



Building Better:

How to make good buildings for
good living

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Structure

UNLEARN - Buildings

LEARN - Scale

RELEARN - Good Living



u n l e a r n

l e a r n

r e l e a r n

CSE



Buildings???



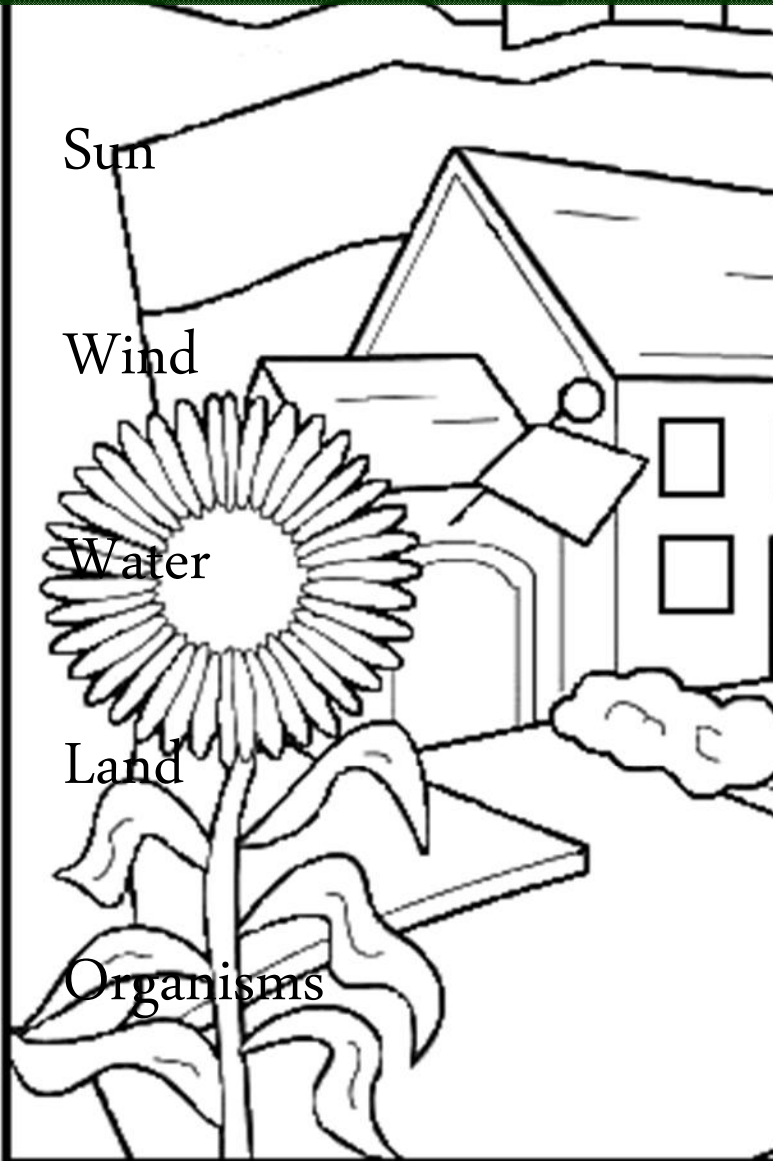
Human habitation



unlearn learn relearn

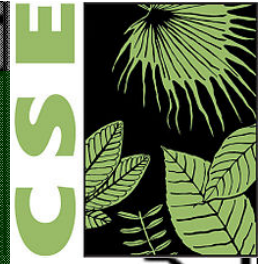
Protection

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Comfort



Thermal

Visual

Acoustic

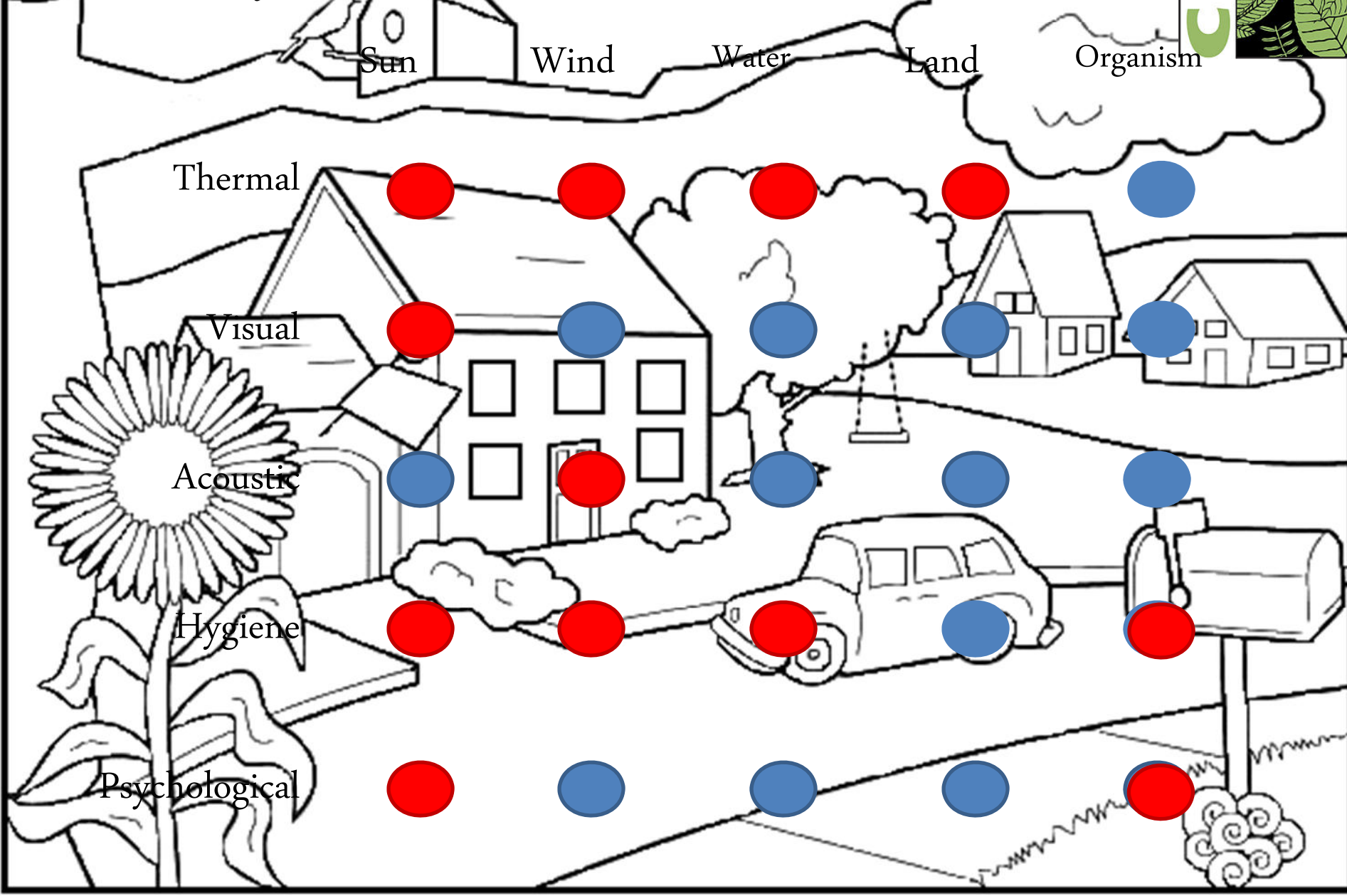
Hygiene

Psychological





Lets Analyze..



What is the Connection

Protection

Comfort

Control



u n l e a r n

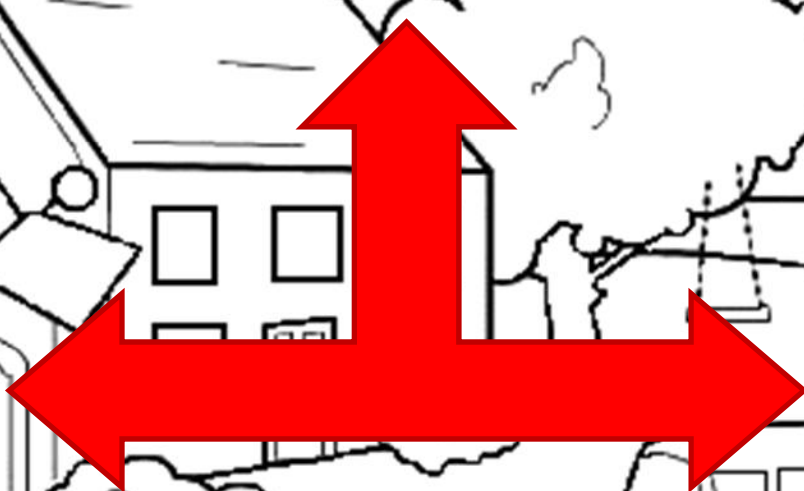
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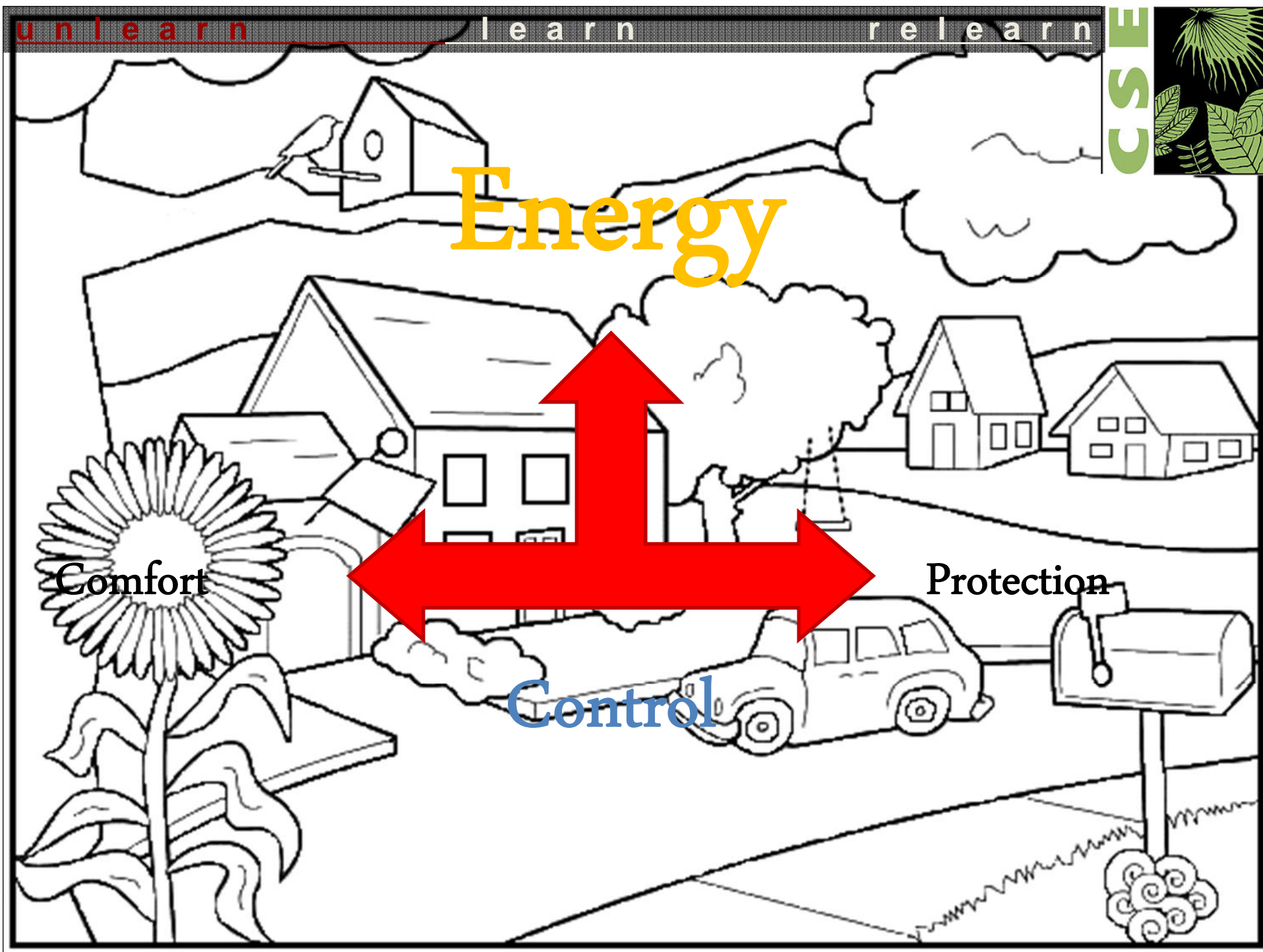
Energy

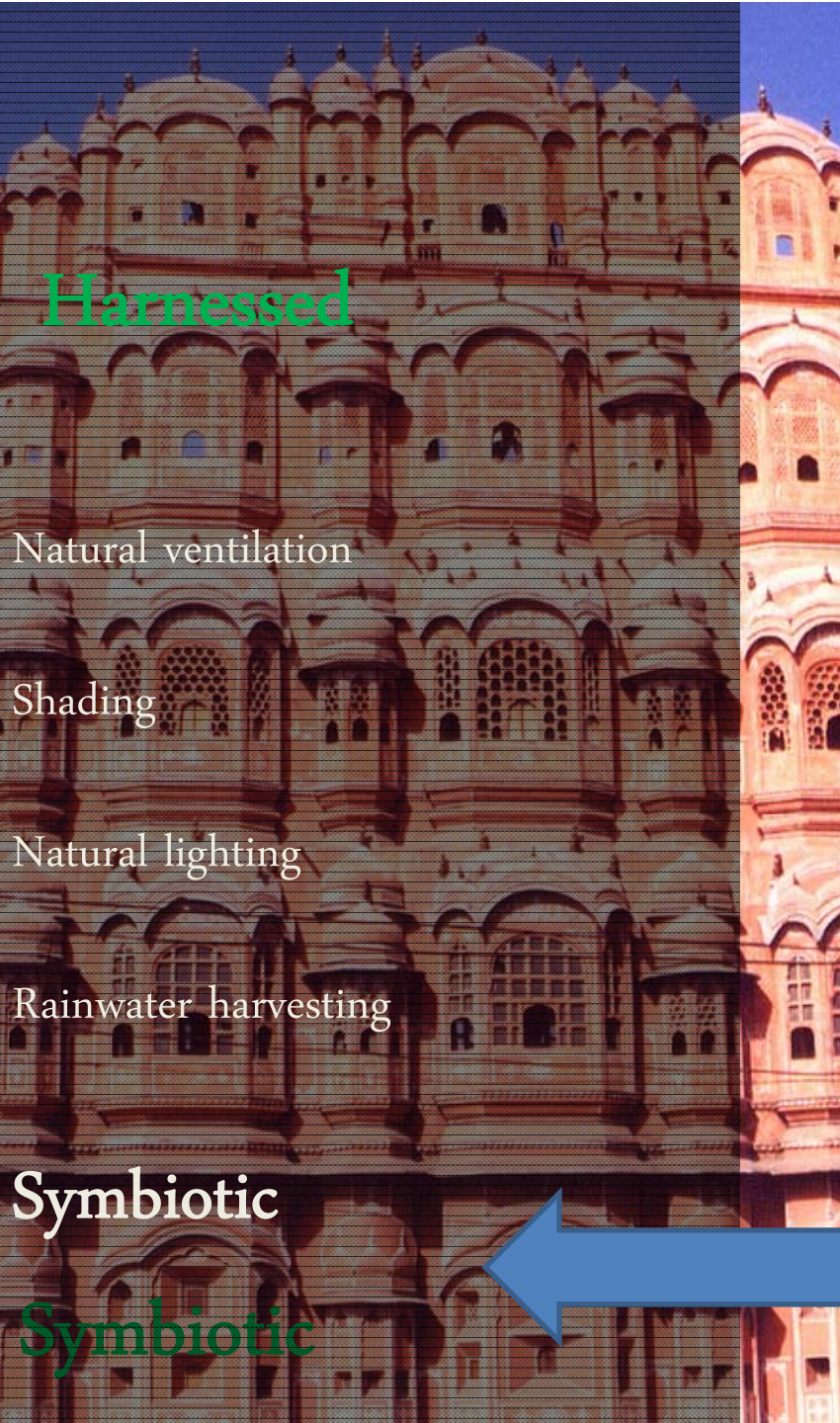


Comfort

Protection

Control





Harnessed

Natural ventilation

Shading

Natural lighting

Rainwater harvesting

Symbiotic

Symbiotic

E
N
E
R
G
y



Spend

Air Conditioning

Tinted Glass

Artificial lighting

Groundwater extraction

Forced

Forced



Control

u n l e a r n

l e a r n

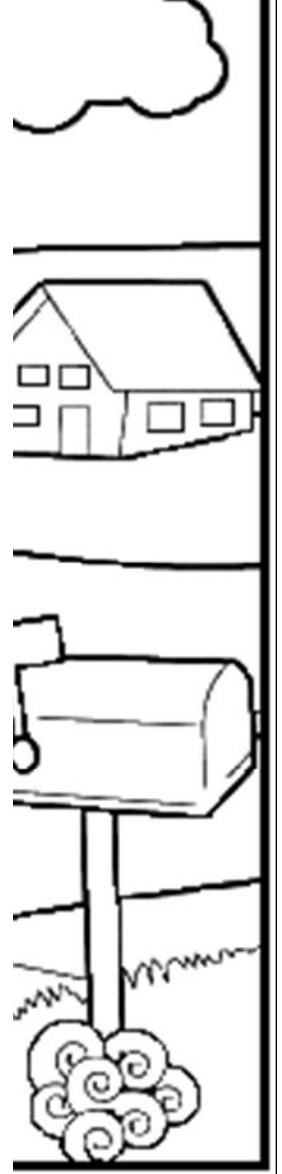
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In other words

Buildings are systems



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so better building is



better energy

utilization!



But that's incomplete picture

Buildings need to be built too!



u n l e a r n

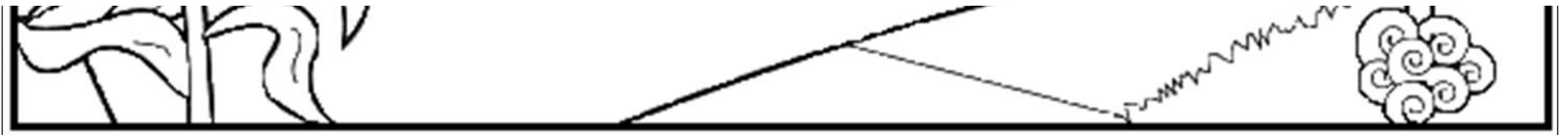
l e a r n

r e l e a r n

What are Buildings built off?

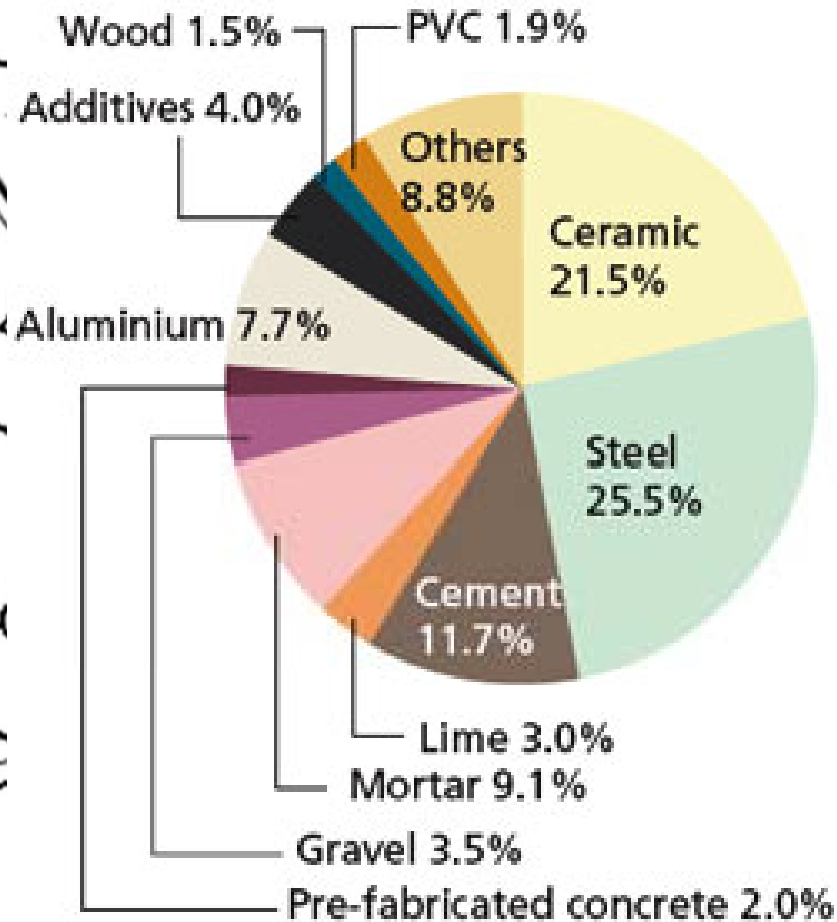


Building = Natural Resources



What adds how much

Building materials' contribution to embodied energy per sq m



Source: 2011 report of Centre of Research for Energy Resources and Consumption, Spain

u n l e a r n

l e a r n

r e l e a r n

So building better
is

Effective resource

Utilization

unlearn

learn

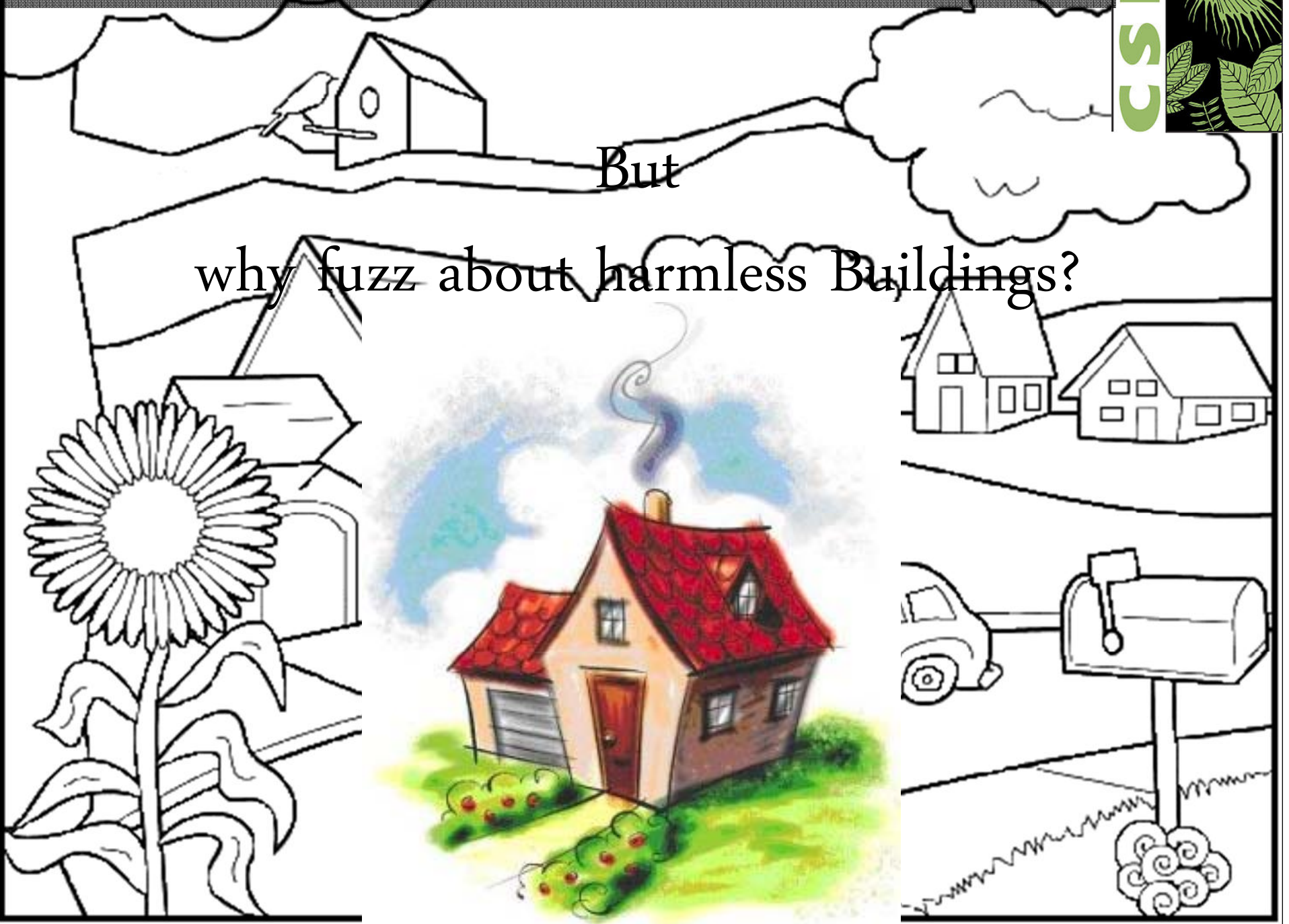
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But

why fuzz about harmless Buildings?



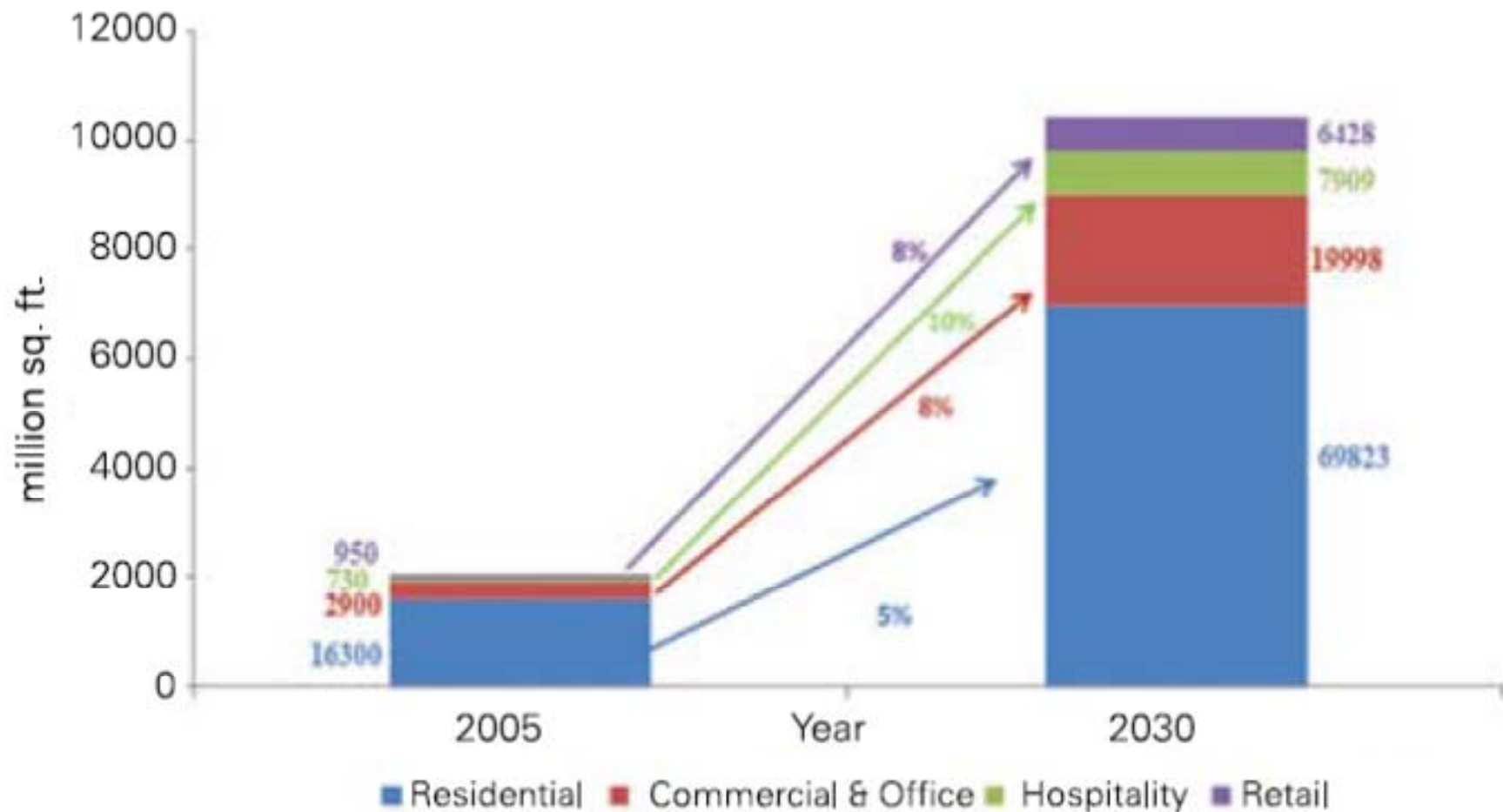
u n l e a r n l e a r n r e l e a r n

Because there are **buildings!!!**

The Organisation for Economic Co-operation and Development found that globally buildings are responsible for about

- 30 per cent of raw materials used,
- 42 per cent of energy used,
- 25 per cent of water used,
- 12 per cent of land use,
- 40 per cent of atmospheric emissions,
- 20 per cent of water effluents,
- 25 per cent of solid waste and
- 13 per cent of other releases

But we have hardly build 30 % of our buildings, almost 80 % yet to be built.



u n l e a r n

l e a r n

r e l e a r n

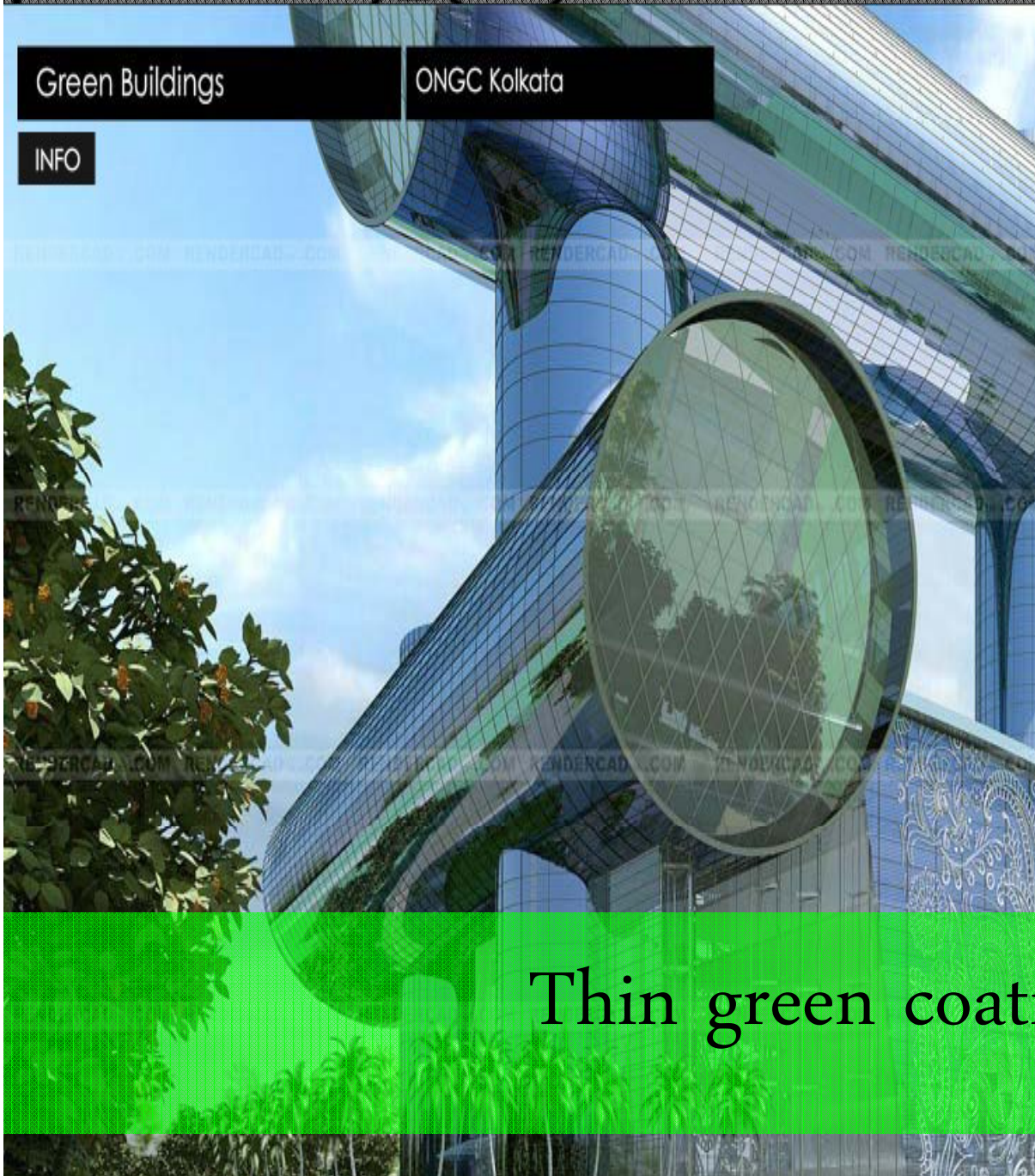
Imagine



Green Buildings

ONGC Kolkata

INFO



Uses... sense of open space. Allows natural light. Keeps dust away...Reduces the need for artificial light; aesthetics etc

But..... **Traps heat**... the principle of greenhouse. Increase energy use for cooling.

Why so much glass in tropical climate of India that needs to control heat gain and high glare.

Thin green coating

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If it's built on wrong land?



SUPERB*
wallpapers



u n l e a r n

l e a r n

r e l e a r n



Future???





Sustainable urbanisation



!!!

Privatised new towns.....

Town of affluent but infrastructure of poor

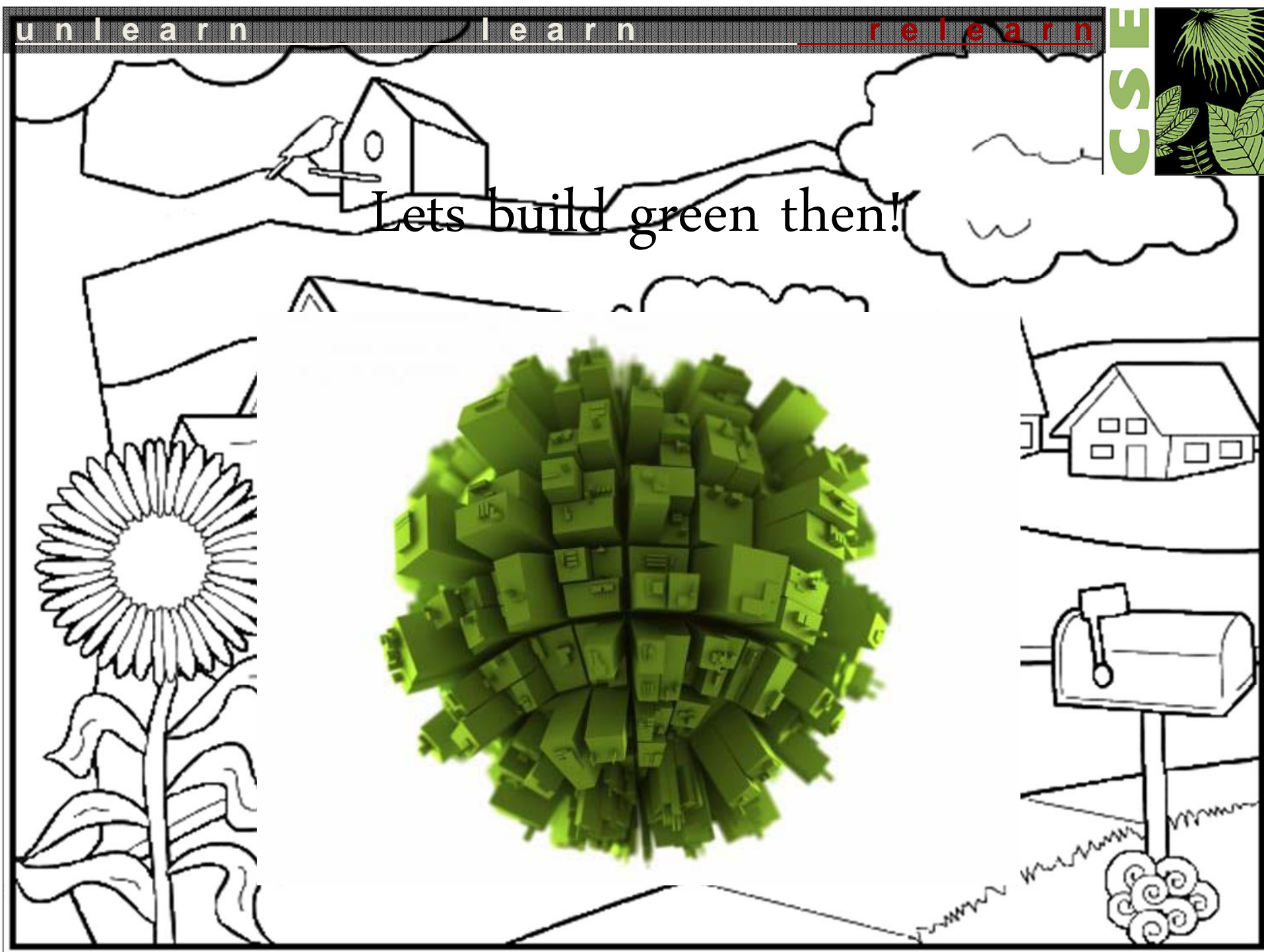
- 70% of water needs from ground water; Groundwater table falling at a rate of 1 to 1.2 meters annually; dropped by 16 meters in last 20 years
- Only 40% of the DLF area connected by sewer line
- Only 70-75% of solid waste transported; No landfill site
- Poor public transport connectivity
- Due to acute power shortage heavy dependence on generator-sets
- Violation of development rules related to open spaces and community services

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Lets build green then!





USA recently found the more than half of the green rated buildings were performing below their rated levels. In fact some were performing worse than average buildings.





Its you and me



unlearn

learn

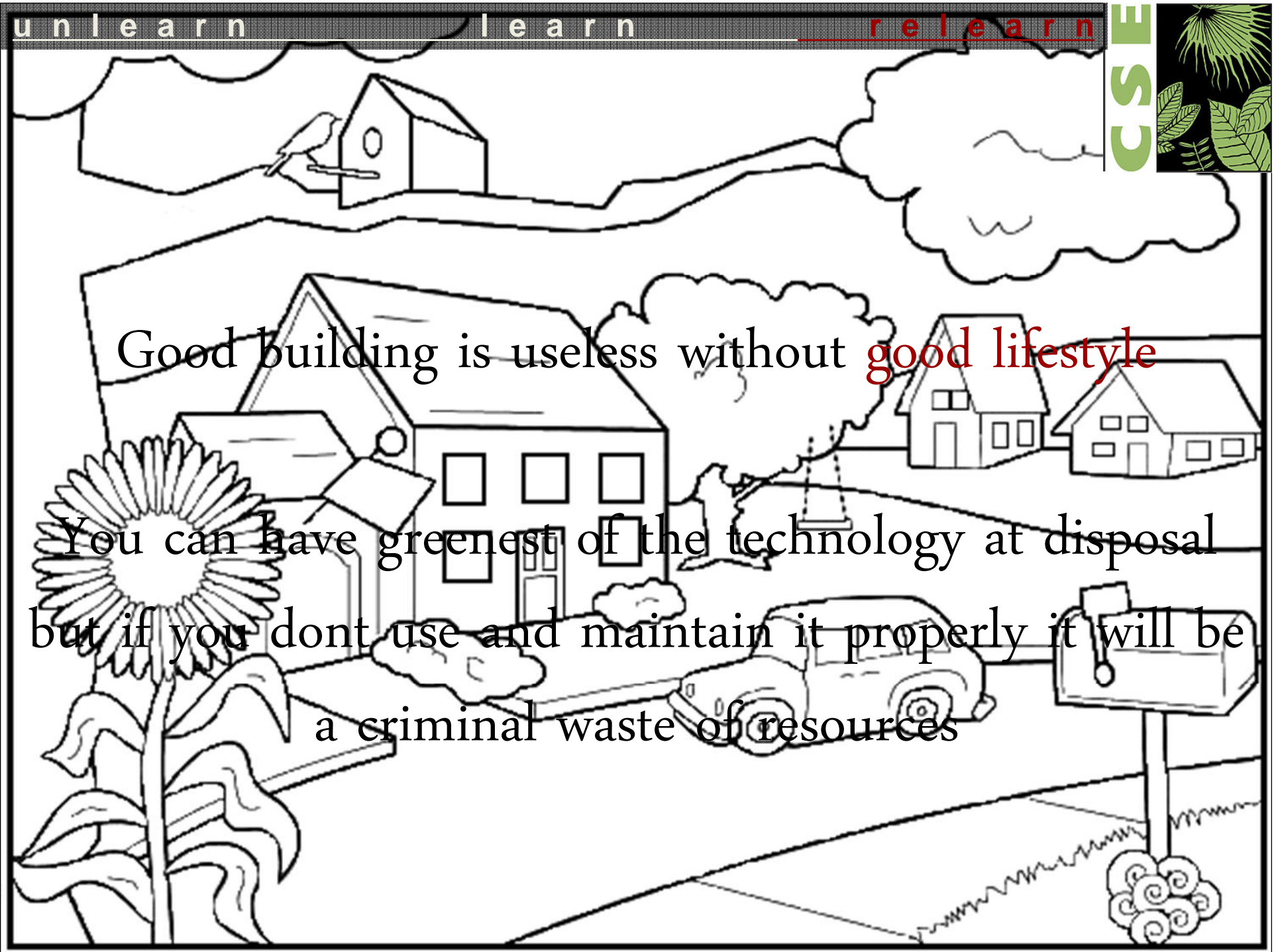
relearn

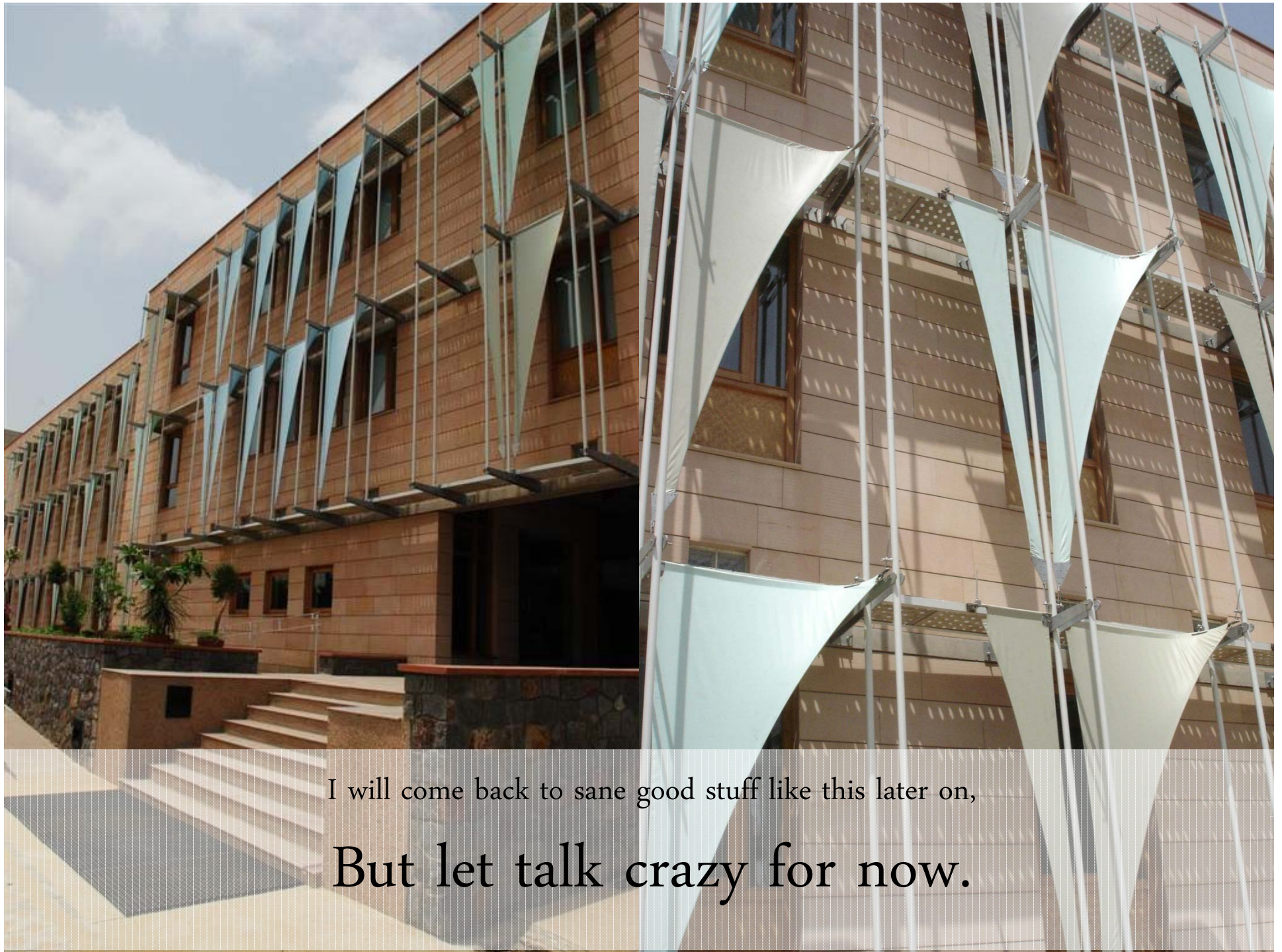
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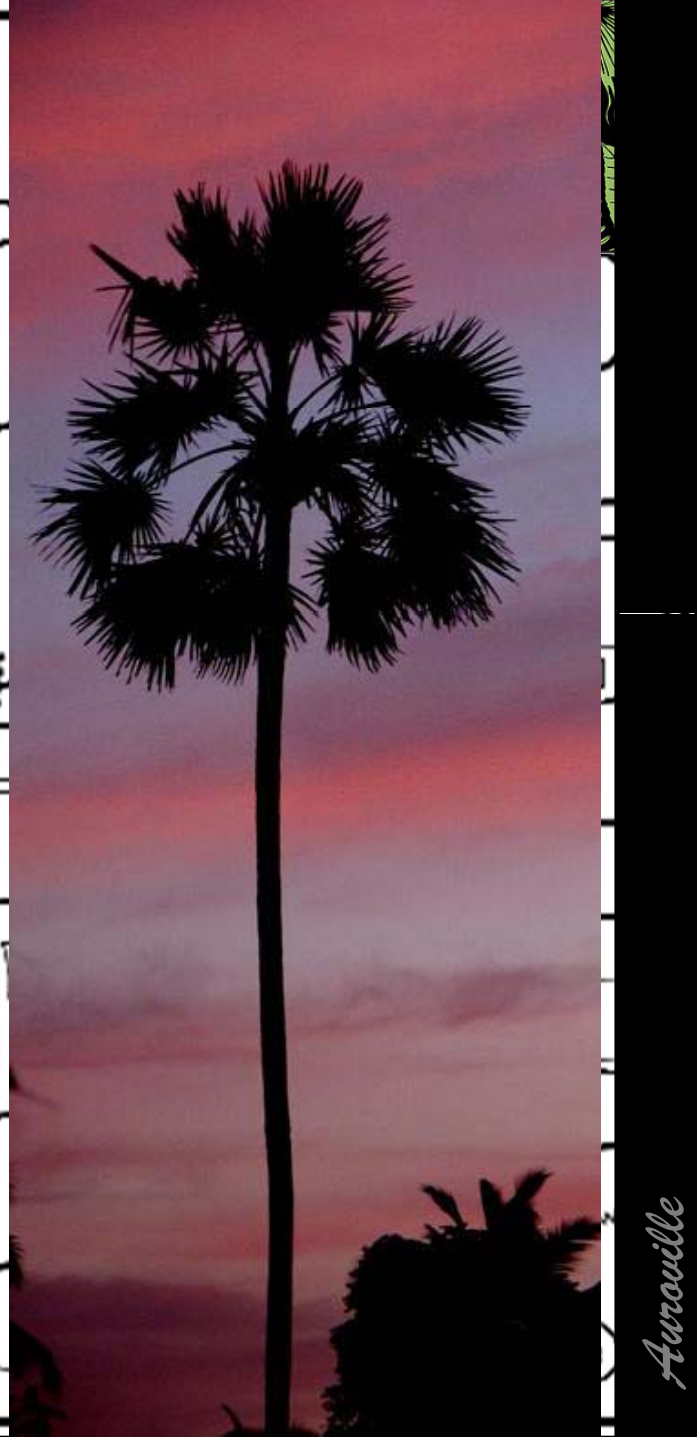
Good building is useless without **good lifestyle**

You can have greenest of the technology at disposal
but if you dont use and maintain it properly it will be
a criminal waste of resources





I will come back to sane good stuff like this later on,
But let talk crazy for now.



















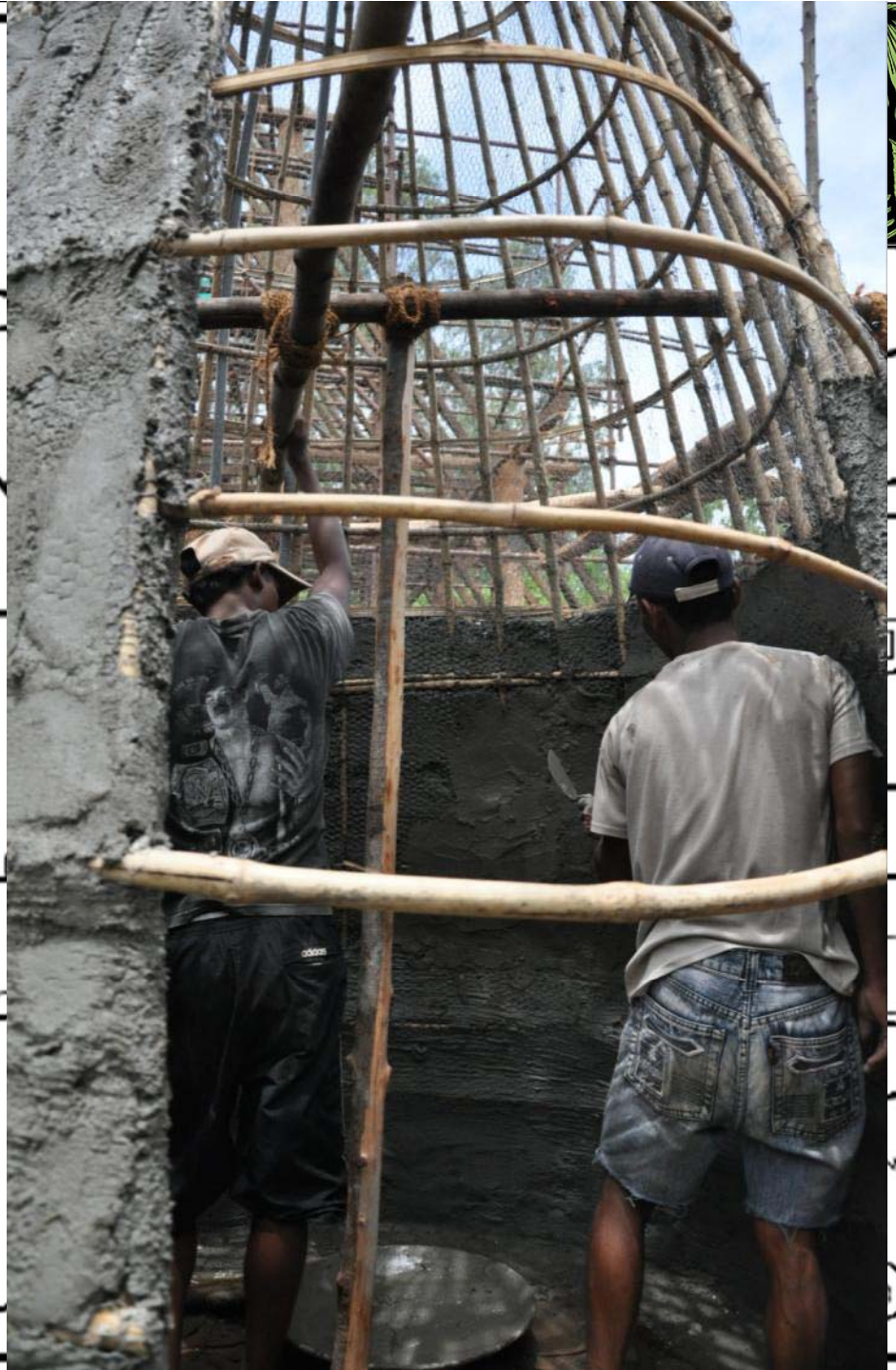










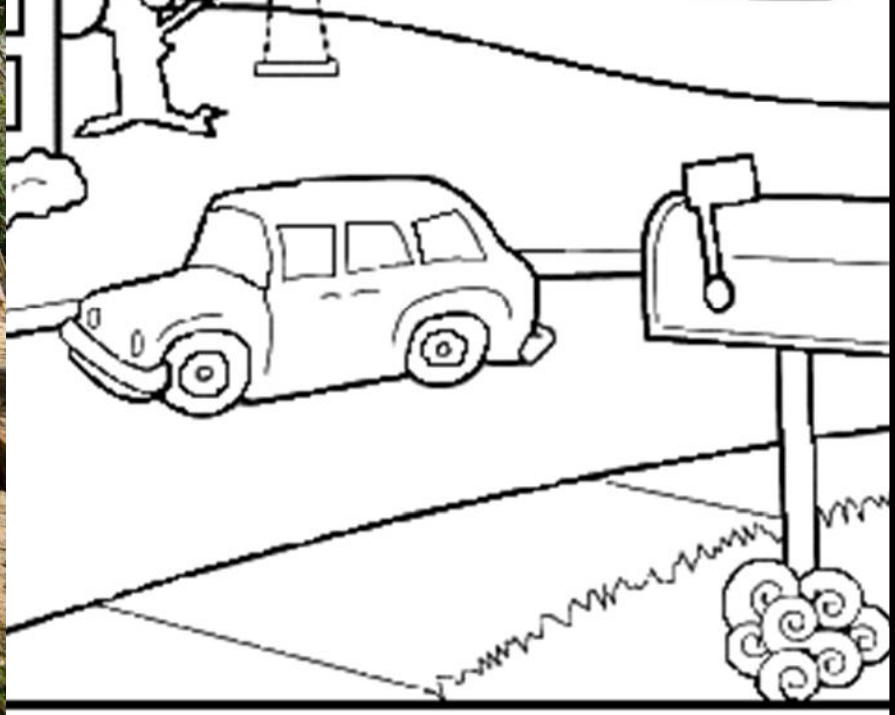














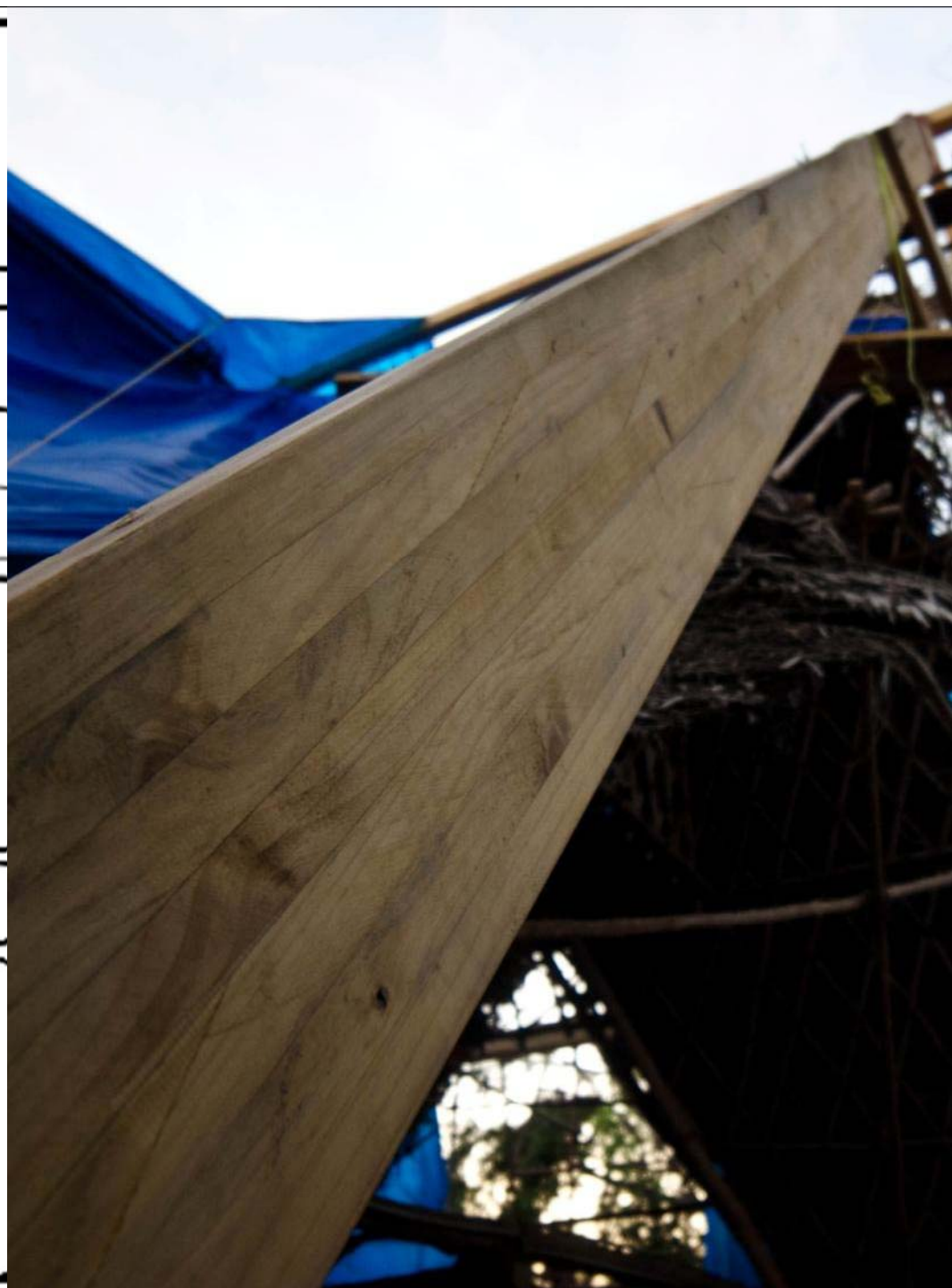






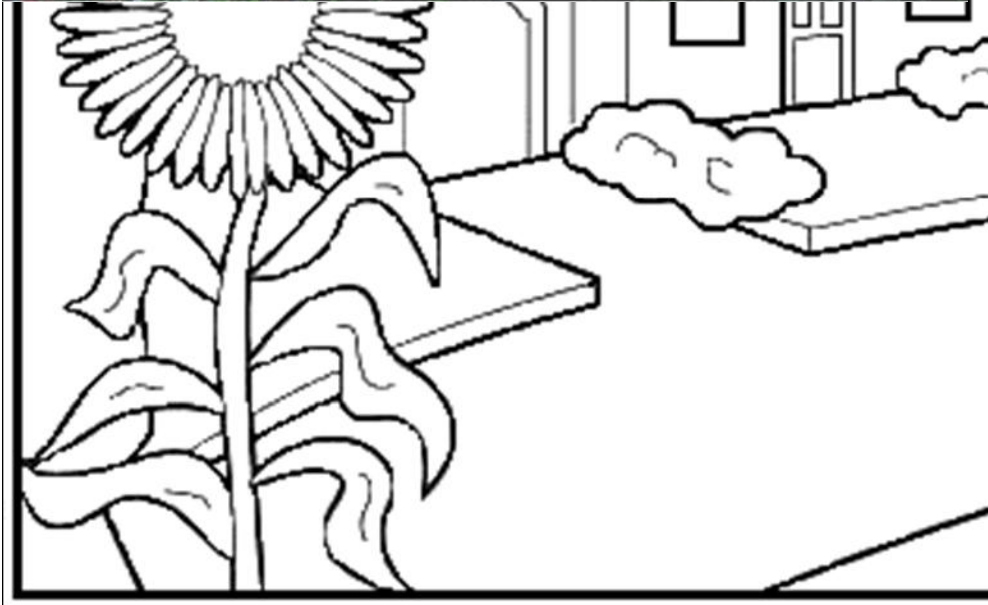






Auraville





unlearn

learn

relearn

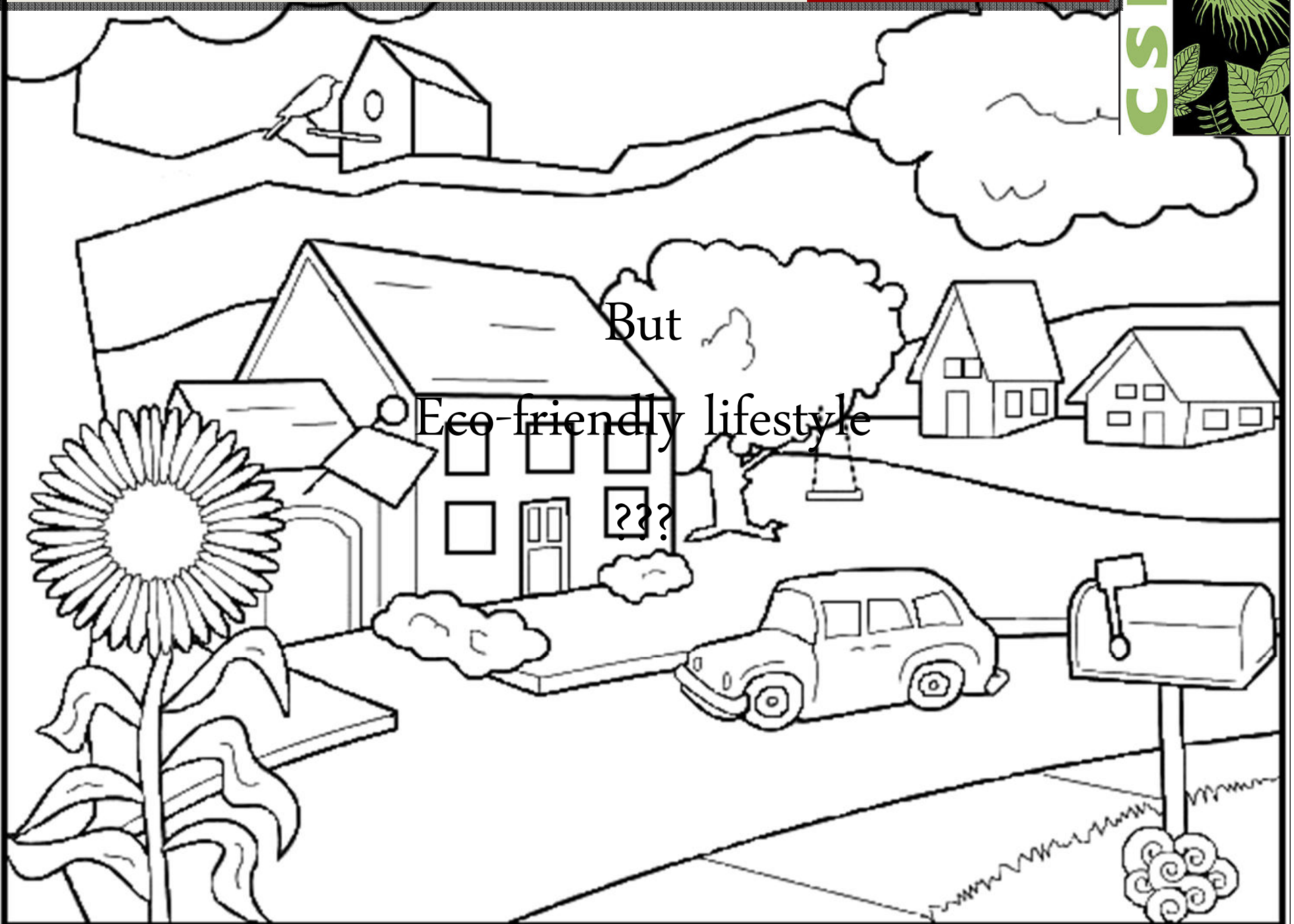
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But

● Eco-friendly lifestyle

???



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Lets talk
CRAZIER



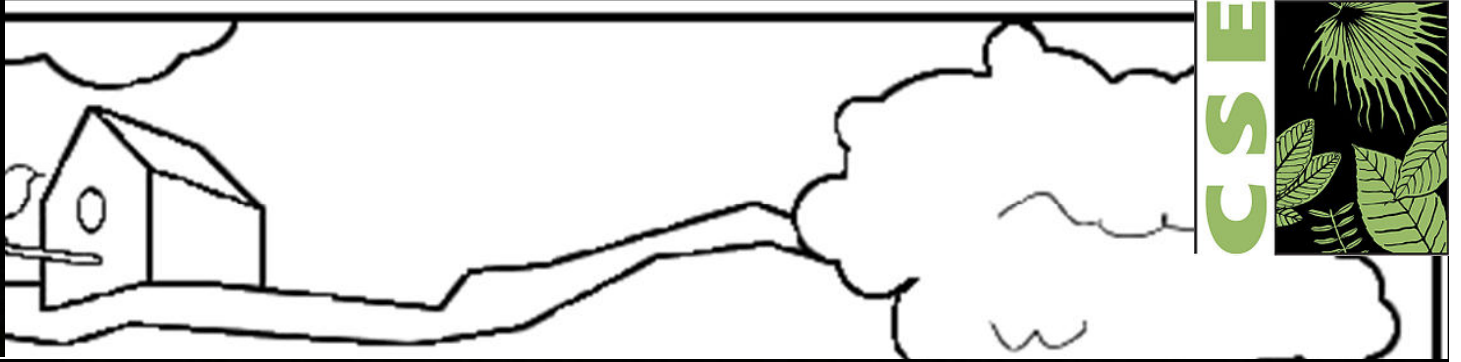












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But start with

Avoidance

