How can we incentivise the architecture of a sustainable food system?

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Motivation: The dilemma of technology innovation
The challenge of environmental regulation
Stagnation of greenhouse gas emission reductions in the UK

Source: Environment Agency (2020)
Plastic bans
Price policy is not a panacea
Price policy has its limitations

1. Price may have very limited impact on the demand, e.g. plastic packaging.

2. The indirect impacts of price policy are often ignored leading to counterproductive consequences.

3. The price effect prediction is based on historical technology while the innovation of technology cannot be considered in the model.
Characteristics demand theory

1. The good, per se, does not give utility to the consumer; it possesses characteristics, and these characteristics give rise to utility.

2. In general, a good will possess more than one characteristic, and many characteristics will be shared by more than one good.

3. Goods in combination may possess characteristics different from those pertaining to the goods separately.

Kelvin Lancaster
Behavioural incentives are critical to establishing a sustainable food system
Environmental warm-glow

Acting green elicits a literal warm glow
Danny Taufik*, Jan Willem Bolderdijk² and Linda Steg³

Environmental policies are often based on the assumption that people only act environmentally friendly if some extrinsic reward is implicated, usually money⁴. We argue that people might also be motivated by intrinsic rewards: doing the right thing (such as acting environmentally friendly) elicits psychological rewards in the form of positive feelings, a phenomenon known as warm glow⁵. Given the fact that people's psychological state may affect their thermal state⁶, we expected that this warm glow could express itself quite literally: people who act environmentally friendly may perceive the temperature to be higher. In two studies, we found that people who learned they acted environmentally friendly perceived a higher temperature than people who learned they acted environmentally unfriendly. The underlying psychological mechanism pertains to the self-concept learning you acted environmentally friendly signals to yourself that you are a good person. Together, our studies show that acting environmentally friendly can be psychologically rewarding, suggesting that appealing to intrinsic rewards can be an alternative way to encourage pro-environmental actions.

Figure 1 | Means of temperature perception (including standard error bars; Study 1).
Warm-glow effects for organic food consumers

**FIGURE 1** The influence of anticipated warm-glow on green behavior. *Note:* *p < .05, **p < .01, ***p < .001. N = 341. Coefficients are standardized. Bootstrapped 95% confidence intervals are provided in parentheses. $T_2 - T_1 = 4$ weeks. To address panel attrition, a full information maximum likelihood (FIML) procedure was used to estimate the mediation models.

Source: Jia and van der Linden (2020)
Moral and market rather than regulation provide a stronger driver for adopting Environmental Management System (EMS).

Note: Percentage within each company size group. Source: Environmental Management System Survey (505 sites).
Behavioural cost and benefit model

Source: Lili Jia et al. (2019)

Thank you very much for your attention!