

Understanding the Environmental Impacts of Household Consumption : A Holistic Systems Approach

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Our Basket of Goods & Services

We know what it costs :



But not what it costs :



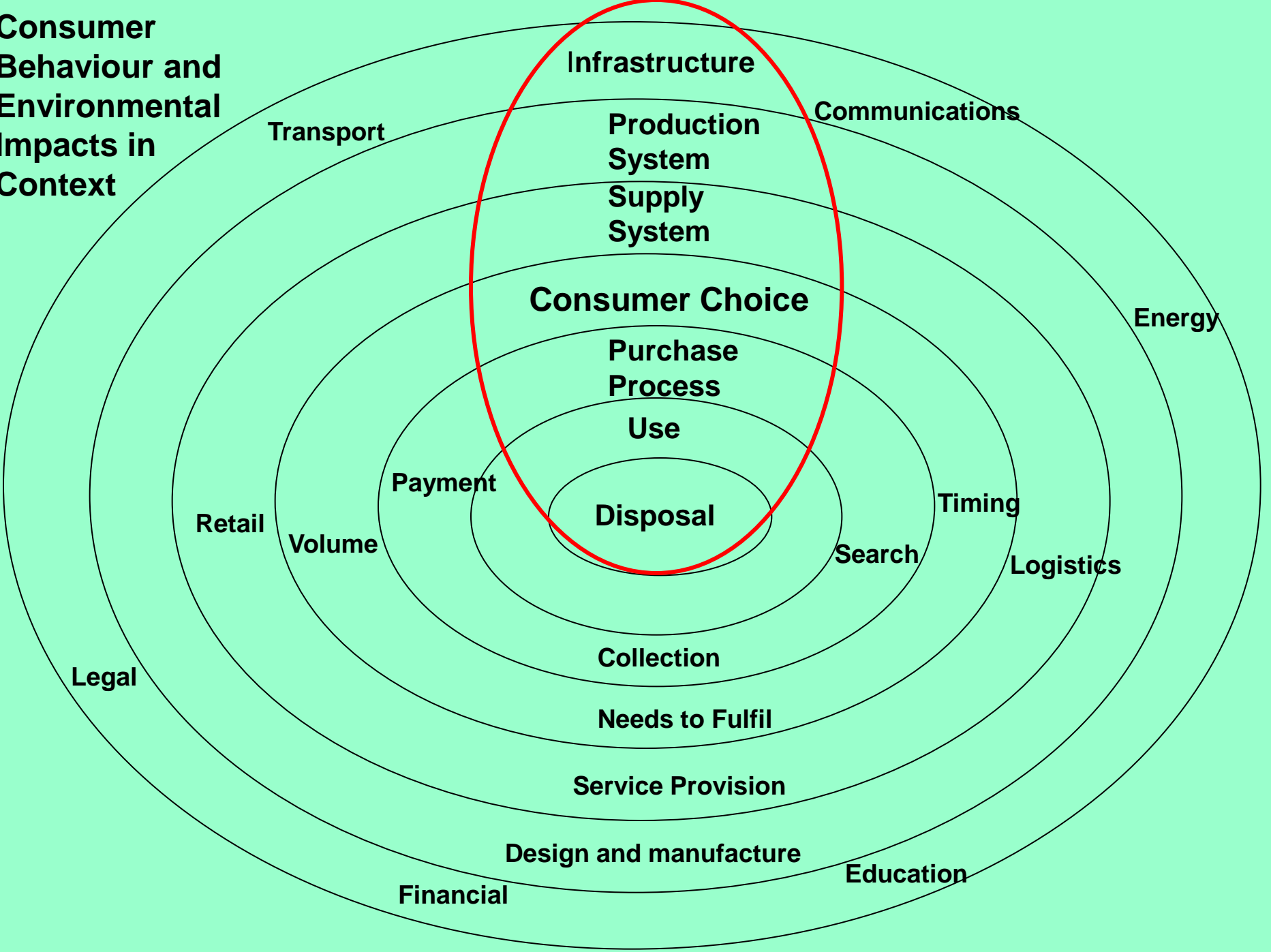
What is our “Ecological Cost of Living”

Household consumption shapes much of our ECL but understanding it is hampered by a tendency to :

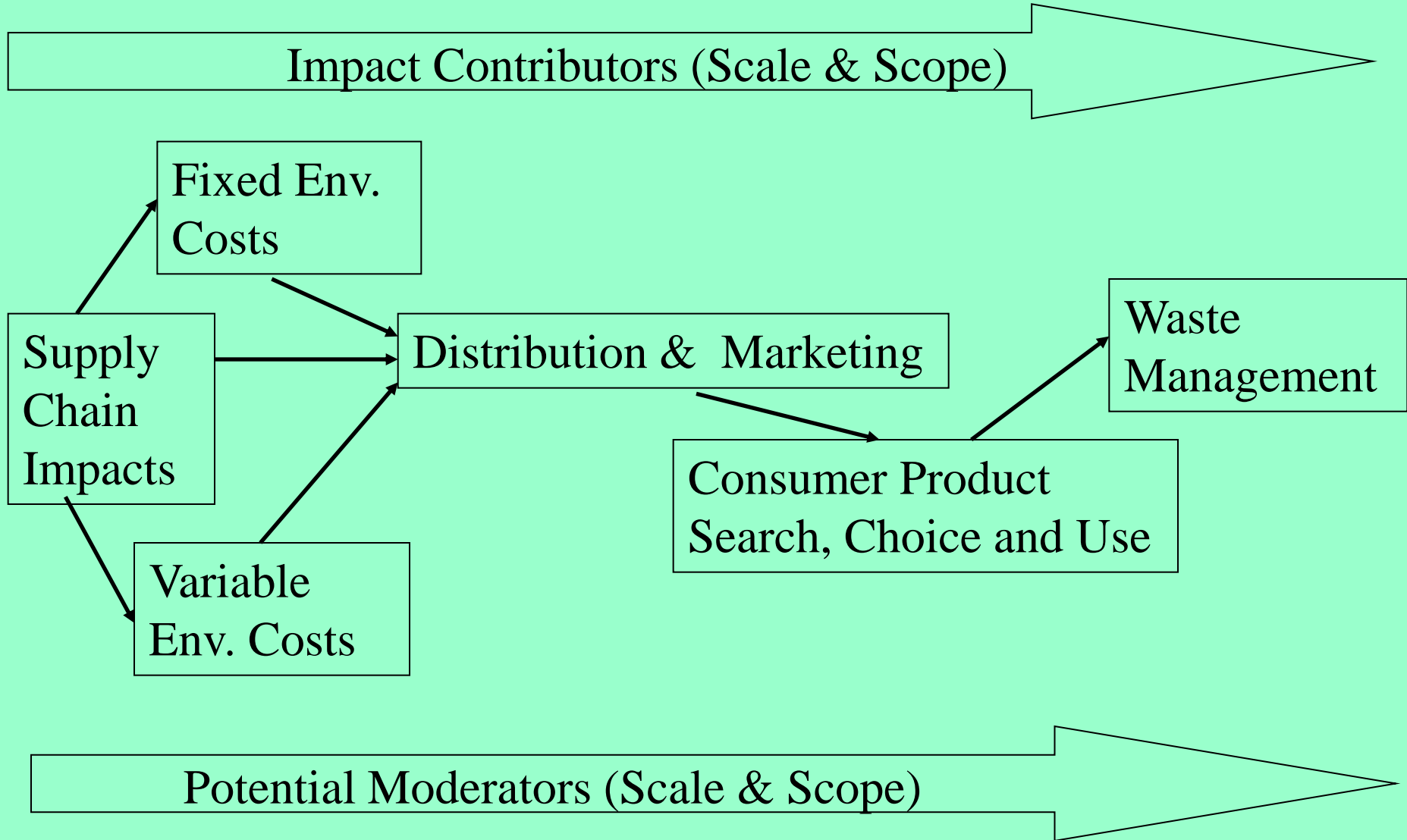
- consider products individually;
- consider only specific links in the SCP chain (e.g. product design, purchase decision or disposal);
- use single measures (e.g. energy use or CO₂);
- switch between households & “consumer units”;

Can lead to suboptimal advice and decisions, and the range of different research measures and methodologies being used is contributing to a “*well-informed confusion*”.

**Consumer
Behaviour and
Environmental
Impacts in
Context**



Determinants of Environmental Impacts of Household Consumption



Key Moderators of ECL

Are all relatively poorly understood. They include :

- Manufacturer initiatives (e.g. remanufacture);
- Goods-to-services market structure changes;
- Longevity-based purchase strategies;
- Environmentally orientated consumer behaviour;
- Second use strategies in the home (e.g. plastic bags) and second use markets (e.g. Ebay);
- Consumer repair and maintenance of durables;
- Domestic recycling & composting;

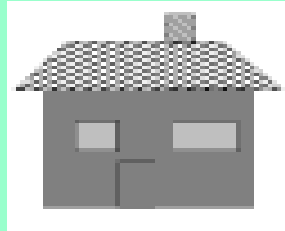
(All are subjects of BRASS research projects)

A Simple Systems Model of Household Consumption

INPUTS

Include costs of input in £ to household and wider economy if appropriate

- Energy (kJ or kWh)
- Water (cu litres)
- Land-take
- Transport
- Materials



OUTPUTS

Output (£ to economy)
Include costs of impacts in £ to household & wider economy

- Emissions to air
- Effluent discharges
- Waste (kg/ litres/ ppm)
- Impacts on biodiversity

Any closed-loop processes
(e.g. home composting)

Waste Routes (e.g. landfill in kg)

Using the Simple Systems Model

Although simple, such a model can help to consider not products or purchases, but household activities and lifestyles in a more holistic way. For example a day's gardening could be considered in terms of :

Inputs – water, fertilisers & chemicals, transport to collect plants or dispose of waste, packaging & energy used;

Outputs – emissions from transport, waste from packaging, discharges (e.g. water run-off) and impacts on biodiversity (good or bad); waste routes and

Closed-loop processes – water recycling or composting;
-- as well as in terms of economic inputs & outputs.

Conclusions

The macro and micro holistic systems perspectives presented here are deceptively simple, but are currently poorly understood. Understanding them and learning to measure impacts better will be important to make good decisions for the many either/or choices that confront policy-makers within the sustainable consumption and production agenda. A move towards more holistic and interdisciplinary research will be vital to move the policy and academic agenda forwards.