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**Economic instruments for the environment: A
psychological perspective.**

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1. Introduction

- The paper is based on three main sources: first, the work, including my own, on the Psychology of Taxation¹; second, my 25 years' experience as an economic psychologist; and third my reading of three policy documents, namely the Strategy Unit's 'Waste not, want not'², HM Treasury's 'Tax & the Environment'³, and finally 'Environment Taxation: Position Statement'⁴ from the Environment Agency.
- The aforementioned documents are easy to understand; offering a perspective which is highly influenced by the discipline of economics. As a psychologist interested in economics, I have no problem with the fact that economic thinking should be highly influential in policy making and implementation, I am concerned instead that it should be so predominant. So I pose two questions: where is the psychology in these documents?; what of psychological importance is missing?

2. Where is the Psychology?

¹ Lewis, A. (1982) *The Psychology of Taxation*. Martin Robertson. Oxford, Lewis, A., Webley, P. & Furnham, A. (1995) *The New Economic Mind*. Simon & Shuster. New York. & London.

² <http://www.number-10.gov.uk/su/waste/report/01.html>

³ *Tax and the Environment: Using Economic Instruments*. (Nov 2002). H.M. Treasury.

⁴ <http://www.environment-agency.gov.uk/aboutus/>

- At first glance there may not seem to be much, as the authors themselves would probably agree. But there is an implicit psychology here about the causes of behaviour and the nature of human nature. The underlying model is of Rational Economic Man (REM). There is a huge literature on the advantages and disadvantages of the REM assumptions and I am going to avoid it here. What is clear is that making these assumptions helps economic modelling as economic antecedents and economic consequences can be linked mathematically without needing to investigate the black box representing the economic actor. Problems arise, and this may well come about without people realising it, when these convenient 'assumptions' start evolving into beliefs systems about what people are really like and what causes their behaviour. So the implicit psychology is that the pursuit of self-interest (often narrowly defined) and dispassionate rational deliberation between alternatives, based on the relative costs and benefits of particular actions, are not assumptions but credible approximations of what people actually do.
- Of course people respond to financial incentives but ignoring the 'black box' is a perilous thing to do.
- Not so long ago, when Psychology was studied by fewer people at University and at school, the discipline tended to conjure up just two

images – Freudian psychoanalysts and women lying on couches, or men in white coats training white rats to run mazes – a tradition called behaviourism. Behaviourism is not a million miles away from economic modelling as the organism is assumed to simply respond to stimuli; certain behaviours can be extinguished by administering electric shocks, while behaviours can be encouraged by the reinforcement of food. Taxing pollution or an unwillingness to recycle, or providing credits for environmentally friendly behaviour could be viewed as a somewhat subtler version of the same thing.

- People don't like being treated like rats and borrowing again from the animal kingdom; worms can turn.
- This is a caricature of course. The HM Treasury Document 'Tax and the Environment' (Section 6) lists five policy measures besides taxation, including voluntary agreements, publicity campaigns and tax credits. The point is that taxation alone is the most heavy-handed. It would be wrong also to say that voters/citizens have been ignored as social surveys, focus groups and a number of other discussion fora have been set up to assess popular views and conceptions. One wonders whether this constitutes diplomacy or a willingness to make 'people' or 'the person' the centre of the equation.

3. Inside the black box: Social psychology

- There are many motivations besides the pursuit of self-interest narrowly defined. Subjective perceptions, attitudes, beliefs, values, and moral commitments make us distinctly human. There is no automatic or inevitable reaction to changing tax rates⁵ as they have to be passed through these components: what do people perceive the tax rates are?; what are people's attitudes towards the new tax or tax changes?; what do payers believe they are for?; are they legitimate?; do they restrict choice or encourage a better society?; are they fair?; are they just?
- We can find out quite a bit about what is in the black box by recording voters/citizens fiscal perceptions and preferences using social surveys and questionnaires. But simply finding out about these preferences is not enough in itself to predict behaviour. Recording general attitudes and preferences can be very informative: survey after survey in Europe and the USA has shown that people are aware of environmental problems and are aware that action must be taken: more specific questions are required that address attitudes to specific behaviours. (The recent MORI poll on attitudes towards household

⁵ Waste Not Want Not. Annex L (Modelling Assumptions) Section 11. "It has not been possible to incorporate a direct relationship between, for example, price & behavioural change."

waste management is a step in the correct direction.⁶) In short what is required are positive attitudes towards a specific action, not just sympathy on its own.

- Unlike REM, social psychological man is responsive to social norms and the behaviour of those around him; decisions are not made by individuals in social isolation. Individuals ask themselves: "What are other people making of these environmental policy initiatives?"
- Social psychological studies show that it is much easier to change behaviour if two key components are in place: positive attitudes towards change and the social approval and support of important 'others'.⁷
- People also need to feel that their actions can make a difference – personal efficacy.
- As human beings we have failings and make mistakes; many people nevertheless are uncomfortable with hypocrisy and want their

⁶ Public Attitudes Towards Recycling and Waste Management. The Strategy Unit, Cabinet Office. Sept. 2002.

⁷ Ajzen, I. & Fishbein, M. (1980) Understanding Attitudes and Predicting Social Behaviour. Prentice-Hall. New Jersey.

behaviour to be consonant with their attitudes and beliefs. For policy makers the work is half done; what is required is to *enable* people to put their principles and beliefs into practice.

- The nature of human nature is contested: there should always be concern that beliefs about human nature might be self-fulfilling. If policy makers (and politicians) assume that voters/citizens are self-interested wealth maximizers and treat them accordingly this might encourage selfish behaviour. Alternatively if one were to assume that people have concerns about other people and issues beyond their immediate self-interest then socially responsible behaviour is encouraged. Contemporary research has revealed that we have multiple-selves: we are both selfish *and* socially responsible ; surroundings, social climate, ideology and demonstration effects⁸ all influence which aspects of our personality and behaviour come to the fore.
- The price effect is powerful yet so much of what we do in everyday life is not for money at all; furthermore if we were paid for certain

Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes*, 50, 179-211

⁸ A 'demonstration effect' is the opposite of a 'crowding-out' effect. Seeing other people behaving in an environmentally responsible way encourages us to do the same.

activities we might even be offended.⁹ I do not pay my wife for doing the ironing, nevertheless we would both be happy to pay someone else to do it. We do not pay our daughter for cleaning her teeth or tidying her room. Most people would feel offended if having invited friends for dinner these same friends were to offer us money in exchange for our hospitality. Rather than being motivated by *extrinsic* rewards and punishments so much of what we do we do we do because we want to, it gives us *intrinsic* satisfaction. Intrinsic and extrinsic motivation interact with one another and crucially under certain circumstances, extrinsic motives *crowd-out* intrinsic motives.

- As has been mentioned, environmental morale in the U.K. is generally favourable and where costs are relatively low for changing behaviour, a heavy-handed instrument is predicted to *crowd out* intrinsic motivation, reducing environmental morale. This is especially likely when individuals and firms who are already behaving in environmentally responsible ways are treated in exactly the same way as those who are not. A second example would be charging for excessive household waste, where rewards/punishments are strongly contingent on behaviour; intrinsic motivation simply becomes

⁹ Frey, B. (1997) *Not Just for the Money: An Economic Theory of Personal Motivation*. Edward Elgar. Cheltenham.

unnecessary. In this way some policies based on rational economic man (REM) encourage people to behave like rational economic man.

- Subtle intervention is appropriate where environmental morale is high and the costs associated with changing behaviour are low engendering a voluntary environmentalism. Intensive intervention is predicted to be appropriate using this model, only when the costs of applying environmental morale are too high.

4. Inside the black box: Cognitive psychology

- Cognitive psychology is about thinking, judgement and decision-making. It is this aspect of psychology that has had most influence on modern-day contemporary economic thought, legitimised by the Nobel Prize in Economics awarded (with Vernon Smith) to a psychologist, Daniel Kahneman.¹⁰ The research usually entails asking hypothetical questions with or without tangible economic outcomes. A now, not inconsiderable body of works shows that people use 'rules of thumb' (or heuristics) in their decision-making and choices are regularly influenced by how they are *framed*. The most famous and persistent result is that when faced with identical economic outcomes

¹⁰ Kahneman, D. (2003) A perspective on judgement and choice: Mapping bounded rationality. *American Psychologist*, 58, 9, 697-720.

people are risk-averse for gains and risk-seeking for losses. How might then an environment tax be 'framed'?

- Social surveys examining fiscal preferences almost always show that people fail to make the 'fiscal connection' between taxation and public expenditure. Consequently taxation is frequently perceived as a loss and public expenditure as a gain. When the fiscal connection is made explicit in the questions posed to voters/citizens negative reactions to taxation are reduced and enthusiasm for public spending curtailed.
- Compared to many countries in Europe (Italy is an excellent example) voluntary tax compliance in the U.K. is high – in many sectors we have no need for heavy-handed tax enforcement which might well produce a backlash. It will be remembered that perceived 'losses' encourage risky behaviour; tax evasion could be the manifestation of this perception.
- The policy implications are that voluntary compliance is too precious to be lost and that any new environmental tax must not be perceived as a loss.
- There are two clear ways to discourage these negative perceptions. The first is to make the fiscal connection clear by some form of

hypothecation stressing the *benefits* of environmental taxes.¹¹ The second is to frame taxation as a gain – a reward for good behaviour rather than a punishment for bad.

Conclusions

- REM is a very useful analytic tool as an 'as if' assumption. At the same time it is a 'thin' description of human nature and should not be the sole driving force in policy making.
- REM stresses individualisation yet in reality people also have a social conscience which must be appealed to.
- The contents of the 'black box' will determine the success or failure of environmental instruments.
- 'Framing' environmental instruments in a positive way where gains and improvements are emphasized is more likely to be successful than initiatives which are perceived as curbing and restricting behaviour.

¹¹ Hypothecation is also supported in Anderson, D., Clark, C., Foxon, T., Gross, R., and Jacobs, M. (2001) *Innovation in the Environment*. Imperial College/Fabian Society

- Putting people at the centre of the equation could mean that voters/citizens become directly involved in the selection of particular environment instruments especially if they are requested to answer with respect to what is best for the environment and not just what is best for themselves as an individual. Research needs to be commissioned on this topic where substantial (and insubstantial) differences between 'self interest' and 'what is best for the environment' can be identified across a range of environmental policy options. Some recent pilot work conducted at Bath University has demonstrated that instrumentality is unevenly distributed; the recommended research would also indicate where most resistance is likely to be found.
- People want to do the right thing – people must feel that environmental behaviour reflects their intrinsic motivation and not just extrinsic motivation. Policy should *enable* people to equate their attitudes with their behaviour by combining moral appeals with subtle incentive systems.

