



School of Economics  
University of East Anglia  
Norwich NR4 7TJ, United Kingdom

**Can economics be founded on 'indisputable facts  
of experience'?**

**Robert Sugden  
University of East Anglia**

For the last 25 years, I've run experiments investigating whether individual behaviour is consistent with the fundamental principles of decision theory.

E.g. Do choices reveal transitive preferences?

Are preferences context-dependent?

What does Robbins say about this?

The propositions of economic theory, like all scientific theory, are obviously deductions from a series of postulates. And the chief of these postulates are all assumptions involving in some way **simple and indisputable facts of experience** relating to the way in which the scarcity of goods which is the subject-matter of our science actually shows itself in the world of reality. The main postulate of the theory of value is the fact that individuals can arrange their preferences in an order, and in fact do so...

These are not postulates the existence of whose counterpart in reality admits of extensive dispute once their nature is fully realised. We do not need controlled experiments to establish their validity: they are so much the stuff of our everyday experience that they have only to be stated to be recognised as obvious. (Nature and Significance, pp. 78-79).

Experimental investigations of individual choice behaviour show systematic deviations from assumptions of decision theory; and ideas from psychology (e.g. salience of cues, reference-dependence) have proved useful in explaining these.

What does Robbins have to say about the role of psychology in economics?

The fundamental assumption of economic theory is 'relative valuations', i.e. the existence of preference orderings]:

It is sometimes thought, even at the present day, that this notion of relative valuation depends on the validity of particular psychological doctrines. The borderlands of Economics are the happy-hunting ground of minds averse to the effort of exact thought, and, in these ambiguous regions, in recent years, endless time has been devoted to attacks on the alleged psychological assumptions of Economic Science. ... .

But (says Robbins) these criticisms reflect an outdated understanding of the relationship between economics and psychology ...

It is well known that certain of the founders of the modern subjective theory of value did in fact claim the authority of the doctrines of psychological hedonism as sanctions for their propositions. ... From the beginning [Menger's analysis was] constructed in terms which begged no psychological questions. ... But the names of Gossen and Jevons and Edgeworth ... are a sufficient reminder of a line of really competent economists who did make pretensions of this sort. ...

[But] no one who was acquainted with recent value theory could honestly continue to argue that it has any essential connection with psychological hedonism, or for that matter with any other brand of *Fach-Psychologie*. If the psychological critics of Economics had troubled to do these things they would speedily have perceived that the hedonistic trimmings of the works of Jevons and his followers were incidental to the main structure of a theory which - as the parallel development in Vienna showed - is capable of being set out and defended in absolutely non-hedonistic terms. (pp. 83-85)

Robbins is not a behaviourist in the 'revealed preference' sense (a 'queer cult' ):

the propositions of analytical economics 'most unquestionably involve elements which are of a psychological - or perhaps better said a psychical - nature' (pp. 86-88).

I.e. economics needs assumptions about human psychology, but it doesn't need any help from professional psychologists.

Why not? Because the assumptions used in economics are so obviously true that we don't need to apply the normal standards of empirical science to establish their validity.

De facto, this attitude to rationality assumptions (if not Robbins's rationalisation of it) has been accepted by many economic theorists - right up to the present.

Robbins doesn't provide much argument to support these claims (and the methodological arguments he does present are rather shaky - see my paper). Instead, he appeals to other theorists who (he says) have given choice theory sound, non-hedonistic foundations:

- \* 'the Austrians' - with Menger's Principles of Political Economy (1871) as the founding text; this presented as sounder than Jevons's Theory of Political Economy (1871), because free of 'hedonistic trimmings';
- \* Wicksell's Common Sense of Political Economy (1910) - to which Nature and Significance is 'especially indebted'.
- \* Pareto's Manual of Political Economy (1906) - Robbins approves the theory, but not Pareto's behaviourism; sees Wicksteed as methodologically sounder.

In my paper, I review Jevons, Menger, Pareto and Wicksteed.  
Here, I can only summarise my conclusions.

## Jevons:

Jevons is explicitly mathematical: 'It is clear that economics, if it is to be a science at all, must be a mathematical science'.

But also psychological: (in opposition to a pronouncement by John Stuart Mill) But it is surely obvious that economics does rest on the laws of human enjoyment; and that, if those laws are developed by no other science, they must be developed by economics (p. 102).

Diminishing marginal utility is presented as a psychophysical relationship between consumption and sensation - informed by state-of-the-art experimental research. This NOT 'trimming'.

And experimental. Jevons was the first experimental economist in the modern sense. He experimented on fatigue/muscular effort (Nature, 1870); purpose to illustrate 'the mode in which some of the laws forming the physical basis of economics might be ascertained'.

I.e. we find the laws of economics by controlled experiment.

## Menger:

Menger's presentation of the theory of value is much less rigorous and less clear than Jevons's. The fundamental concept is a hierarchy of 'needs', ordered by 'importance'.

Even his translators are not sure what his 'Tables' mean:

## Menger's table

I	II	III	IV	V	VI	VII	VIII	IX	X
10	9	8	7	6	5	4	3	2	1
9	8	7	6	5	4	3	2	1	0
8	7	6	5	4	3	2	1	0	
7	6	5	4	3	2	1	0		
6	5	4	3	2	1	0			
5	4	3	2	1	0				
4	3	2	1	0					
3	2	1	0						
2	1	0							
1	0								
0									

I shall designate the importance of satisfactions on which life depends with 10, and the smaller importance of the other satisfactions successively with 9, 8, 7, 6, etc. In this way we obtain a scale of the importance of *different* satisfactions that begins with 10 and ends with 1... Suppose that the scale in column I expresses the importance to some one individual of satisfaction of his need for food, this importance diminishing according to the degree of satisfaction already attained, and that the scale in column V expresses similarly the importance of his need for tobacco.

Not clear that Menger is non-hedonistic:

... it is above all a fact of the most common experience that the satisfactions of greatest importance to men are usually those on which the maintenance of life depends, and that other satisfactions are graduated in magnitude of importance according to the degree (duration and intensity) of pleasure dependent on them. (pp. 122-123)

Perhaps this is amateur psychology, in the same way that the Table is amateur mathematics?

Is Menger's presentation really an advance on Jevons's?

## Pareto:

Pareto self-consciously separates economics from psychology. He bases economics on preferences rather than on mental states. (This is well known, so I take it as read).

But, in order to justify the assumption of consistent preferences:

We will study the many logical, repeated actions which men perform to procure the things which satisfy their tastes. ... [W]e are concerned only with certain relations between objective facts and subjective facts, principally the tastes of men. Moreover, we will simplify the problem still more by assuming that the subjective fact conforms perfectly to the objective fact. This can be done because we will consider only repeated actions to be a basis for claiming that there is a logical connection uniting such actions. (Ch 3, § 1)

And ...

A man who buys a certain food for the first time may buy more of it than is necessary to satisfy his tastes, price taken into account. But in a second purchase he will correct his error, in part at least, and thus, little by little, will end up by procuring exactly what he needs. We will examine this action at the time when he has reached this state. (Ch. 3, §1)

I.e. Pareto is assuming rationality; his hypothesis is that behaviour approaches rationality as choices are repeated.

This is an idealising assumption (compare frictionless planes); but we can identify cases that approximate the ideal.

Pareto tries hard to solve the 'integrability problem', i.e. to show that indifference curves could be derived from observations of local indifference. Why? Because he thinks the assumption of a preference ordering needs some theoretical justification.

So, Pareto is a pure theorist, who does not use psychology.

But he does NOT treat 'consistent preference' as an undisputed fact of experience. It can be expected to hold only in the special case of repeated choice - and perhaps not even there (because of the integrability problem).

## Wicksteed:

Wicksteed sees himself as a common-sense expositor of Pareto-style theory. (In his 1906 review of the Manual, he reacts with shock to Pareto's use of abstractions in place of concrete references to economic life.)

But he rejects Pareto's restriction of economics to repeated choice:

He hardly seems to realise how very much this definition must be stretched if it is to include more than a very small part of the actual phenomena of the business [of economics]; nor does he show any consciousness of what an immensely greater area is covered by his diagrams, his 'curves of indifference', his 'hills of pleasure', and his 'paths of ascent', than is covered by his definition of economics. May it not, indeed, be doubted whether there is ever room for frequent repetitions of choice on a large scale while the objective relations ... remain constant?

Wicksteed uses idealised but concrete descriptions (especially an account of the decision-making of a capable housewife) to argue that the assumption of consistent preferences can be applied generally ('from end to end of life' - p. 159):

We are constantly weighing apparently heterogeneous objects of desire against each other and selecting between them according to the terms on which we can secure them. All these things that we balance against and compare with each other, whether they can be had for money or not, may ideally be arranged on a scale of relative significance in our minds. (Common Sense, p. 13)

But notice 'ideally'...

Wicksteed is well aware of exceptions. He devotes a whole chapter to 'Economical administration and its difficulties'. The 'difficulties' are temptations to irrationality, which can be overcome by 'alert intelligence and sound judgement' (and an economic training).

Wicksteed's treatment of 'difficulties' is psychologically acute, and anticipates some discoveries of behavioural economics.

E.g. failures of transitivity (or context-independence) due to bad-deal aversion (compare Thaler 1985, Isoni 2007),

A man might be willing to give a shilling for a knife because he thought it cheap, and might refuse to give a shilling for a certain pamphlet because he thought it dear, and yet if he had been offered the direct choice between the pamphlet and the knife as a present he might have chosen the pamphlet. That is to say, he would prefer the knife to a shilling and would prefer a shilling to the pamphlet, and yet he would prefer the pamphlet to the knife. (p. 33).

So: Wicksteed grounds economics on assumptions about consistent preferences, and he justifies these assumptions in common-sense terms, without reference to findings of professional psychology; but ...

... he does NOT treat them as indisputable facts of experience. They are part of a model of rational choice; and he recognises that this model fails to capture some behavioural regularities with psychological explanations.

This is not a warrant for ignoring results of experimental investigations of how far people's preferences really are consistent.

## Back to Robbins...

Robbins is using the theoretical constructions of Jevons, Menger, Pareto and Wicksteed; but he has stripped out:

Jevons's empirical theory of preferences, based on psychophysics;

Menger's ambiguities (have later Austrians reconstructed him in their own image?);

Pareto's restriction of the theory to repeated choice;

Wicksteed's recognition of that rational choice is only a model, from which real behaviour can diverge systematically.

What do we get instead?

No one will really question the universal applicability of such [an] assumption as the existence of scales of relative valuation' (p. 81).

The tenor of this is characteristic of many later justifications of rationality assumptions in economics...

... but it is only bluster.

