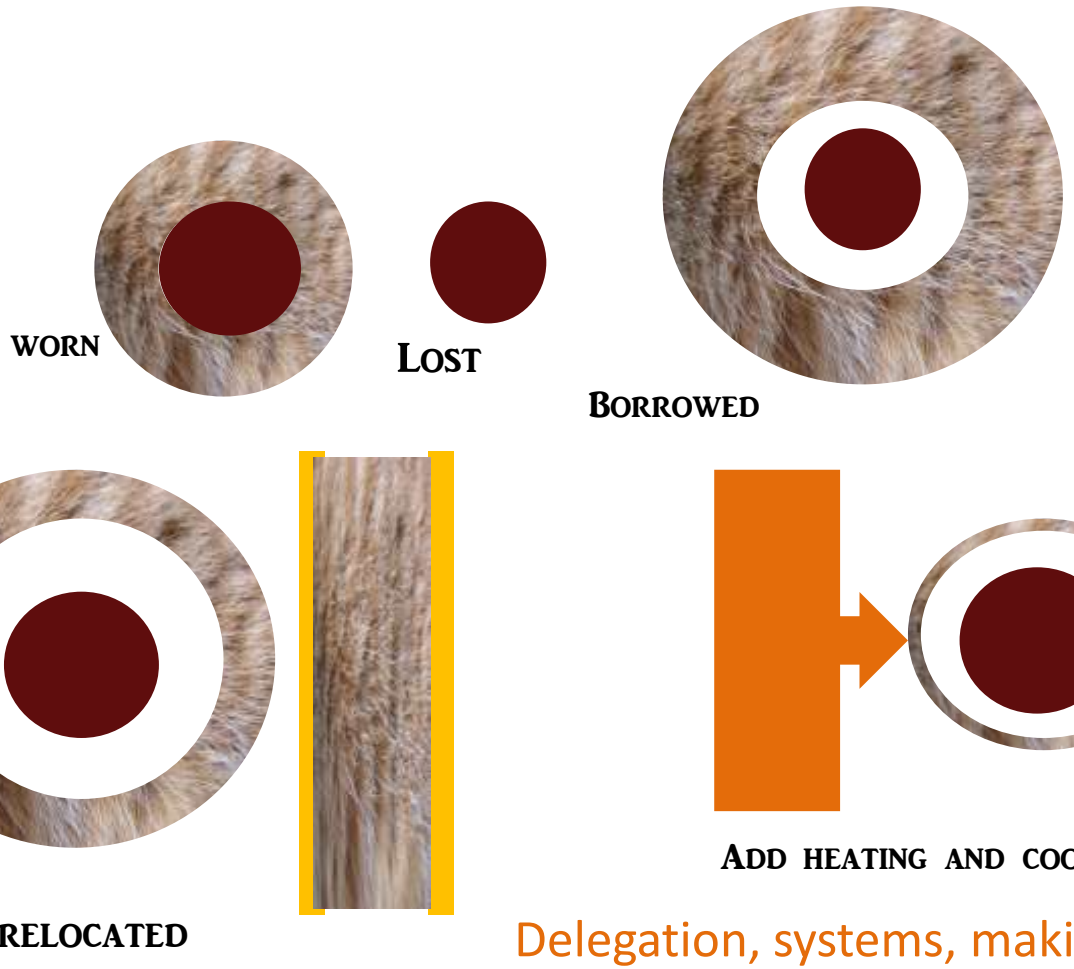
This a Display Energy Certificate as defined in SI2007:991 as amended.

Assessment Software: OR v1
Property Reference: 89112376612
Assessor Name: John Smith
Assessor Number: ABC12345
Accreditation Scheme: ABC Accreditation Ltd
Employer/Trading Name: EnergyWatch Ltd
Employer/Trading Address: Alpha House, New Way, Birmingham, B2 1AA
Issue Date: 12 May 2007
Nominated Date: 01 Apr 2007
Valid Until: 31 Mar 2008
Related Party Disclosure: EnergyWatch are contracted as energy managers
Recommendations for improving the energy efficiency of the building are contained in Report Reference Number 1234-1234-1234-1234

Focusing on efficiency sidesteps larger questions about how buildings sustain (unsustainable) ways of life.

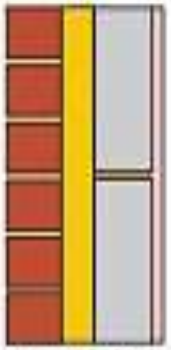
For example, how do buildings figure in the reproduction of energy intensive systems and concepts of indoor comfort.

E.g. 22 degrees C. all over the world, all year round and whatever the weather outside.



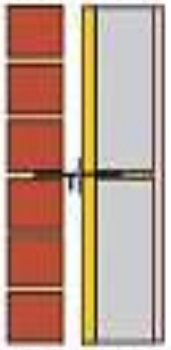
Delegation, systems, making and 'meeting' needs

filled cavity



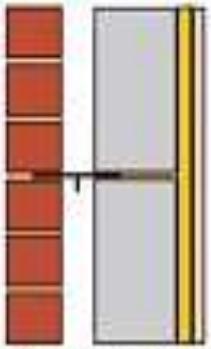
50mm cavity batts
100mm aerated block
13mm lightweight plaster

partial fill

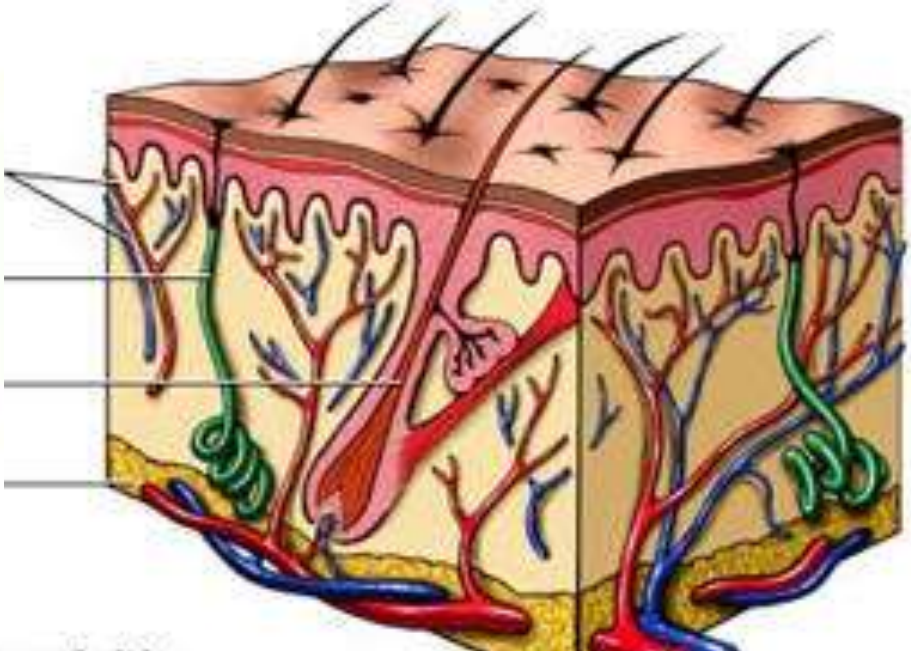


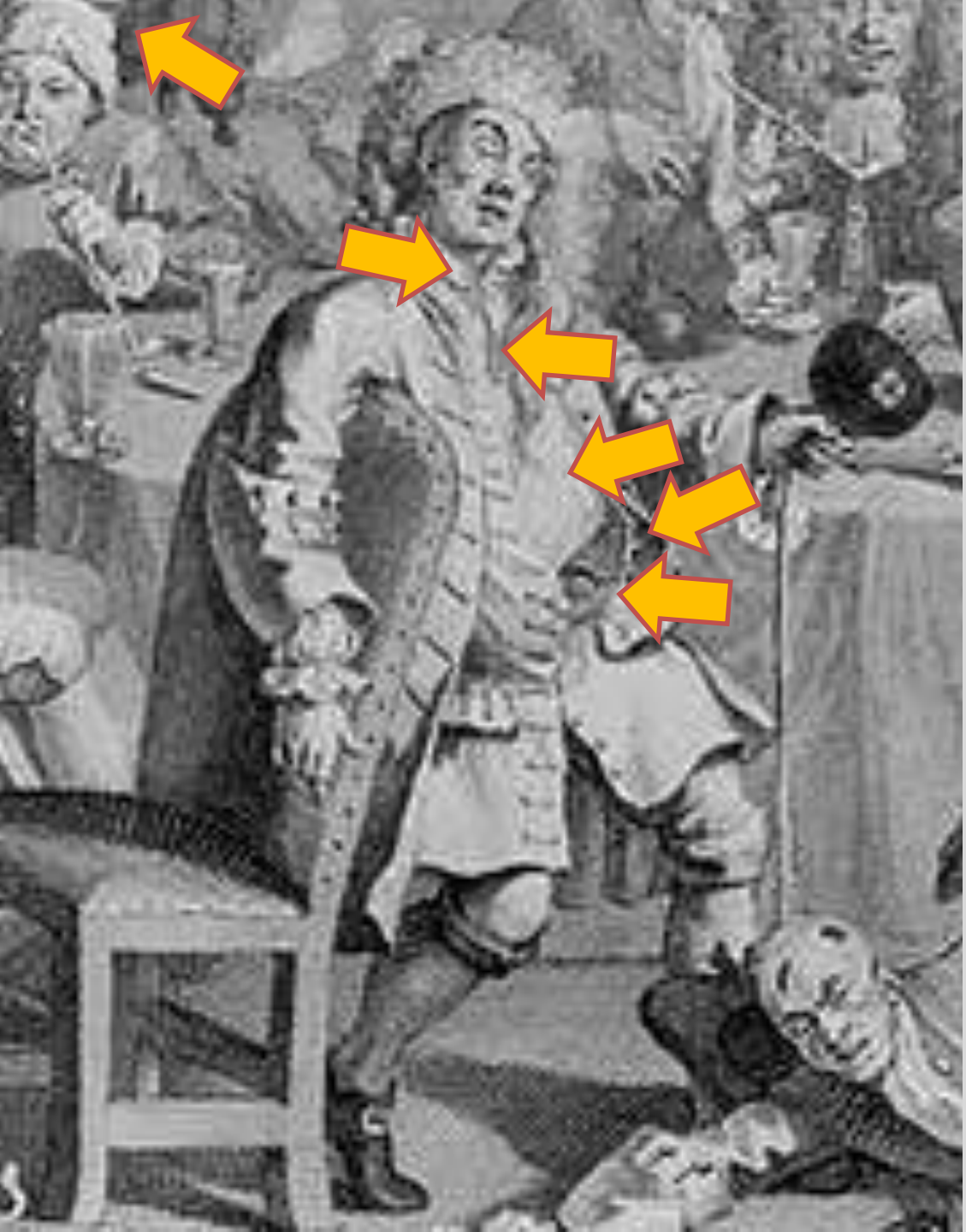
25mm cavity boards
100mm aerated block
13mm lightweight plaster

clear cavity



125mm aerated block
25mm thermal board





The co-production of comfort involves new integrations of:

Clothing

Sweating

Building fabric and technology

Ideas about the human body

Seasonality

Regulation

Scientific research

Corporate interests

If a building is set, regularly at, say, 22 ºC … [and] …If enough buildings are controlled at this temperature, it becomes a norm for that society at that period of its history, and anything different is regarded as 'uncomfortable' (Humphreys 1995: 10)

Buildings and the reproduction of unsustainable social practices

As material elements: as ‘equipment’; as ‘scripting’ devices (ways of life are inscribed); as stabilising devices; as constraining and enabling

As carriers of images and meanings; the good life, the relation between nature and culture, indoors and out; the meaning of comfort, the body, sweat and smell.

As entities that demand and reproduce specific forms of competence and know-how; in building and in inhabiting; seasonal skills; procedures.

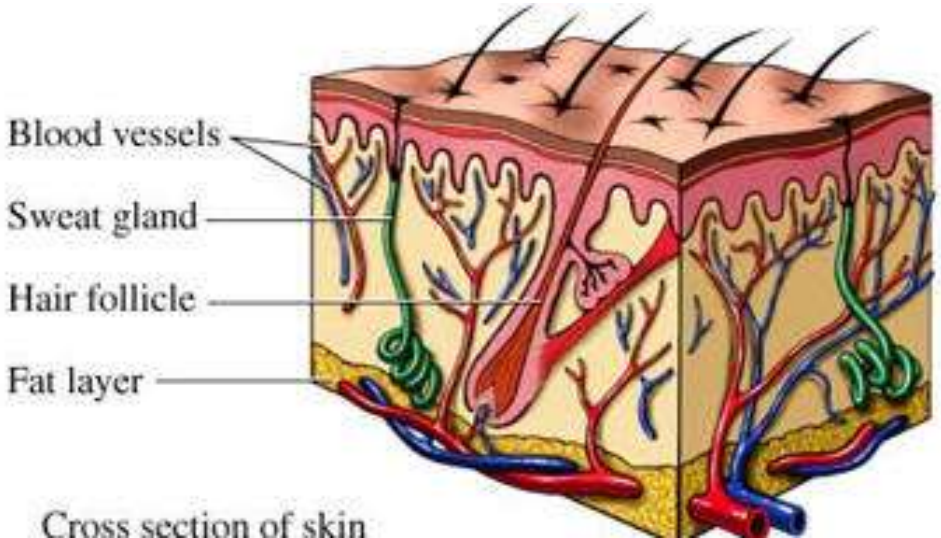
Professor Fanger in his "Doctor-dress" at a reception at DTU, June 14, 2001

For example, buildings and bodies

The **olf** is a unit used to measure the scent emission of people and objects.

One olf is defined as the scent emission of an "average person", a sitting adult that takes an average of 0.7 baths per day and whose skin has a total area of 1.8 square metres; the scent emission of an object or person is measured by trained personnel comparing it to normed scents.

Fanger employed 160 sniffers to smell one thousand Europeans and calculated the average *olf* for one individual. An average smoker is said to emit six *olfs* and a trained athlete, when exercising vigorously, is said to emit 20 *olfs*.



Trying to re-define the relationship

Japan Sweats It Out As It Wages War On Air Conditioning Salarymen Shed Their Ties And Endure the Shame On Steamy Summer Days, Sebastian Moffett
The Wall Street Journal,***September 11, 2007; Page A1***

TOKYO -- Late last month, the presidents of Japan's three biggest banks gathered to make an important announcement: They were abandoning formal attire for the rest of the summer -- and insisting that their 1,630 branches nationwide keep office temperatures at a steamy 82 degrees Fahrenheit in order to conserve energy

Satoshi Iue, Sanyo Electric chairman and CEO, poses during a 'Cool Biz' fashion show.

Sustainability

Unsustainability is arguably hard wired into suburbia and into suburban ways of life in the form of:

Severe under-crowding,

Extreme energy and water intensity and

A very high mobility burden.

Suburbia

Is suburbia a blip in the long term evolution of living arrangements, an enduring form or the ghetto of the future?

Systems in transition

Suburbia as a case with which to consider ideas about how large scale, systemic transitions in everyday life come into existence, how they are reproduced and how they are unmade.

Making the ideological infrastructure

Family and childhood : playing outdoors

Making the material infrastructure

Hardwiring of everyday life

As an outcome of planning and policy; embodied visions of the good life

Two Cypriot houses: infrastructures, materials, expectations and uses across one generation

adapted from Golton (1994).

How do buildings fit into dynamic systems of social practice?

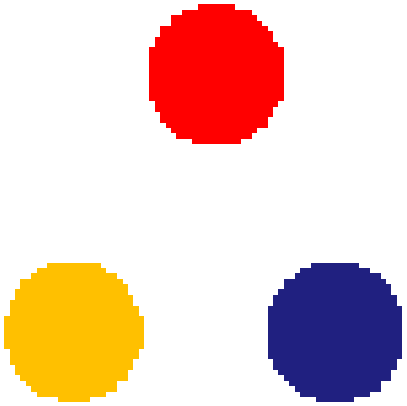
Features	Grandparents' house	Parents' house
Area per person	18m^2	66.5m^2
Roof	Timber, mud, straw	Reinforced concrete
External walls	Stone and mud	Reinforced concrete frame, brick and cement mortar
External openings	3 timber doors	14 doors and windows with aluminium frames and imported glass, 1 door of imported timber
Internal finishes	Natural gypsum	Processed gypsum, vinyl paint, ceramic
Floors	White soil	Ceramic, terrazzo and carpet
Internal services	None	Copper, galvanised steel and PVC pipe, PVC covered copper wire
External services	None	Copper, galvanised steel, salt glazed earthenware and PVC pipe, aluminium wire
Lighting	Animal oil	Electricity
Space heating	Wood burning fire	Diesel oil
Space cooling	None	Electricity
Cooking and washing	Wood burning fire	Gas, diesel, oil, electricity, solar
Control of comfort	Inhabitants experience a wide range of conditions	Inhabitants experience a narrow range of conditions
Control of lighting	Limited control	Extensive control
Servicing the dwelling	Takes considerable time	Takes barely any time
Social network	Local friends and relatives	International networks, electronic communication

“social practices ordered across space and time” constitute “the basic domain of study of the social sciences”
(Giddens 1984: 2).

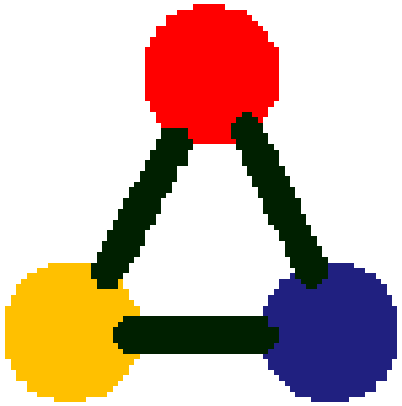
‘the existence of a practice depends upon the specific inter-connectedness of many elements

– forms of bodily activities, **mental** activities, **things** and their use, background knowledge in the form of understanding, know-how and notions of **competence**, states of emotion and motivational knowledge’ **Reckwitz 2002**

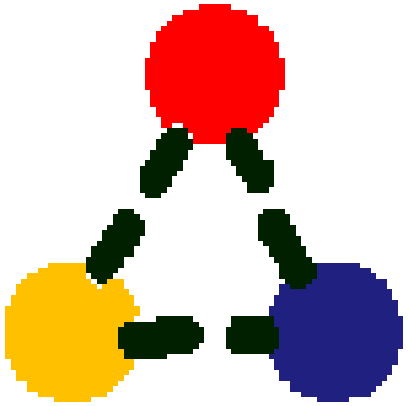
proto-practices (pre-formation)



practices (re-formation)

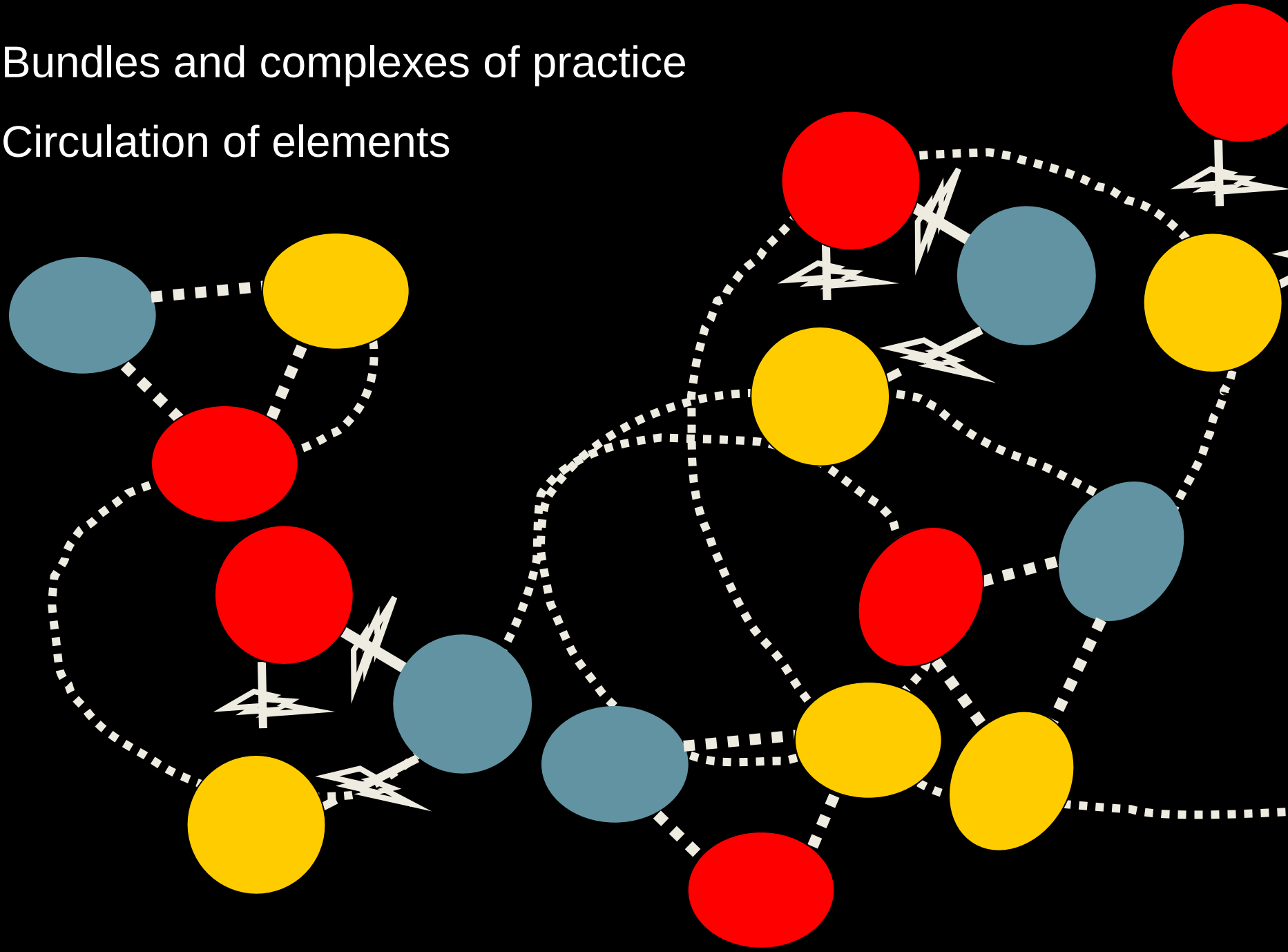


ex-practices (de-formation)

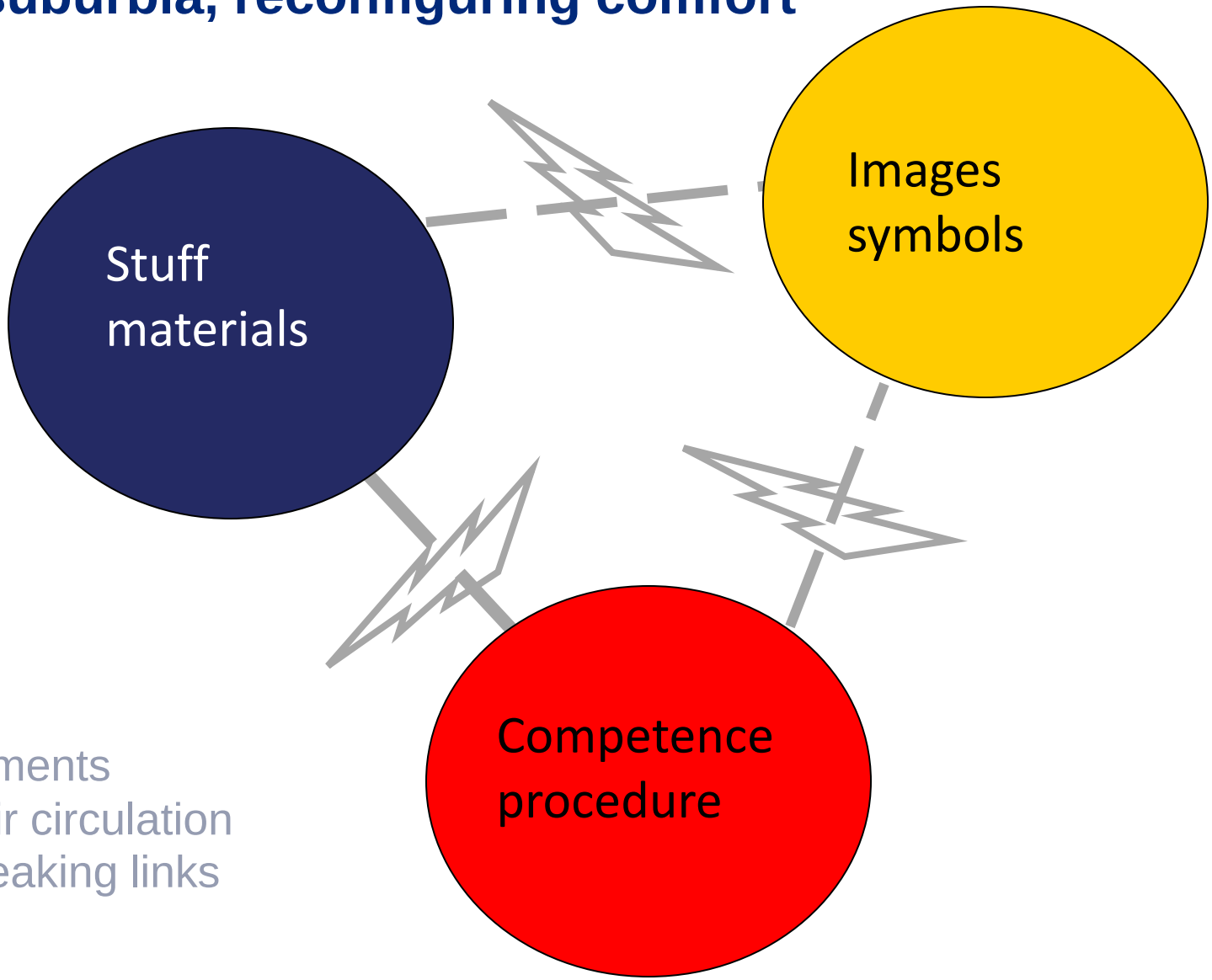


Bundles and complexes of practice

Circulation of elements

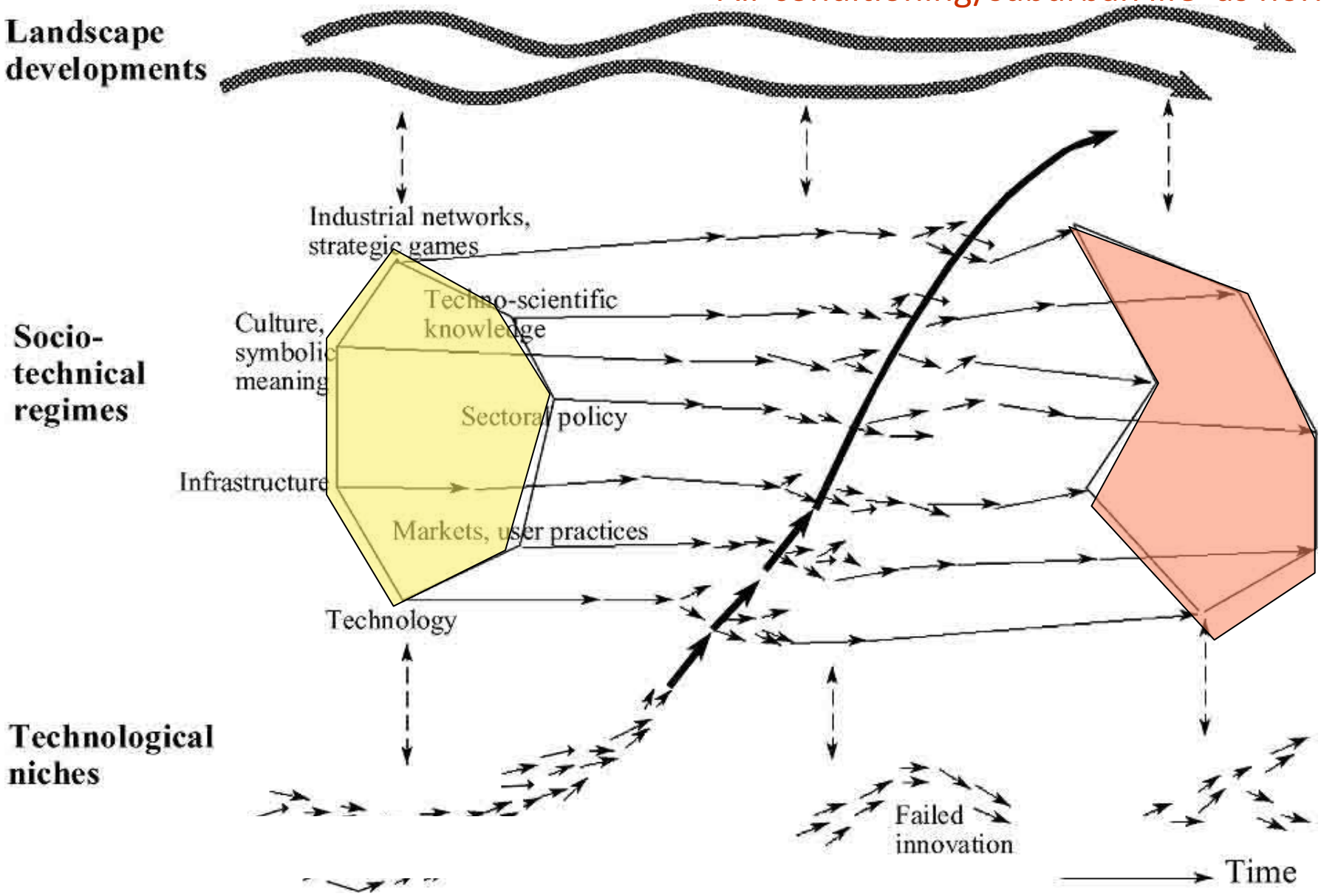


Unmaking suburbia, reconfiguring comfort



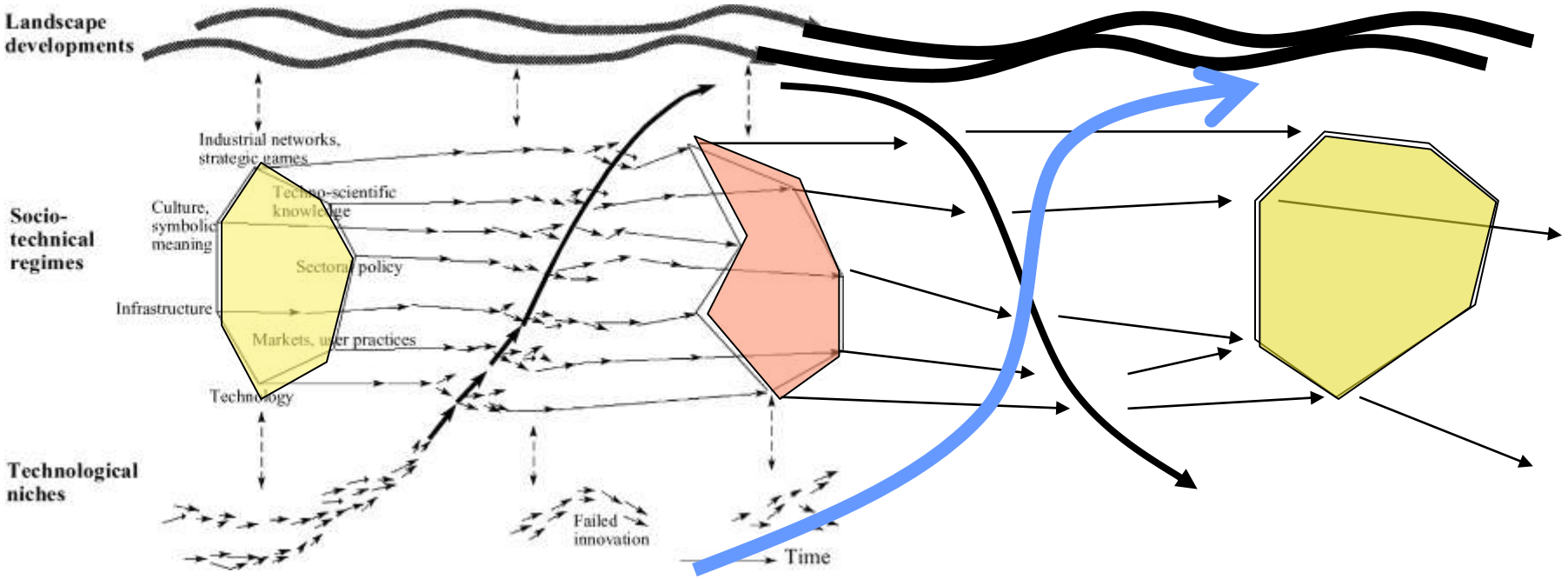
Redefining elements
Influencing their circulation
Making and breaking links

Air conditioning/suburban life as normal



Geels 2002.

Disappearing systems and practices



Mechanical cooling becomes normal

New configurations take hold

Unstable systems, tensions & contradictions

Isolation, deserted in the day, hours commuting, no local services, changing conventions and cultures of childhood

To do list…. Though notice issues of agency!

Develop new energy sensitive sciences of comfort: clothing and buildings together; extending the range of indoor conditions.

Understand diversity in what people take to be normal, in relation to showering, bathing, heating, cooling and in terms of the space they inhabit.

Understand the cultural production of the body: sense, sensations, sweat – experiences of freshness and how these are reconfigured

Confront political issues: making and not 'meeting' needs - how to design buildings to re-engineer concepts of normality: water supplies, space standards, service provision.

Understand how social and technical systems co-evolve; how social conventions change, how elements circulate and travel.

Reflect on the dangers of energy efficiency: more efficient but still reproducing unsustainable practices.