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1 September 2007

Online at <https://mpra.ub.uni-muenchen.de/6684/>
MPRA Paper No. 6684, posted 12 Jan 2008 14:52 UTC

NORMATIVE ISSUES IN MARGINALISM: THE CASE OF P. WICKSTEED

SEPTEMBER 2007

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ABSTRACT

Phillip Wicksteed's ideas played an important role in the history of economic methodology. This is because of two reasons: The first was that his views represent the starting point of the deliberate attempt to expel normative issues from marginalist economic analysis. The second reason was that his ideas influenced his disciple L. Robbins, who was one of the first theorists to set the methodological basis for an allegedly value-free economic science. The paper examines Wicksteed's conception of a positive economic science and the role of normative aspects. In the same context, his views on the nature and the role of economic man, and his analysis of selfish and altruistic behaviour are also discussed. Finally, the work combines the above with Wicksteed's economic methodology in order to assess his overall role and influence on the development of the trend towards a value-free economic theory.

JEL Codes: B3, B4

An earlier version of this paper was presented to European Society for the History of Economic Thought annual conference in Strasbourg, 5-7 of July 2007. The author wishes to thank the participants for comments and especially C. Orsi and T. Hirai. The usual disclaimer applies.

I. Introduction

Towards the end of the 19th century there were the first clear signs of the tendency to expel normative issues from economic theory. The growing influence of positivism, with its emphasis on the rejection of all non-scientific elements from scientific theory, was the main cause of this tendency. The first generation marginalists had also been influenced by earlier versions of positivism, but their economic theories contained substantial value judgments and normative elements (for discussions of this issue see Gordon, 1977; Drakopoulos 1997). This tendency was reinforced by the enormous success of physics as a science and its prestigious status among scientific disciplines. Many economic theorists saw the imitation of classical physics methodology as ideal if economics was to become an established scientific field (for a discussion of the influence of physics on economics see Mirowski, 1989 and Drakopoulos, 1994). The essential prerequisite for a physics-type methodology was the rejection of all normative elements from scientific economic thought. The works of P. Wicksteed, V. Parero and I. Fisher can be seen as the first systematic attempts towards this direction. Wicksteed's explicit reservations about utilitarianism and hedonism, Pareto's use of "given" and thus allegedly psychology-free indifference curves, and Fisher's critique of the concept of utility as being unscientific, are strong indications of the above trend.

Philip Wicksteed's work was a representative example of the attempt to construct an economic theory free from all normative and metaphysical elements. Wicksteed's work is also important because of his considerable influence on L. Robbins who was one of the first theorists to set the

methodological framework for a normative free economic science. The current methodological stance of normative free economic theory is based to a large extent on Robbins' influence. This paper will discuss Wicksteed's views concerning the role of philosophical and psychological elements in economics, his economic methodology, the classical physics ideal and the use of mathematics, and his views on the concept and use of economic man. Thus, the first part of the paper will discuss Wicksteed's ideas on the role of normative elements in economics. The following part will concentrate on his approach to economic methodology. In the subsequent two sections, the paper will examine Wicksteed's conception of economic man and the influence of his views especially on the work of L. Robbins. A concluding section will close the paper.

II. The Role of Normative Elements

Wicksteed's economic ideas are presented in his two most important works, the *Alphabet of Economic Science* and the *Common Sense of Political Economy*. His economic thought was in line with the general theoretical framework of marginalism and especially with Jevons' approach. Wicksteed was a great enthusiast of Jevons' ideas and his aim was the application and the extension of the marginalist framework to day-to-day decision making (see also Flatau, 2004 and for an opposite but minority view which sees Wicksteed far less connected to Jevons' thought, Comim, 2004). His economic analysis is conducted in terms of marginal utility but the use of mathematics is not as extensive as in Jevons' work. As Paul observes: "He expressed Jevons'

complex formulas in ordinary language, thus rendering them accessible to those less schooled in advanced mathematics“ (Paul, 1979). As we shall see, his main economic arguments, developed in his most important works, are essentially in line with the marginalist theoretical framework.

The economic approach of the marginalist school and especially that of Jevons, Walras and Edgeworth was explicitly rooted in the utilitarian calculus of Bentham, or more generally in psychological hedonism. Jevons clearly states that his purpose was to ‘treat Economy as a Calculus of Pleasure and Pain” (Jevons, 1871, p.vii). The theory of exchange equilibrium developed by Walras requires agents to “attain maximum satisfaction” (Walras, 1874, p.125). In the same climate, Edgeworth thinks that the “Principles of Greatest Happiness, Utilitarian or Egoistic constitute the first principles of Ethics and Economics” (Edgeworth, 1881, p.v). It is clear that these authors were not methodologically concerned about the apparent presence of utilitarian and hedonistic concepts and assumptions in their theoretical formulations (for an extensive discussion see Drakopoulos, 1991).

However, Wicksteed is aware of the role of normative or philosophical concepts in marginalism and particularly in Jevons’ work. More specifically, he realizes that hedonism with its central idea of pleasure maximization and pain minimization, has had a crucial influence on the marginalist approach (see also Drakopoulos, 1992). His anxiety about the obvious role of hedonism in marginalist formulations leads him to a deliberate attempt towards downplaying hedonistic underpinnings. Thus, in his *Common Sense* and following some sections where he describes the basic elements of the marginalist approach, he feels the obligation to make the following statement:

“Nothing that has been said in this chapter must be taken as committing the author to a hedonistic theory of ethics (Wicksteed, 1933, p.434). With the same concern in mind, he devotes a number of pages to an attempt to eliminate the role of hedonistic ideas in his work (see Wicksteed 1933, pp.431-435). The following passage is in the same tone:

“It is not my purpose, however, to discuss ethical theories, but merely to show that the general principles on which our investigations are based, while throwing light on the hedonistic calculus, do not presuppose a hedonistic theory, but are equally applicable to any other” (Wicksteed, 1933, p.435).

In spite of the above qualification though, Wicksteed’s economic analysis and most of his examples are presented in terms of pleasure seeking and pain avoidance. In an indicative statement which is not too far from moral hedonism, he writes: “We must therefore cultivate the power to endure such undesired experiences as are unattainable, with the minimum of suffering, and to derive the maximum of satisfaction from the realization of things desired” (Wicksteed, 1933, p.421, see also similar passages in Wicksteed, 1914, pp.774,777).

Wicksteed’s distinction between higher and lower pleasures also adds a moralistic dimension. It seems that he considers material enjoyments as lower pleasures and artistic or spiritual enjoyments as higher pleasures. Furthermore, he does not consider as hedonistic the sacrifices and suffering that someone might endure for the purpose of some religious or social end (see Wicksteed, 1933, pp.431-433).

Wicksteed's conscious attempt to avoid any connection of his economic analysis with a particular philosophical framework (in this case hedonism), can also be seen from his explicit and forceful references to justice and equality in his non-economic works. For instance, the case for a more equal distribution of wealth is made in his *The Advent of the People* (1895). This point can also be reinforced by his other political and religious writings where he supports the labour movement and strongly condemns materialism (for a review see Steedman, 1994 and Flatau, 2004). However, these ideas are almost absent in his economic works and this is mainly due to his conscious approach of excluding normative elements from scientific economic analysis (for an alternative interpretation which argues that Wicksteed conceived economics as a moral science, see Comim, 2004). In his *Battle with Materialism* for example, he believes that the role of religion is not to interfere with the normal course of scientific endeavour and prescribe particular methods and truths (Wicksteed, 1891, p.702). One can also argue that Wicksteed's justification for the rejection of the possibility of interpersonal comparisons of utility is to be found in their lack of scientific foundations. Wicksteed believes that "...there is no means of comparing the wants of two different minds with each other..." mainly because that will involve "a metaphysical scruple or a general vague supposition" (Wicksteed, 1933, pp.148-149).

III. Economic Methodology

Wicksteed's influence from positivism was combined with imitation of the methodology of physical sciences (for an explicit indication of Wicksteed's influence from the positivism of A. Comte, see Wicksteed, 1906). The physical science ideal was extremely influential among the first and the second generation marginalists (with the notable exception of Marshall). Jevons' close analogy of the theory of economy with the science of statical mechanics and Walras' analogy between astronomy and mechanics to mathematical economics are representative examples (Jevons, 1871, p.viii, Walras, 1874, pp.47,48). Furthermore, Edgeworth's parallel between "Mecanique Celeste" with "Mecanique Sociale" and Fisher's analogy between mechanics, hydrodynamics and economics, are also in the same methodological framework (Edgeworth, 1881, p.12; Fisher, 1892, pp.85,86).

Wicksteed's methodological approach to economics is also in the same conceptual structure. In particular, the physical science ideal is present in his economic works. In his *Alphabet*, he compares the analysis of total and marginal utility to the projection of a body upwards at a given velocity. The curve which demonstrates the connection between height and time corresponds to the curve which demonstrates the connection between total satisfaction derived from a given good and the quantity of the good (Wicksteed, 1888, pp.2-15). In the same tone, and in a subsequent article on Jevons' ideas, he uses the physics analogy again. Wicksteed attempts to illustrate Jevons' theory of total and marginal utility by using diagrams from the field of dynamics. His simplification approach consists of using the

diagrams and the formulas of the acceleration of a falling body corresponding to marginal utility theory (Wicksteed, 1889). The physics scientific ideal is repeated in another article for the Palgrave dictionary. More precisely:

“The physicist may, according to his convenience, represent the height of a projectile –a magnitude of one dimension –by a line, or by an area, and speed by a line or an inclination. So the economist may represent a magnitude measured by a complicated derived unit by a line, or a magnitude measured by a fundamental unit by an area or a solid” (Wicksteed, 1894a, p757).

The physics methodological ideal was combined with the use of mathematics in economics (although not to the same extent as in Jevons' work). In both of his main books, Wicksteed attempts to present important economic ideas in mathematical form. For instance, in his *Alphabet*, the utility theory of value is presented in mathematical terms (see also Flatau, 2004). He even provides an outline of basic mathematical tools necessary for the exposition of marginalist theory (Wicksteed, 1888). In this respect, he followed the methodological views of Jevons concerning the role of mathematics in economics (Jevons, 1905 and for an analytical treatment of Jevons' use of mathematics and its wider implications for the development of economics, see Schabas, 1990).

IV. Economic Man

Wicksteed's conception of economic man is quite complex and in some respects different from the rest of marginalists. First of all, Wicksteed's views concerning the methodological nature of economic man are not in line with mainstream marginalism. The new element that can be found in his work is the rejection of the concept of fictional economic man. This stance was mainly based on his interpretation of positive economic theory. More specifically, Wicksteed thought that an economic science that does not include all psychological considerations and has no universal laws cannot be a positive science. He believes that all psychological considerations that actually bear upon the production and distribution of wealth must be included in economics if it is to become a positive science (Wicksteed, 1894b, p.770). This attitude can be traced to the considerable influence of positivism in social sciences (for a review, see Caldwell, 1982 and Redman, 1993). In the same spirit, he insisted that economic laws were not an exclusive set of rules which apply only to the economic behaviour of human beings, but that their validity was of a general nature. As he states:

This brings the economic conduct of man under the same laws as his conduct in general, and promises to give us the wider basis of which we are in search (Wicksteed, 1894b, p.771).

The above view is at odds with the established line of marginalism that considered economic laws as dealing with a specific domain of human

activity. Wicksteed's main source of inspiration, Jevons, referred to the existence of higher motives and thus economic man was conceived only as a partial picture of human behaviour (Jevons, 1871, p.31 and Bensusan-Butt, 1978, p.128). Walras also distinguished between "homo oeconomicus" and "homo ethicus" thus admitting the partial character of economic man (Bensusan-Butt, 1978, p.129). However, Wicksteed was explicitly against the concept of fictional economic man: "the psychological law that dominates economics dominates life" (Wicksteed, 1914, p.780). As he writes:

"We have now to ask further, are these psychological data, whether facts or principles, to include all the psychological considerations that actually bear upon the production, distribution etc., of wealth, or are we artificially to simplify our psychology and deal only with the motives supposed to actuate the hypothetical 'economic man'? In the latter case political economy will be a hypothetical science. In the former it will aim at positivity" (Wicksteed, 1894b, p.770)

It is clear that this approach places him in full opposition to line of thought originating from J.S. Mill's concept of hypothetical economic man and to the fictional economic man of many marginalists (see also Blaug, 1980). In fact, as far as this issue is concerned, he is closer to the viewpoints of Senior and Marshall. Senior did not accept Mill's fictional economic man, but held that the model of economic man was also a description of man's actual behaviour (see Senior in Bowley, 1967, p.61). In the same tone, Marshall includes all motives which act with force and regularity. As he writes "In all this we deal

with man as he is: not with an abstract or 'economic' man; but a man of flesh and blood". (Marshall, 1890 p.27)

The rejection of fictional economic man and the inclusion of all motives in Wicksteed's concept of economic man, implies a close connection between economics and psychology. More precisely :

"...the relation of psychology to economics will be as close as that of mathematics to mechanics, though not in all respects analogous to it"
(Wicksteed, 1894b, p.767)

This belief can also be seen from the following passage:

The laws of political economy then, being ultimately laws of human conduct, are psychical and not physical; and therefore psychology enters into political economy on something more than equal terms with physical science and technology. (Wicksteed, 1894b, p.767)

The role of psychology in economic analysis is not only nominal but for Wicksteed is essential in formulating economic laws (see also Comim, 2004, p.486). For instance, one of the most important economic laws, the law of diminishing marginal utility is based on a psychological law:

"The whole theoretic study of consumption can be little else than the application of the great psychological law of diminishing returns of satisfaction"

or relief to successive increments of commodity or service supplied to the same subject.” (Wicksteed, 1894b p.767)

It must be emphasized here that for Wicksteed, psychology was a perfectly legitimate scientific discipline and thus he saw no obstacle for economics to use its concepts and findings. This is contrary to the views of many of Wicksteed’s contemporary and subsequent theorists who did not advocate any connection of psychology to economics. I. Fisher for instance, believes that “It is not his [the economist’s] province to build a theory of psychology (1892, p.11). The same attitude can be found in Robbins (1932, p.84) and in Samuelson’s *Foundations* (1963, p.91). (For a detailed discussion of the emergence of anti-psychologism in economics, see Coats, 1976 and Bruni and Sugden, 2007.)

Wicksteed’s views on economic man are closely connected with his conception of human rationality. He maintains that human decisions are mainly rational, and that rational considerations are carried out unconsciously. He proceeds to provide examples of ordinary behaviour which display unconscious rationality when undertaking decisions: “A girl is conscious of choosing between a number of hats in a shop, but she may hardly be conscious of choosing between a hat and something else...[but] gets the best she can afford” (Wicksteed, 1933, p.35). He concludes “but to say that all this is merely to say that our scale of preferences often asserts itself automatically” (Wicksteed, 1933, p.35). It has to be pointed here that his use of the term scale of preferences was to become basic in the subsequent

theory of consumer behaviour. In another passage he points out the underlying rationality of decisions:

“That is to say, if we are moderately wise we pretty generally act without reflection in the manner which reflection would have dictated” (Wicksteed, 1933, p.36)

In short, although he expresses some reservations about the correctness of these decisions, Wicksteed holds that in general, human behaviour is rational.

Selfish behaviour was another central characteristic of marginalist homo oeconomicus. Wicksteed however, adopts a different approach from the other marginalists. This was part of his effort to distance marginalist economics from the normative framework of selfish utility maximization. In particular, he believes that selfish and altruistic behaviour are both equally acceptable in the economic domain. Furthermore, he condemns the exclusion of altruistic motives from previous marginalist economists (Wicksteed, 1933, p.179). Wicksteed believes that limiting economics to one particular motive, ‘the desire to possess wealth’, has prevented economic science from evolving (Wicksteed, 1933, p.163). His own attempt to include non-selfish motives in economics is quite interesting. He argues that in business transactions and especially in bargaining situations, agents might think of their interests (ego) or of the interests of others (family, friends: alteri) but they do not think of the interests of the trading partner (tu). Thus, according to this approach, the specific characteristic of an economic relation is not its ‘egoism’ but its “non-tuism” (Wicksteed, 1933, p.180). This elaboration of the selfish behaviour

does not prevent him from stating that after all “altruism has no place in business and non-tuism is equivalent to egoism” (Wicksteed, 1933, p.180). It seems that for Wicksteed the nature of economic relation determines whether non-selfish considerations appear. As was the case in his discussion of hedonism, Wicksteed’s concern to include non-selfish motives in economic behaviour, was another indication of his attempt to shield economics from criticism of being a science based on egoism (see also Bruni, 2000). A detailed analysis of Wicksteed’s approach on this issue can be found in Steedman (1989) and also Fontaine (2000).

V. Wicksteed’s Influence on Robbins

Wicksteed’s ideas on the role of normative issues, and his economic methodology influenced to a great extent the views of L. Robbins (see also O’Brien, 1990 and Howson, 2004). Robbins’ work “*An Essay on the Nature and Significance of Economic Science*” (1932) has had a considerable impact on the development of mainstream economic methodology. Robbins was a great admirer of Wicksteed and this can be seen from his edition with an extensive introduction of “*The Common Sense*” and a number of Wicksteed’s essays. He also acknowledged his intellectual debt to Wicksteed in his autobiography (Robbins, 1971, p.146). Robbins realized the influence of hedonism in marginalist economics, but similarly to Wicksteed, he believed that hedonism was incidental to the main structure of the theory (Robbins, 1932, pp.85-86). As he writes:

“Thus, from a very early stage, we find explanations that utility is not utility in the sense of psychological hedonism, but rather a neutral quality of being the object of desire, whether hedonistic or otherwise” (Robbins, 1970, p.27)

Robbins gives credit to Wicksteed for allegedly having expelled hedonism from economics. The following quotation is indicative:

“Before Wicksteed wrote, it was still possible for intelligent men to give countenance to the belief that the whole structure of Economics depends upon the assumption of a world of economic men, each actuated by egocentric or hedonistic motives...Wicksteed shattered this misconception once and for all.” (Robbins, in the Introduction to Wicksteed, p.xxi).

In the same spirit, his influential definition of economics in terms of ends and scarce means is given as a normative free definition. This definition is connected to the physics ideal that we also observed in Wicksteed (for further evidence of Robbins’ influence from the method of physics, see Howson, 2004). As Robbins notes:

“In pure Mechanics we examine the implication of the existence of certain given properties of bodies. In Pure Economics we examine the implication of the existence of scarce means with alternative uses (Robbins, 1932, p.83)

Furthermore, Robbins’ rejection of the idea of interpersonal comparisons is justified in terms of lack of scientific foundations (Robbins, 1938, p.640). As was mentioned before, this was the basic reason of

Wicksteed's rejection of the idea. In addition, Robbins points out that Wicksteed had also rejected the assumption of interpersonal comparisons of utility "as early as 1888" (Robbins, in the Introduction to Wicksteed, p.xvii). However, Robbins does not agree with Wicksteed's conception of economic man as describing actual behaviour.

"If this were commonly known, if it were generally realized that Economic Man is only an expository device –a first approximation used very cautiously at one stage in the development, of arguments which, in their full development, neither employ any such assumption nor demand it in any way for justification of their procedure- it is impossible that it would be such a universal bogey." (Robbins, 1932, p.90).

Furthermore, Robbins does not share Wicksteed's concerns about selfish behaviour since there is no discussion of Wicksteed's novel concept of non-tuism (see also Bruini, 2000, p.302). In the same framework, Robbins is also opposed to Wicksteed's conviction that economics should adopt findings from psychology. As he states: "I doubt whether anything which has yet been written by psychologists has the slightest value for the economist" (quoted in Howson, 2004, p.430). Thus, it can be argued that the current anti-psychologism of many contemporary economists can also be attributed to Robbins' methodological stance on this issue.

Robbins seems to have taken on board most of the points relating to Wicksteed's conception of the nature of economics that we discussed. In particular, Robbins accepted Wicksteed's idea of hedonism as incidental to

economic theory, the physics methodological ideal for economics, the non-scientific nature of interpersonal comparisons and in general the need for disassociation of economics from any philosophical or ethical framework.

V. Concluding Comments

Normative issues, and especially influences from utilitarianism and hedonism, were explicitly present in the economic works of many leading marginalists and especially of Jevons, Walras, and Edgeworth. Wicksteed, the main disciple of Jevons and a popularizer of marginalism, was not very content with such influences. Thus he was anxious to disassociate marginalist economic theory from utilitarianism and hedonism. This is mainly due to his influence from positivism that demanded the exclusion from economics of all normative/philosophical elements. Wicksteed's adherence to the positivist methodology for economics can also be seen from his economic methodology where the physical science scientific ideal combined with use of mathematics, were central. Furthermore, Wicksteed's conception of economic man was in the same positivist climate. He thought that economic man was not a fictional construction, but a representation of actual behaviour and that its psychological characteristics were based, or should be based on, sound scientific findings from psychological research.

Although Wicksteed's influence as an economist was not as great as that of major marginalists, his approach on the role of normative elements became dominant in the subsequent treatments of those issues. This was

mainly achieved through Robbins' work who was much influenced by the ideas of P. Wicksteed. Some important elements of Wicksteed's economic methodology such as his non-hypothetical economic man and his pro-psychologism, were not accepted by Robbins. The main reason for this was the mathematical attraction of a relatively simple model of individual economic behaviour based on selfish utility maximization. However, many of Robbins's influential ideas on economic methodology such as the rejection of hedonism and of interpersonal utility comparisons stem directly from Wicksteed's work. Thus, some, but not all, of Wicksteed's important views concerning the nature and method of economics became quite dominant among subsequent economists albeit indirectly through his influence on L. Robbins.

REFERENCES

- Bensusan-Butt, D. (1978) On Economic Man, Canberra: Australian National University Press.
- Blaug, M. (1980) The Methodology of Economics, Cambridge: Cambridge University Press.
- Bowley, M. (1967) Nassau Senior and Classical Economics, New York: Octagon Books.
- Bruni, L. (2000) "Ego facing alter: how economists have depicted human interactions", Annals of Public and Cooperative Economics, vol. 71, pp.285-313.
- Bruni, L. and Sugden, R. (2007) "The road not taken: how psychology was removed from economics, and how it might be brought back" The Economic Journal, vol.117, pp.146-173.
- Caldwell, B. (1982) Beyond Positivism: Economic Methodology in the Twentieth Century, London: Allen and Unwin.
- Coats, A.W. (1976) "Economics and Psychology: the death and resurrection of a research programme", in S. Latsis (ed) Method and Appraisal in Economics, Cambridge: Cambridge University Press, pp. 43-64.
- Comim, F. (2004) "The Common Sense of Political Economy of Philip Wicksteed", History of Political Economy, vol. 36, pp.475-495.
- Drakopoulos, S. (1991) Values and Economic Theory: The Case of Hedonism, Aldershot: Avebury

Drakopoulos, S. (1994) "Some implications of the new physics for economic methodology", South African Journal of Economics, Vol. 62, No. 4, pp.198-209.

Drakopoulos, S. (1997) "Origins and development of the trend towards value-free economics", Journal of the History of Economic Thought vol. 19, pp.286-300.

Edgeworth, F. Y. (1881). Mathematical Psychics, London: Kegan Paul.

Flatau, P. (2004) "Jevons's one great disciple: Wicksteed and the Jevonian revolution in the second generation", History of Economics Review, vol.40, pp.69-107.

Fisher, I. [1892] (1965) Mathematical Investigations in the Theory of Value and Price, New York: Augustus M. Kelley, 1965.

Fontaine, P. (2000) "Making use of the past: theorists and historians on the economics of altruism", European Journal of the History of Economic Thought, vol.7, pp.407-422.

Gordon, S. (1977) "Social science and value judgments, Canadian Journal of Economics, vol.10, pp.529-46

Howson, S. (2004) "The origins of Lionel Robbins's Essay on the Nature and significance of Economic Science", History of Political Economy, vol.36, pp.413-443.

Jevons, W. S. (1871) The Theory of Political Economy, London: Macmillan

Jevons, W. S. (1905) The Principles of Science, London: Macmillan.

Marshall, A. [1890] (1961) Principles of Economics (9th edition), London: Macmillan.

Mirowski, P. (1989) More Heat Than Light, Cambridge: Cambridge University Press.

O'Brien, D. P. (1990) "Lionel Robbins and the Austrian connection", History of Political Economy, vol.22, pp.155-84.

Paul, E. F. (1979) Moral Revolution and Economic Science, London: Greenwood Press.

Redman, D. (1993) Economics and the Philosophy of Science, Oxford: Oxford University Press.

Robbins, L. (1932) An Essay on the Nature and Significance of Economic Science, London: Macmillan.

Robbins, L. (1938) "Interpersonal comparisons of utility: A Comment", The Economic Journal, vol.48, pp.635-641.

Robbins, L. (1970) The Evolution of Modern Economic Theory, London: Macmillan.

Robbins, L. (1971) Autobiography of an Economist, London: Macmillan.

Samuelson, P. (1963) Foundations of Economic Analysis, Cambridge (Mass.): Harvard University Press.

Schabas, M. (1990) A World Ruled by Number. William Stanley Jevons and the Rise of Mathematical Economics, Princeton: Princeton University Press.

Steedman, I. (1989) "Rationality, economic man and altruism in P.H. Wicksteed's Common Sense of Political Economy" in I Steedman, From Exploitation to Altruism, Oxford: Blackwell.

Walras, L. (1874) Elements of Pure Economics, transl. by W. Jaffe, London: George Allen and Unwin (1965).

Wicksteed, P. (1888) The Alphabet of Economic Science, London: Macmillan.

Wicksteed, P. (1889) "On certain passages in Jevon's "Theory of political economy"", Quarterly Journal of Economy, 3, pp.193-314, reprinted in Wicksteed, 1933, pp.

Wicksteed, P. (1891) "The battle with materialism", The Inquirer, August 16, pp.702-4.

Wicksteed, P. (1894a) 'Dimensions of economic quantities", Palgrave Dictionary of Political Economy 1, pp.583-5, reprinted in Wicksteed, 1933.

Wicksteed, P. (1894b) 'Political economy and psychology", Palgrave Dictionary of Political Economy 1, pp.140-142, reprinted in Wicksteed, 1933

Wicksteed, P. (1895) "The advent of the people", in A. Reid (ed.), The New Party. Described by Some of its Members, London: Hodder Brothers, pp.36-40.

Wicksteed, P. (1914) "The scope and method of political economy in the light of the 'marginal' theory of value and of distribution", Economic Journal, 24, pp.1-23, reprinted in Wicksteed, 1933

Wicksteed. P. (1906) "Review of Pareto's *Manuale di Economia Politica*", The Economic Journal, vol.16, pp.553-7.

Wicksteed, P. [1910] (1933) The Common Sense of Political Economy and Selected Papers and Reviews on Economic Theory, vols. 1 and 2. Edited with an introduction by L. Robbins, London: Routledge.