Spillover of pro-environmental behaviour: Generalizing, a license to anti-social behaviour, or neither?

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The Challenge

“Continuing depletion of Europe's stocks of natural capital and flows of ecosystem services will ultimately undermine Europe's economy and erode social cohesion. Most of the negative changes are driven by growing use of natural resources to satisfy production and consumption patterns. The result is a significant environmental footprint in Europe and elsewhere.”

World Footprint - Do we fit on the planet?

- It now takes the Earth one year and six months to regenerate what we use in a year.
- Moderate UN scenarios suggest that if current population and consumption trends continue, by the 2030s, we will need the equivalent of two Earths to support us.
“If we are to reduce carbon emissions to levels that do not threaten catastrophic climate change, then people in the richer parts of the world like the UK have to live more sustainably. This doesn’t need to be painful it just means we need to be less wasteful. You can help London and the world tackle climate change by taking a few simple steps.”

“Have no illusions. To achieve our goal of getting off fossil fuels, these reductions in demand and increases in supply [of renewables] must be big. Don’t be distracted by the myth that “every little helps.” If everyone does a little, we’ll achieve only a little. We must do a lot. What’s required are big changes in demand and in supply.” (McKay, 2009: 114, emphasis in original)

David McKay (2009): *Sustainable Energy – without the hot air*
Spillover – the rationale for “small steps”

If governments and environmental organisations are to persist in campaigning for individuals to adopt behaviour with small environmental impacts, at a time when fundamental changes in behaviour are urgently needed, this must be because there are good grounds to expect that these simple behavioural changes will lead to more far-reaching and environmentally significant changes.

(Thøgersen & Crompton, 2009)
Foot-in-the-door?

“Get someone to do something small and then introduce another larger action once the small one is completed. The move upwards won’t just happen on its own: communications are needed to link each rung of the ladder.” (Futerra 2006: 10)
Catalytic behaviours?

“We need to promote a range of behaviours as entry points in helping different groups to make their lifestyles more sustainable – including catalytic (or "wedge") behaviours if identified through research.” (The UK government’s Department for Environment, Food and Rural Affairs, Defra, 2008: 22)
How going green may make you mean

Ethical consumers less likely to be kind and more likely to steal, study finds

• You ask, they answer: Ethical Consumer magazine
• Julian Baggini: Goodies behaving badly

Kate Connolly in Berlin
guardian.co.uk, Monday 15 March 2010 19.42 GMT
Article history

A consumer of ‘ethical’ products such as organic food might be more inclined to cheat and steal, the study found. Photograph: David Sillitoe/Guardian
Outline

• Are pro-environmental behaviours independent from one another or do performing one influence the likelihood that people will perform other such behaviours?
  • The case for negative spillover
  • The case for positive spillover

• Contingencies

• Does doing small and simple things – green consumerism – make people more likely to accept environmental policy?
Theoretical Reasons to Expect Negative Spillover

- Self-affirmation/Compensation ethic/
- Contributing ethic
- Moral licencing
- Done my fair share
- Pro-environmental Behavior 1
- Pro-environmental Behavior 2
- Self-serving bias

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Moral Licensing – a Compensatory Ethic

- Higgins’ (1996) self-discrepancy theory: The desired “moral self” serves as a reference point
  - People tend to experience emotional distress when they perceive that they are not living up to their moral aspirations and are more likely to engage in moral behaviours to compensate
- Like a rubber band: When self-perception deviates from the ideal moral image, the band is stretched and produces the greatest motivational force
- The compensatory mechanism can be reversed, producing a sense of entitlement to some moral laxity, when perceiving that their behaviour has matched or even exceeded their ideal self

(Zhong, Liljenquist & Cain 2009)
Experiment

- Toronto undergrad students, 2 conditions: Green or conventional store
  - Select products they would want to buy, up to $25

(Mazar & Zhong, 2010)
**“Green” Store vs “Conventional”**

- 12 products
- Green store: 9 green, 3 conventional
- Conventional store: 3 green, 9 conventional
- Both: 3 green-conventional pairs

randomly assigned to the initiator’s role (even though they all played that role) and were assured that they would walk away with any amount of money they kept for themselves.

Neither (mere exposure) on the amount of money offered, $F(1, 152) = 0.06, $p = .806$.

![Fig. 1. Screenshots of (a) the green store and (b) the conventional store used in Experiments 2 and 3.](image)

(Mazar & Zhong, 2010)
**Experiment**

- Toronto undergrad students, 2 conditions:
  - Green or conventional store: Select products they would want to buy, up to $25

- Next task: 20 dots on a screen, divided on left and right side of a line. Report if there are more dots on the left side or the right side.
  - Payment: 0.5 cent if most on the left, 5 cent if most on the right side
  - Always clear which side had most dots
  - 90 trials, in 40% more dots on the right than on left side

- Pay themselves by taking out the corresponding amount from a provided envelope with money
Percentage of “most dots on the right side”

(Mazar & Zhong, 2010) 

Difference between groups sign. $p = .027$

“Conventional store” condition not sign. higher than 40%
Stealing

(Mazar & Zhong, 2010)

Difference between groups sign. \( p = .013 \)

“Conventional store” condition not sign. higher than 0.
What Does the Study Show, Really?

- Not that “green consumers” are more likely to lie and steal than other people!
- People in the “green store” condition were not “green consumers”
  - They bought more “green” due to lack of choice, not due to motivation
- Possible explanation: (young) people with a weak moral character (who would rarely buy “green”) are more likely to fall for temptations (to lie and steal) when the situation has bestowed them with moral credentials (of any kind)
  - Lying leads to stealing (“slippery slope”)
Contribution Ethic: Spillover from Recycling to Waste Prevention Norm

Rec-PNWP:
$\chi^2_d(1 \text{ d.f.}) = 24.46$
(p < .001)

Rec-WP:
$\chi^2_d(1 \text{ d.f.}) = 6.62$
(p = .01)

Rec-WP (when Rec-PNWP):
$\chi^2_d(1 \text{ d.f.}) = 9.09$
(p < .01)

(Thøgersen 1999).

$\chi^2(6 \text{ d.f.}) = 17.23$ (p < .01).
CFI = 0.99. RMSEA = 0.05
Contribution ethic and negative spillover

• Bratt (1999) found a positive relationship between car driving and people’s acceptance of the claim that car driving is justified when you recycle your waste.

• Participants with more positive general environmental attitudes were less willing to accept the claim that recycling justifies car driving.
  • The justification-attitude relationship was three times as strong as the justification-behaviour relationship.
In sum

Existing evidence does not support the hypothesis that negative spillover between pro-environmental behaviours is an important phenomenon.
Theoretical Reasons to Expect Positive Spillover

- Pro-environmental goals and values
  - Priming/activation
  - Self-perception

- Environmental identity

- Pro-environmental Behavior 1

- Pro-environmental Behavior 2
  - Attention/guiding
Spillover depends on actions being “diagnostic of a pro-environmental disposition”

- **Causal clarity**
  - Many environmentally relevant behaviours are causally ambiguous: Both environmental and private benefits
  - Their perceived diagnosticity can be enhanced by framing them as reflective of a pro-environmental disposition

- **Frequency of occurrence**
  - Behaviours which have become social norms are less diagnostic for inferring pro-environmental values and attitudes than less common behaviours
  - Their perceived diagnosticity can be enhanced by cuing them as environmentally friendly

- **Both interventions led to increased pro-environmental action**

Cornelissen et al. (2007; 2008).
Theoretical Reasons to Expect Positive Spillover

Pro-environmental Behavior 1

- Priming/activation
- Self-perception
- Learning
- Learning

Pro-environmental goals and values

Attention/guiding/motivating

Environmental identity

Skills and knowledge

Self-efficacy

Pro-environmental Behavior 2

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Positive Spillover

- A large number of studies report positive correlations between pro-environmental behaviours.

- Behaviours within the same taxonomic categories (the time and place of the behaviour, the skills employed, etc.) tend to be more strongly correlated than behaviours within different taxonomic categories (e.g., Stern, et al., 1999; Thøgersen & Ölander, 2001).

- Correlations between pairs of pro-environmental behaviour increase with the similarity (Bratt, 1999) or with the perceived similarity (Thøgersen, 2004) of the two behaviours.
Correlations between “simple and painless” and more important behaviours

<table>
<thead>
<tr>
<th></th>
<th>Recycling</th>
<th>Driving less</th>
<th>Pay higher taxes</th>
<th>Citizenship behaviours</th>
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<td>Citizenship behaviours</td>
<td>.17</td>
<td>.11</td>
<td>.35</td>
<td>1.00</td>
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</tbody>
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Based on ISSP (2000). All correlations are significantly higher than 0, p < .05.
Consistency between ERBs depends on their perceived similarity

\[ C = -0.33 + 0.086S; r^2 = 0.414 \]

Similarity assessment and pairwise correlation between environmentally friendly behaviours, \( N = 57 \)

(Thøgersen 2004).
Positive spillover

The spontaneous positive spillover between different behaviour categories is slow (Thøgersen & Ölander, 2003)
Stability & spillover

RMSEA = 0.031, CFI = 0.99

(Thøgersen & Ölander 2003).
Spillover depends on values and ethical norms

- The spillover pattern differs significantly between groups defined by
  - Universalism values
  - Strength of personal norms regarding EF conduct
- More cross-lagged effects in the high than in the low groups
  - In the high groups, the aggregate pattern prevail
  - In the low groups, only 1-2
Consistency between ERBs, perceived similarity and the moral importance of behaving in an ER way

Correlation between buying organic and recycling. N = 213

(Thøgersen 2004).
Everyday environmentalism

Consumer efficiency investments

Policy support

Recycling, waste avoidance, shorter showers, switching off light, etc.

Retrofitting, solar panels, a hybrid car, etc.

Stated approval of environmental regulation, willingness to pay environmental taxes, etc.

Environmental activism
Policy Acceptance

- Political leaders and policymakers often feel hampered by too little public acceptance of fundamental regulatory change.
- The difficulty of achieving the acceptance of the electorate is a major cause of the inadequacy of government action on environmental challenges.
  - More than a government’s failure to grasp the urgency and scale of environmental challenges or the pressures by vested interests.
- Public acceptance of the need for radical policy interventions would serve to provide sympathetic policymakers with the “space” to pursue an ambitious legislative agenda.

(Thøgersen & Crompton, 2009)
'Nimbyism' blocking the spread of wind farms

By Ben Russell, Political Correspondent

Tuesday, 1 January 2008

Local planning logjams are preventing renewable power projects being given the green light, according to research that reveals two out of three applications for onshore wind farms are being rejected.

Thirty three schemes have been turned down by local authorities in the past 18 months. Only 15 were approved, a study by environmentalists has found.

Wind power operators warned that schemes to provide the equivalent of eight conventional power stations were clogged up in the planning system sometimes for years and called for action to win over a "not in my back yard" element campaigning against new projects.
Protestors target turbine test center

Siemens and Vestas may pull out of turbine tests if forests are not cleared by March deadline

Attempts to clear a forest to make way for a wind turbine test centre in northern Jutland have been hampered by interference by protesters.

Around 50 police officers on Tuesday morning removed a majority of the protesters who have been blocking the Danish Nature Agency’s tree felling machines into the Østerild dune plantation for nearly two weeks. Several of the protesters, however, were able to escape from the police and place themselves in front of the machines and in the trees themselves, thus further delaying the planned clearing of the first 12 of 1,500 hectares of forest to be felled to test seven, 187-metre tall turbines.
Acceptance of Environmental Policies

- The acceptability of environmental (transport) policies is generally higher when people are aware of and concerned about environmental problems (Eriksson, Garvill & Nordlund, 2006).

- Acceptability increases if people expect negative collective outcomes to reduce (Schuitema, Steg & Rothengatter, 2010).

- Acceptance of congestion charges in Stockholm: the two most important factors were general environmental attitudes and beliefs about the charges' effectiveness (Eliasson & Jonsson, 2011).
Acceptance of wind power

- A diverse range of contingencies have been studied
  - Perceived need of wind power (Devlin 2005)
  - the type of landscape where a project is planned (Pasqualetti, 2011; van der Horst, 2007) and the visibility of the wind turbines (Khan, 2003; Escroignard and Jobert, 2004)
  - perceptions of distributional and procedural justice (Gross, 2007).
  - community ownership (Warren & McFayden, 2010)
  - Trust (Wustenhagen et al. 2007)
Policy Acceptance and Green Consumerism

“It is … crucially important to examine the effect of public campaigns aimed at encouraging individuals to modify their behaviour in simple ways that serve to reduce personal environmental impact: to what extent do such campaigns contribute to building public acceptance of, and demand for, far-reaching government interventions?” (Thøgersen & Crompton 2009, p. 142)
Spillover From “Green” Everyday Behaviours?

- Positive correlations between private-sphere pro-environmental behaviours and support for environmental policies do not prove that adoption of simple behavioural changes increase support for environmental policies:

- People who are aware of and concerned about environmental problems may both be more likely to adopt simple private-sphere behavioural changes and to express support for environmental policies.
Case: Acceptance of Wind Power in Maine, USA

Survey 2009, N = 613

- **Acceptance of wind power**: three items, including: “Would you encourage wind power development in Maine?” (0=not likely, 6=very likely). (Cronbach’s Alpha = .95).

- **Green consumerism**: three items: “How often do you …: (1) buy eco-labeled products, (2) recycle, (3) buy energy efficient products?” (1=never, 3=sometimes, 5=always). (Cronbach’s Alpha = .65).

- **Environmental concern**: six items, four of which were taken from the NEP instrument, including “If things continue on their present course, we will soon experience an ecological catastrophe,” and the remaining two: “I am concerned about the effect of global warming on Maine” and “I am concerned about Maine’s air quality” (1=strongly disagree, 3=unsure, 5=strongly agree). (Cronbach’s Alpha = .84).
Wind Power Survey, Maine 2009 (cont.)

- Questions about acceptance of wind power – in the future

- Questions about green behaviour – in the past

- Asked questions about acceptance of wind power before questions about its presumed antecedents, thus avoiding potential halo or priming effects
Acceptance of Wind Power in Maine, N = 613

Chi-square = 181.952, 51 df., p < .001. CFI = .96, RMSEA = .065 (90% confidence interval: .055-.075).
Conclusions

• The positive correlation between green consumerism and acceptance of wind power is not just due to both being rooted in general environmental concern.

• The study results suggest that, if a person acts pro-environment, even in small and simple ways, this in itself increases their acceptance of and support for wind power, over and above the effects of (just) being environmentally concerned.

• Hence the promotion of “green” everyday behaviours may have prepared the ground for increasing acceptance of more far-reaching changes in this population.

• However, policy-makers still need to have the courage to take advantage of this and decide the necessary policy!
There seems to be a widespread belief that if people can be persuaded to make simple and painless changes in their lifestyle, there is a higher chance they will also make large and more consequential changes.

The evidence suggests that if this mechanism exists, it is a slow process that is contingent on pro-environmental values and norms and which depends on people doing pro-environmental “things” for the “right reasons.”

The status of the evidence suggests that it is a mistake for environmental NGOs and governments to limit their campaigns to small changes - small changes will not solve the huge problems that we face.
Thank you for your attention!

- Questions?

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References