

Science for Environment Policy

Some green behaviour policies may have negative side-effects

A recent Swiss-US study of a short-term water saving campaign found that, although the programme successfully reduced water use, there was also an overall increase in electricity consumption by participants. The researchers suggest a 'moral licensing' effect may be in action, whereby people 'trade' a positive behaviour for a negative one.

After performing a positive action, people may feel entitled to more self-indulgent behaviour, known as the 'moral licensing' effect. It is commonly seen amongst dieters who might treat themselves to a snack or rich meal after physical exercise. The same effect may occur in environmental behaviour, whereby [resource conservation](#) in one area could allow people to be more wasteful in another. This has implications for campaigns or policies that aim to encourage pro-environmental behaviour.

The study is one of the first to explore the possibility of this phenomenon in a real-world setting. It investigated the impact of a behaviour change campaign in water consumption on both water and electricity use in a multifamily building complex in Massachusetts, USA.

There were 154 apartments in the study; half were provided with water saving tips and weekly feedback on water use for seven weeks, whilst the other half were not provided with any information at all. The tips did not include activities that may affect electricity use, such as use of dishwashers or washing machines.

Water meter readings were collected every day and data on electricity use were collected weekly by the researchers. The number of occupants, absent days and the day of the week (consumption is higher at weekends) were taken into account in the analysis.

The results revealed that the campaign affected water consumption. The group that received feedback and tips reduced water consumption, on average, by 6% or 15 litres per person per day, compared to the group who had received no feedback.

However, in the same water-saving group, electricity consumption increased by 5.6%. This resulted in additional electricity use of 0.89 kWh per person per day. The study did not identify the precise psychological mechanism that caused the increase in electricity consumption, but suggested it may be moral licensing. This is different from 'rebound' effects, which rely on a financial incentive, i.e. saving money in one area means you can spend more in another. In this study, water was free.

If moral licensing is occurring, this has implications for environmental behaviour campaigns, in particular, those that suggest 'every little bit helps' or propose that encouraging one form of behaviour will create opportunities to encourage another ('spillover' effects). In fact, the researchers suggest that some campaigns that encourage low-impact behaviours may produce a 'warm glow' that negatively affects behaviour in another area.

When considering the results, it should be remembered that the study was short-term (seven weeks) and the observed effects (both positive and negative) may fade over time. In addition, the water use data were collected daily and electricity use data were collected weekly, so it was difficult to be confident of direct links between the two behaviours. Further research could confirm and quantify the existence of a moral licensing effect.



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