horizon
DIGITAL ECONOMY RESEARCH

Framing Energy in terms of Cost or Carbon?

Field Study
Experimental Psychology Studies

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Smart Meter Rollout

- Rollout across UK by 2020
- Utility?
  - Reductions of between 5 and 15%
  - No systematic examinations of ***why*** and ***when***
- Importance of display units
  - Carbon emissions to be included?

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Student Comp / Lab Studies

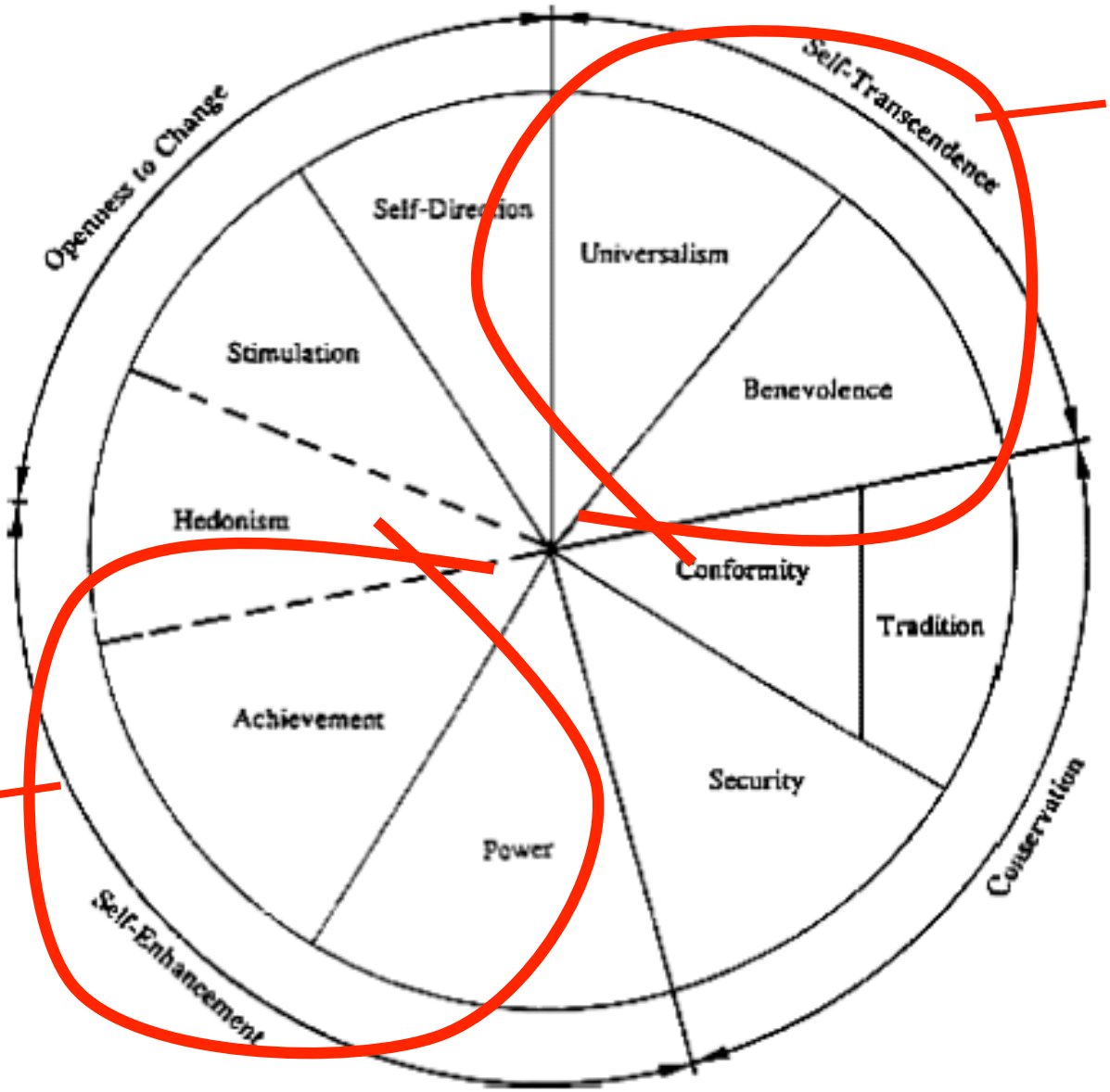
Focus on Mechanisms

- Examine primed **Values** and **Goals**
- Examine **Accessibility** of Climate Change and impact on **Psychological Distance** of Climate Change

Behavioural Impact (Spillover?)

- Impact on **Energy Behaviour**
- Impact on other **Environmental Behaviour**
- Impact on other **Altruistic Behaviour** and **Success Behaviour**

Schwartzs value circumplex



Carbon

Cost

Figure 1. Circumplex model of values, Schwartz (1992). Note: This figure was published in Experimental Social Psychology (Vol. 25, pp. 1–65),

Goal Circumplex *(Grouzet, 2005)*

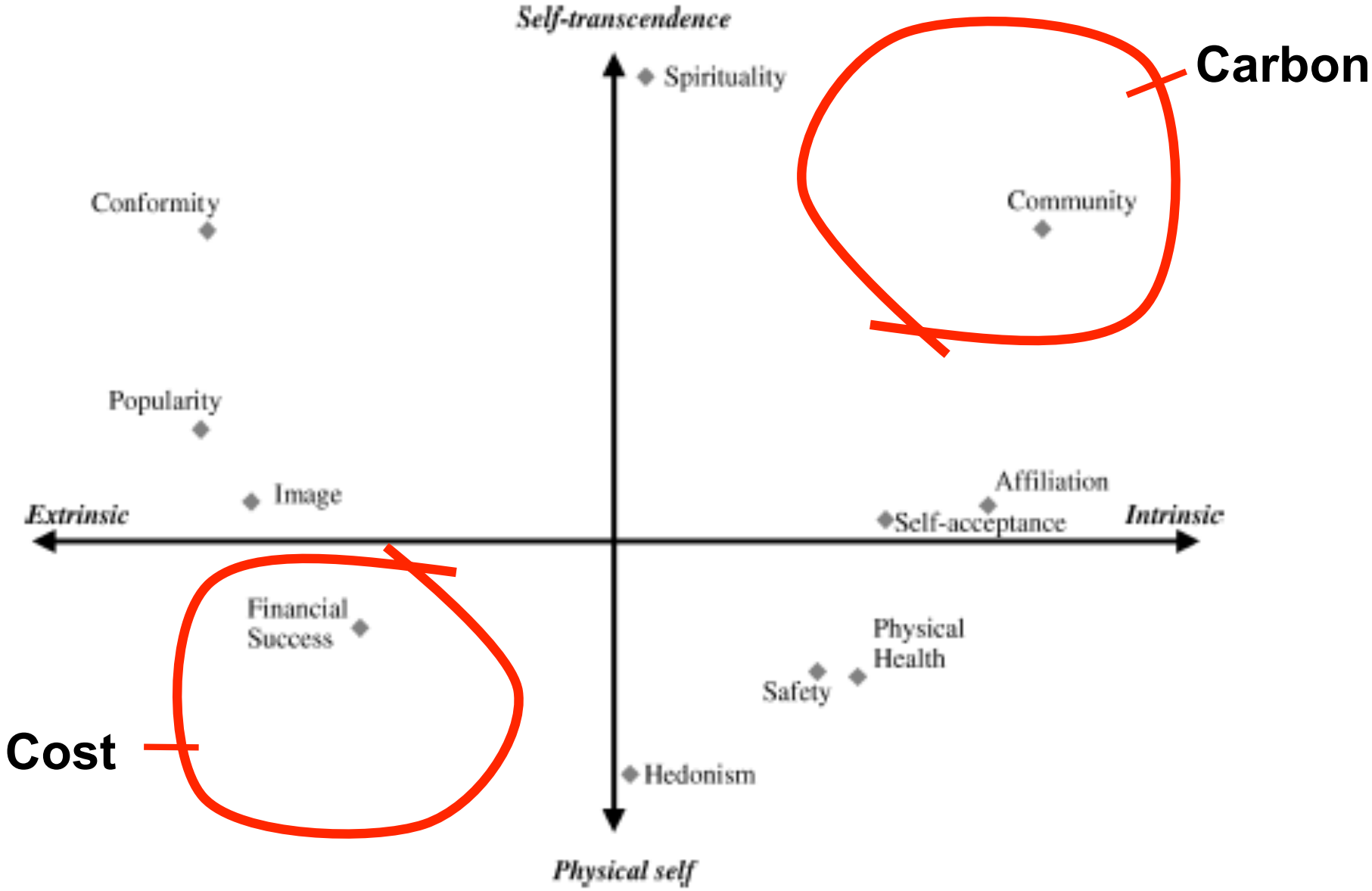
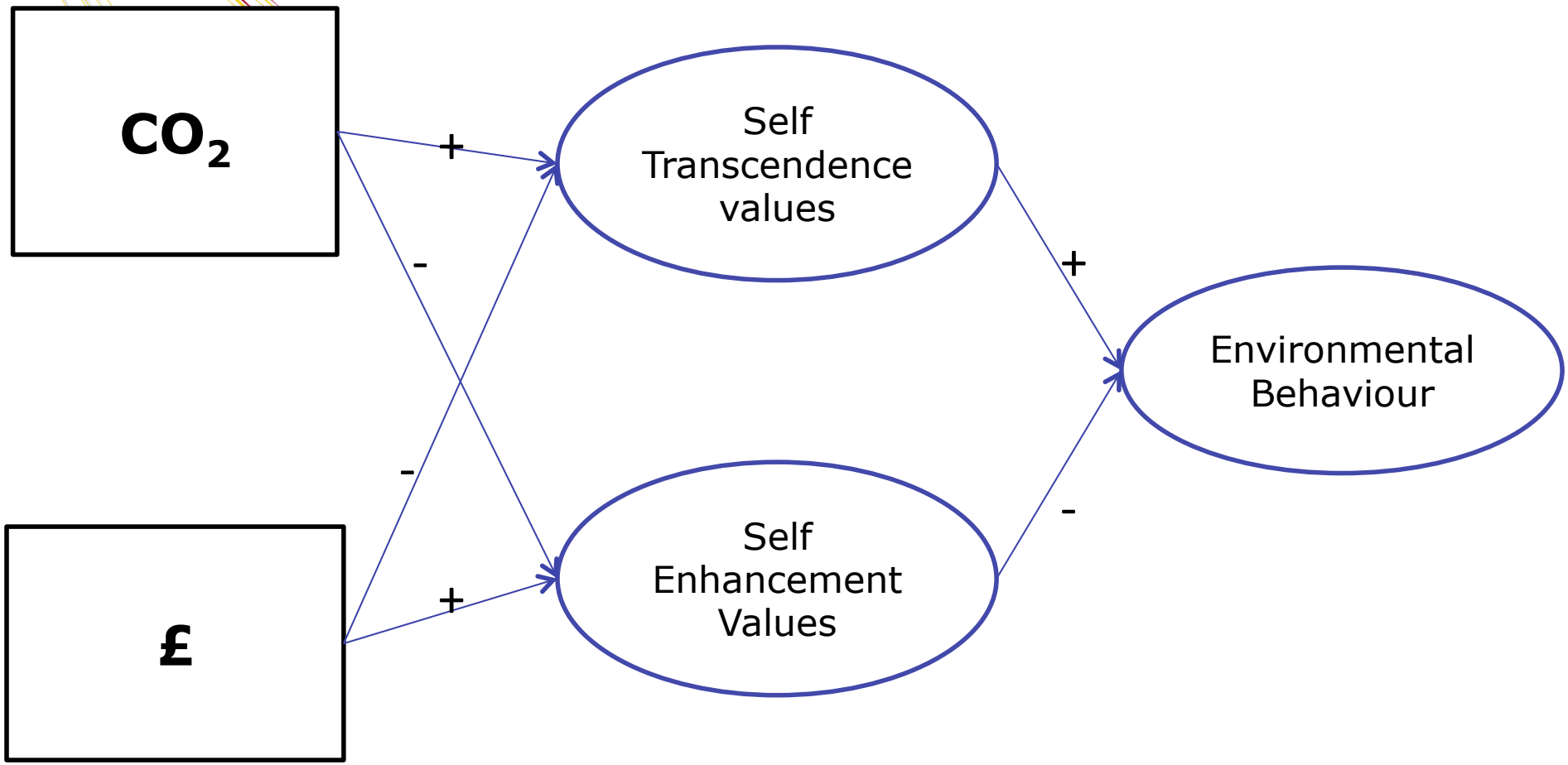
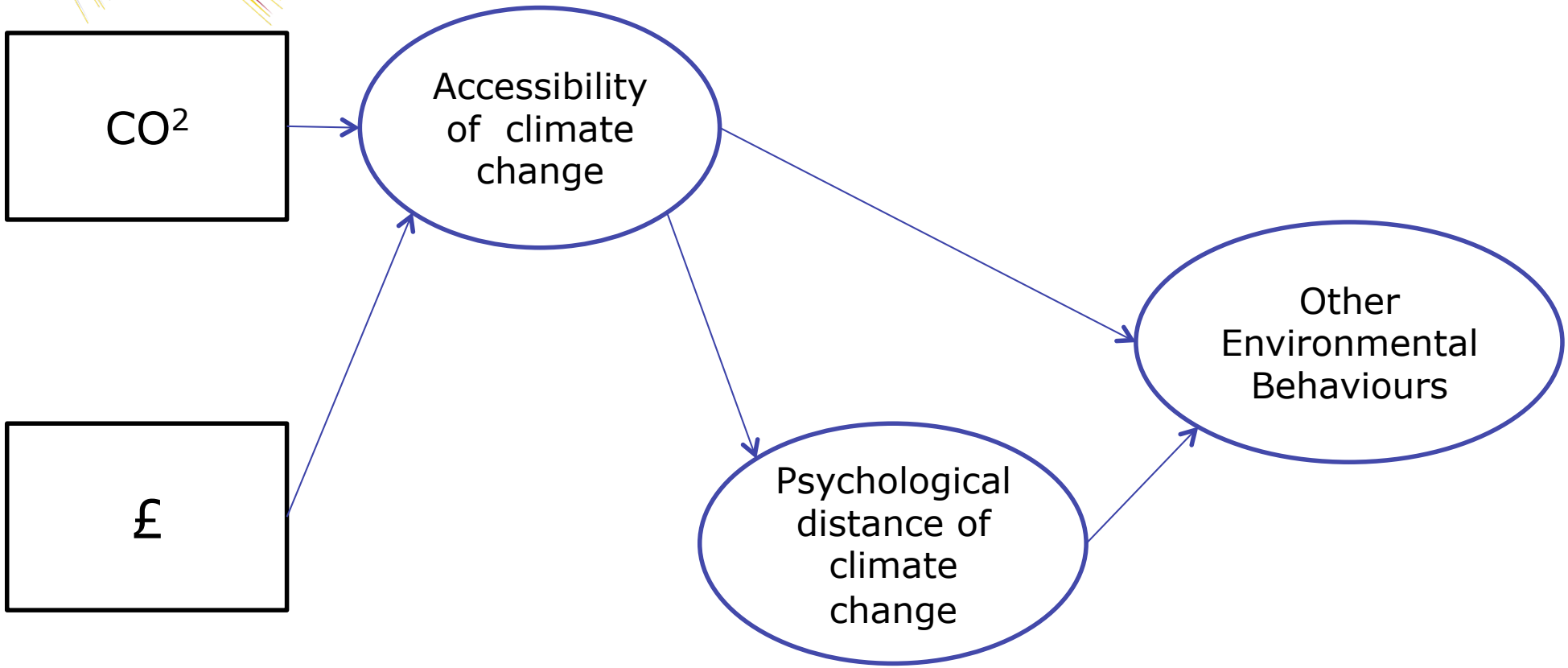


Figure 2. Circumplex model of aspirations, Grouzet et al., (2005).

Priming Values and Goals



Increased Salience of Climate Change



Student Halls Competition

- 6 Halls
- Competition + Comms
- Focus on **CARBON**
- Pre / Post Questionnaires

- 6 Halls
- Competition + Comms
- Focus on **COST**
- Pre / Post Questionnaires

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Hall Environmental Competition 2010/11

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UNITED KINGDOM · CHINA · MALAYSIA

October League Table

- Help to Reduce Climate Change -

RECYCLING

Hall of residence	Recycling Rate %	Points Allocated
Sherwood	35.3	15
Cripps	34.8	14
Cavendish	31.3	13
Nightingale	23.0	12
Derby	22.2	11
Willoughby	21.9	10
Florence Boot	21.5	9
Rutland	21.4	8
Lenton & Wortley	17.2	7
Newark	16.2	6
Lincoln	13.0	5
Ancaster	12.7	4
Southwell	12.4	3
Hugh Stewart	11.0	2
Melton	6.7	1

ELECTRICITY

Hall of residence	Electricity used per bed space	Points Allocated
Southwell	113.5	15
Melton	125.5	14
Newark	125.6	13
Cripps	154.1	12
Rutland	149.7	11
Lincoln	156.2	10
Derby	156.9	9
Cavendish	159.1	8
Sherwood	181.0	7
Hugh Stewart	196.3	6
Willoughby	200.3	5
Ancaster	208.0	4
Florence Boot	216.5	3
Lenton & Wortley	228.9	2
Nightingale	249.5	1

Reduce Climate Change

This month's overall winning hall is:

CRIPPS

Reduce Climate Change

Hall Environmental Competition 2010/11

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Reduce Costs

This month's overall winning hall is:

CRIPPS

Reduce Costs

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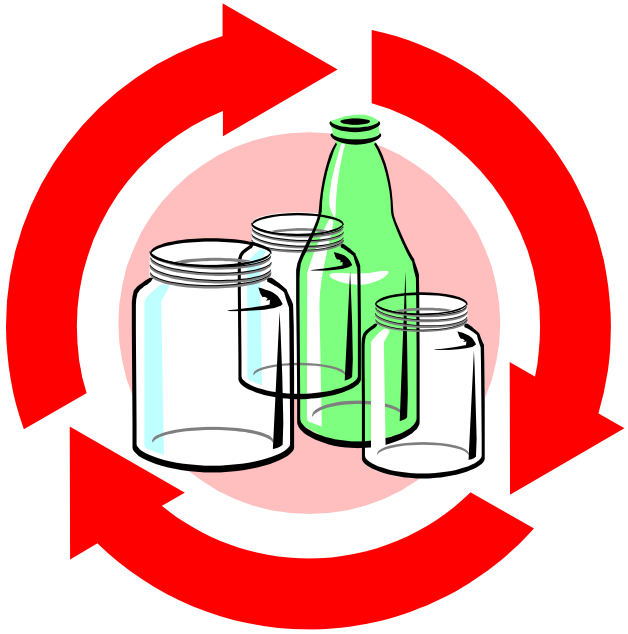
Reduce your carbon emissions – RECYCLE MORE

Recycling 20 glass bottles conserves finite resources and prevents 3kg of CO_2 being produced



Please recycle your empty bottles

CO_2

Reduce Climate Change

Hall Environmental Competition 2010/11

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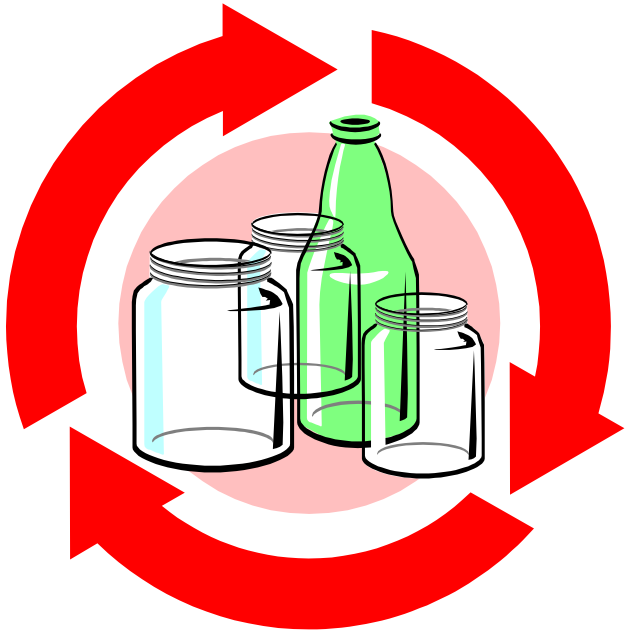
Reduce your living costs – RECYCLE MORE

Dumping one glass bottle in landfill costs almost twice as much as recycling it.



Please recycle your empty bottles

£

Reduce costs

Hall Environmental Competition 2010/11

Reduce your CO_2 emissions – SWITCH IT OFF!

Leaving 100 laptops on overnight releases 98Kg of CO_2. Switch it off when not in use to reduce your CO_2 emissions!

CO_2

Reduce Climate Change

Reduce your living costs – SWITCH IT OFF!

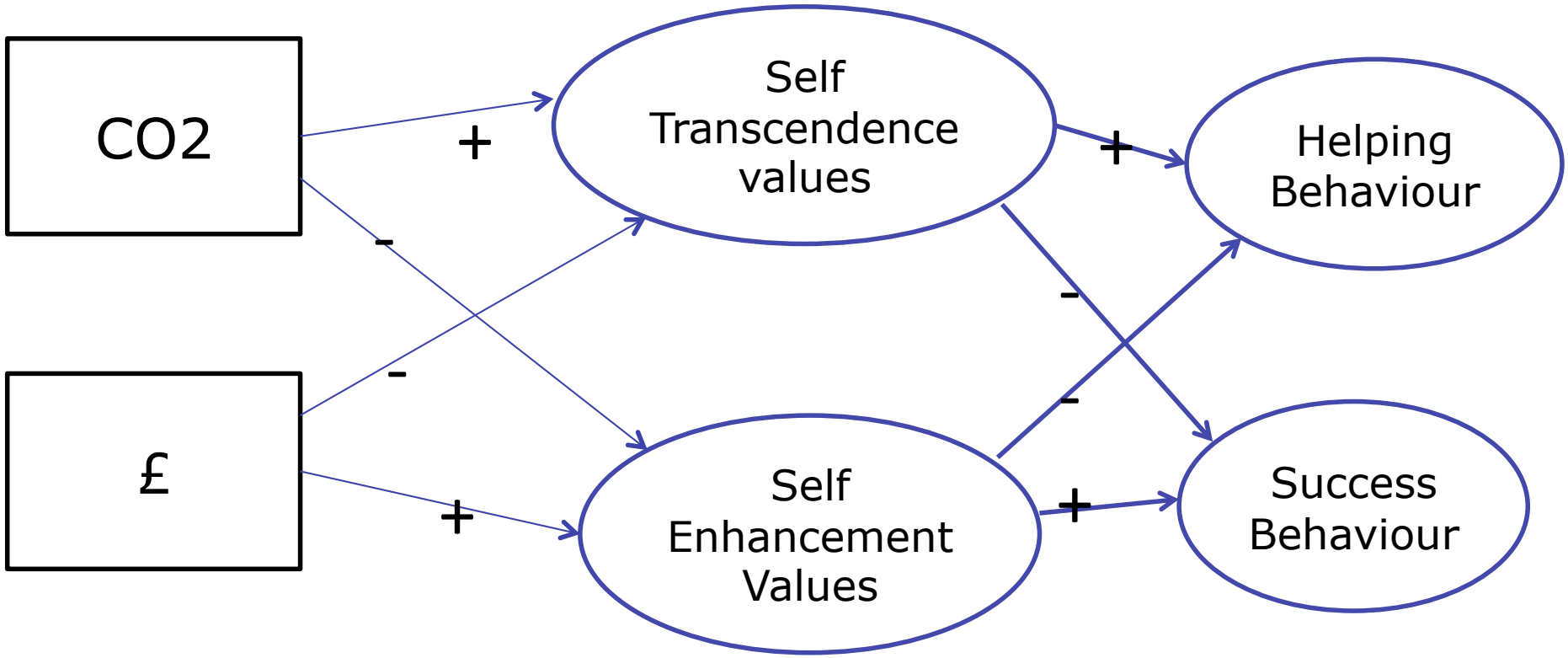
Leaving 100 laptops on overnight costs £100 in electricity. Switch it off when not in use to save money!

Reduce costs

Experimental Studies

- 3 lab or online experiments
- +/- 300 participants

Priming Values and Goals



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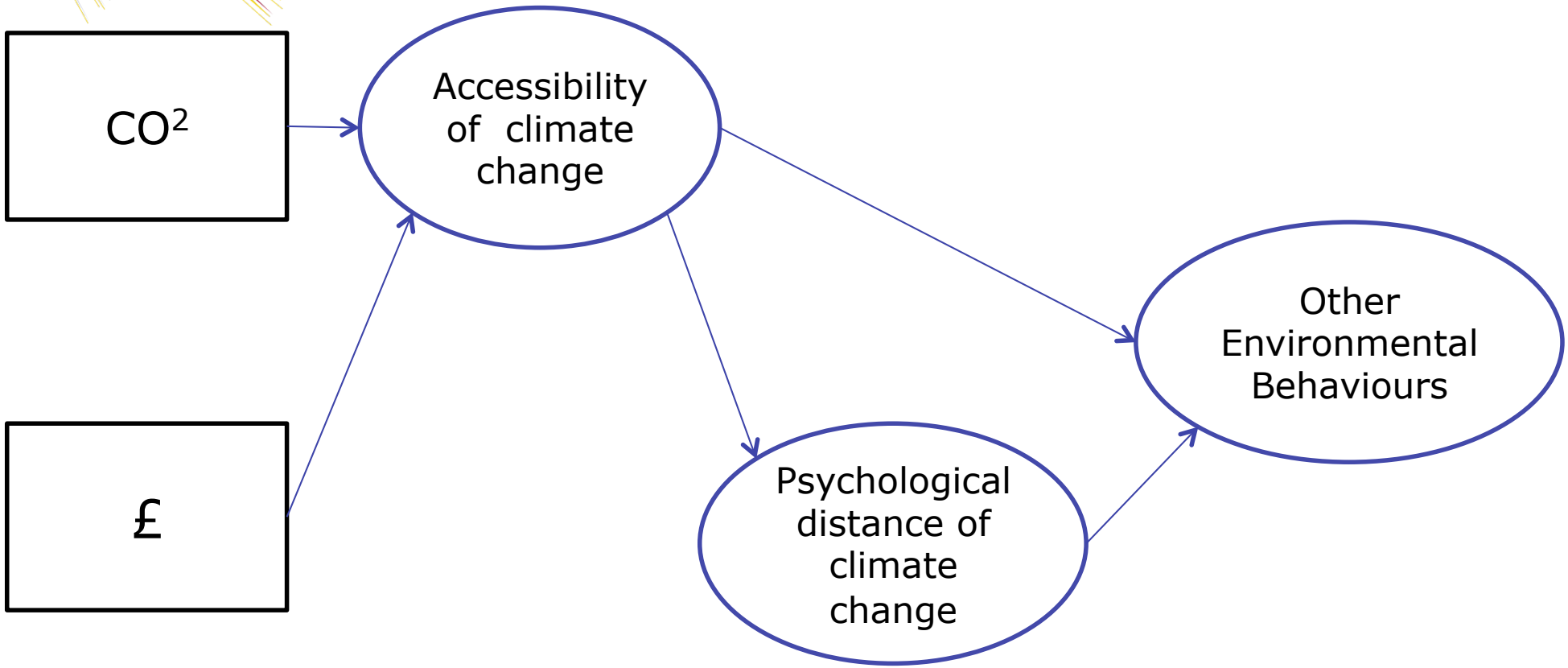
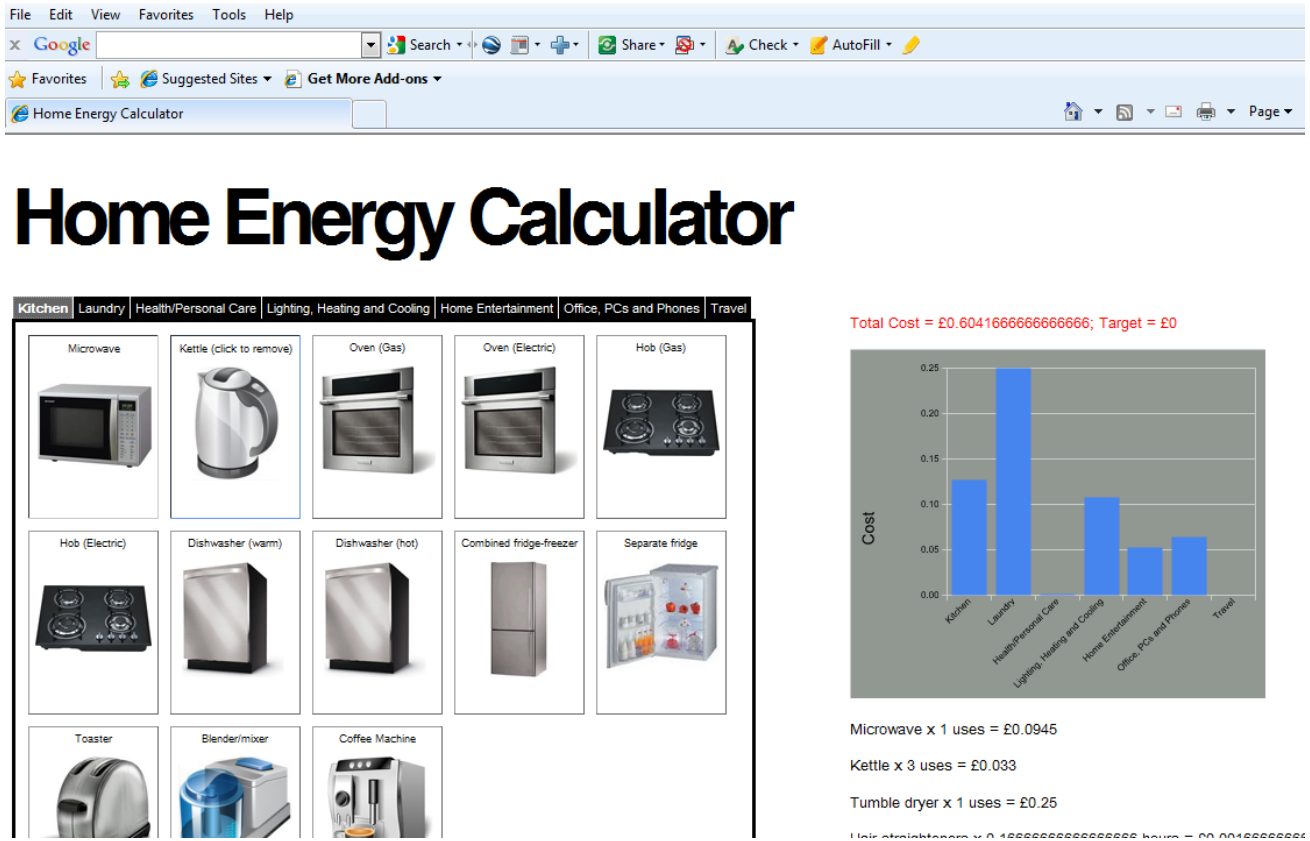
Increased Accessibility of Climate Change



Lab Studies

Online Energy Task

- Focus on **Carbon** or **Costs** (also Control – **KwH** condition)



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Experimental Design

Energy Game

- Frame Cost / Carbon / Control

Questionnaire

- Measure Values (Schwartz, 1992) and Goals (Grouzet, 2005)
- Accessibility and Psychological Distance of Climate Change

Environmental Behaviour

- Budget allocation task
- Donating time to further environmental research

Indirect measures of Success and Benevolence behaviours

- Word search
- Donating time to further research