behavioural public economics

Interest in the field of psychology and economics has grown in recent years, stimulated largely by accumulating evidence that the neoclassical model of consumer decision-making provides an inadequate description of human behaviour in many economic situations. Scholars have begun to propose alternative models that incorporate insights from psychology and neuroscience. Some of the pertinent literature focuses on behaviours commonly considered ‘dysfunctional’, such as addiction, obesity, risky sexual behaviour, and crime. However, there is also considerable interest in alternative approaches to more standard economic problems such as saving, investing, labour supply, risk-taking, and charitable contributions.

Behavioural public economics (BPE) is the label used to describe a rapidly growing literature that uses this new class of models to study the impact of public policies on behaviour and well-being (see Bernheim and Rangel, 2006a, for a more comprehensive review).

Background: the neoclassical approach to public economics

Public economic analysis requires us to formulate models of human decision-making with two components – one describing choices, and the other describing well-being. Using the first component, we can forecast the effects of policy reforms on individuals’ actions, as well as on prices and allocations. Using the second component, we can determine whether these changes benefit consumers or harm them.

The neoclassical approach assumes that individuals’ choices can be described as if generated by the maximization of a well-defined and stable utility function subject to feasibility and informational constraints. Neoclassical welfare analysis proceeds from the premise that, when evaluating policies, the government should act as each individual’s proxy, extrapolating his preferred choices from observed decisions in related situations. This premise justifies the use of the as-if utility function as a gauge of well-being. In effect, this approach uses the same model for positive and normative analysis.

Within the neoclassical paradigm, government policy can affect behaviour and welfare only if it changes the decision maker’s information or budget constraint. For example, vaccination campaigns may influence behaviour by providing information concerning the risks of a disease and the advantages of taking preventive action, while cigarette taxes may alter choices by raising the cost of smoking.

From the neoclassical perspective, government intervention in private markets is justified to enforce property rights, correct market failures, and address inequity by redistributing resources. Standard examples of interventions motivated by market failures include the use of taxes and subsidies to correct externalities, the provision of
public goods, and the introduction of social insurance when private risk sharing is inefficient.

The accomplishments of neoclassical public economics, such as the theories of optimal income taxation and corrective environmental policy, are considerable. However, there is growing concern that this paradigm does not adequately address a number of important public policy challenges – for example, what to do about ‘self-destructive’ behaviours such as substance abuse, or about the apparently myopic choices of those who save ‘too little’ for retirement. Since the neoclassical welfare criterion respects all voluntary consumer choices (conditional on the information in the consumer’s possession), it rules out the possibility of enhancing well-being by correcting ‘poor’ choices (except through the provision of information).

The behavioural approach to public economics

A key feature of BPE is the potential divergence of positive and normative models. Even when it is assumed that individuals are endowed with well-behaved lifetime preferences, decision processes may translate these preferences to choices imperfectly. To conduct positive analysis, one employs a model of the potentially imperfect decision process. To conduct normative analysis, one uses a well-defined welfare relation. In stark contrast to the neoclassical approach, the welfare relation may prescribe an alternative other than the one that the individual would choose for himself, at least under some conditions.

The analysis of addiction presented in Bernheim and Rangel (2004) illustrates this approach. Our model assumes that people attempt to optimize given their preferences, but randomly encounter conditions that trigger systematic mistakes, the likelihood of which evolves with previous substance use. The model is based on the following three premises. First, use among addicts is sometimes a mistake and sometimes rational. Second, experience with an addictive substance sensitizes an individual to environmental cues that trigger mistaken usage. Third, addicts understand their susceptibility to cue-triggered mistakes and attempt to manage the process with some degree of sophistication. The first two premises are justified by a body of research in psychology and neuroscience, which shows that, after repeated exposure to an addictive substance, the brain tends to overestimate the hedonic consequences of drug consumption upon encountering environmental cues that are associated with past use. The third premise is justified by behavioural evidence indicating that users are often surprisingly sophisticated and forward looking.

The \((\beta,\delta)\)-model of intertemporal choice (Strotz, 1956; Phelps and Pollack, 1968; Laibson, 1997; O’Donoghue and Rabin, 1999; 2001) also illustrates the BPE approach. Psychologists have found that people often act as if they attach disproportionate importance to immediate rewards relative to future rewards, especially in situations where cognitive systems are overloaded. (For a recent review of this literature, see Frederick, Loewenstein and O’Donoghue, 2002; Loewenstein, Read and Baumister, 2003.) To capture this tendency, the \((\beta,\delta)\)-model assumes that, in each period \(t\),