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MAINSTREAM CONSUMER THEORY: DELAY, ACCEPTANCE  
AND HISTORY TEXTS

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## **I. Introduction**

One of the basic tenets of neoclassical economics is the theory of choice and in particular the theory of consumer. Consumer theory is considered to be the hard core of the neoclassical canon. One can find the first concrete elements of a theory of the consumer in the writings of the first Marginalists and especially in Jevons and Walras. The formation of consumer theory continued with Edgeworth, Marshall, Pareto and Fisher. Subsequently it was extended to a general theory of choice mainly with the works of Hicks and Samuelson with which the marginalist based consumer theory eventually became established. However, this development was not without opposition mainly by non-orthodox economists. For instance, the institutionalists (especially Veblen) criticized the mainstream and set the basis for alternative approaches. Keynes also did not seem to be content with the established theory.

The present work traces the various historical stages which led to the acceptance of the theory, and attempts to offer some possible explanations for its eventual establishment. The paper starts with a brief historical discussion of the establishment of the canon of the marginalist consumer theory. Subsequently, it discusses the main points of attack by alternative schools of thought. Furthermore the paper critically assesses the basic points of the debate from its initial appearance up to the recent developments. Finally, as part of the assessment, the paper will utilize period and phenomenological histories of thought in appraising the fashionable or non-fashionable way that this theory found a permanent place in the general texts of the history of economics. It is hoped that the discussion will contribute to the understanding of the dominance of mainstream consumer theory and the way that it took this paramount place in modern economics.

## **II. Delay and acceptance of consumer theory**

During the period in which utility analysis first appeared in the works of Jevons and Walras and to a lesser extent of Menger, the methodological environment in the Anglo-Saxon countries and in continental Europe was not particularly friendly to the marginalist methodology. For example, For instance, W. Bagehot referring to the abstract analysis of Jevons and Walras, states:

"At the very moment that our Political Economy is objected to in some quarters as too abstract, in others an attempt is made to substitute for it one which is more abstract still.... and any one who thinks what is ordinarily taught in England objectionable, because it is too little concrete in its method, and looks too unlike life and business, had better try the new doctrine, which he will find to be much worse on these points than the old". (Bagehot,1879,p.21)

Furthermore, J.E.Cairnes [1875, pp. 34-5, 84-5, 90,93, 96-8, 101-3, 108-9], one of the first authors to write extensively about economic methodology, was in favour of a mixture of induction and deduction in economic analysis and the empirical verification of its results. At the same period (1870-1880) in England one can observe the attempts of T.E. Cliffe Leslie, J. Ingram, H. Sidwick and others [see Karayiannis, 1995, pp. 121-5] to incorporate more sociological aspects in economics. This did not facilitate the establishment of the new theory which was considered to be too abstract and had to prove its fruitfulness in solving the various practical problems and /or explaining concrete economic phenomena. In the same spirit L. Price in his methodological work asked for more empirical content of economic analysis in order to be used as a policy instrument [Karayiannis, 1995, pp. 129-30].

Apart from the above general methodological hostility toward the new abstract theorizing in economics, another obstacle for its wide acceptance was the considerable degree of mathematical presentation by Jevons and Walras. Given that during that period most of economists were not mathematically trained or were suspicious towards mathematics, formal arguments were not easily accepted [Blaug, 1973, pp.12-3].

At the same period Veblen's institutionalist attack on the new doctrine cast doubts in U.S academic circles. Veblen strongly criticized the limitations of new theory. His main objections were concentrated on the following subjects:

(1) The new theory was static in character: "Like other taxonomic sciences, hedonistic economics does not, and cannot, deal with phenomena of growth except so far as growth is taken in the quantitative sense of a variation in magnitude, bulk, mass, number, frequency" [1908, p. 178]; and "have yet contributed anything at all appreciable to a theory of genesis, growth, sequence, change, process, or the like, in economic life" [1909, p. 152].

(2) It does not relate to technological progress: "the growth of the industrial arts- is of the first importance; but the marginal-utility theory does not bear on this matter, nor does this matter bear on marginal- utility theory" [1909, p. 153].

(3) This theory does not explain "institutional facts", but instead it takes them "for granted, denied, or explained away" [p. 154], or did not explain institutions [1909, p.164-5].

(4) This theory has a "teleological character" being deductive or a priori "instead of being drawn in terms of cause and effect" [1909, p. 158].

Thus the methodological environment of the last decades of the previous century did not facilitate the advancement and acceptance of the new utility theory.

Another reason for the delay of marginal utility analysis to be accepted in the main corpus of economics was that its early exponents were without "strong academic power" at the time that they developed the new theory. As Howey [1973, pp. 24-5] comments "the fact that they were newcomers deprived them for a long time of allies".<sup>1</sup> Stigler's argument [1973, pp. 311, 314; see also Blaug, 1973, p. 14] that the professionalization of economics made possible the acceptance of new theory and this explains its delay can not stand alone but must be connected to the dominant methodological framework.<sup>2</sup>

However, the climate seems to be changing in the beginning of 20th century in Britain. W. Ashley [1907, p. 232] surveying the development of economic theory mentioned that "the centre of interest among academic economists (and with them must be reckoned for this purpose some influential writers outside the Universities) is still to be found, both in this country and in America, in abstract argument. Among the diverse lines of thought which converged upon the old orthodoxy for its destruction in 1870-80, that represented by Jevons has for the time had the widest influence. It has been supplemented by the similar influences of Austrian economists.... there has appeared in America an independent theoretician of the first rank, Professor Clark, who has already carried most of the younger economists of the United States with him". Here Ashley offers an explanation for the establishment of the new theory similar to that advanced by Stigler more than 60 years latter.

The advancement and establishment of the utility theory is parallel with the methodological adoption of mathematics as a basic instrument of analysis. If we look at the methodological propositions of the majority of economists at the end of the 19th and the beginning of 20th century we will

see that more and more became aware of the scientific character that economics could accomplish through the mathematical approach. For example, Jevons, Edgeworth, Walras, Pareto, J.N.Keynes (and Marshall in regard to the use of geometry), Wicksell, Cassel, Fisher, etc. recognized and emphasized the advantages of the mathematization of economics. Thus the methodological current was changing in favour of abstract theorizing and the incorporation of the mathematical analysis in economics.

### **III. The introduction of the new theory in history texts**

We may argue that a theory becomes a part of the mainstream corpus of a science when it receives a relative place in the history texts of that science. Searching in the history books of economics from the end of 19th century to the first decades of the present century, we might be able to make a number of interesting observations concerning the dominance of the new consumer theory. Let us see first the texts published at the end of 19th century.

#### a) End of the 19th century

In Price's history, Jevons was included as a leading British economist [1891, pp. 158-176] but his theory of utility received only a short note [Ibid., pp. 107-8, 159]. In the same year, however in a book which was published by the Professor of Glasgow University William Smart, one can read in the preface " [this book] claims to be no more than an introduction. I do not consider that the last word on Value has been said by the Austrian school, but that seems to me no reason why the principles of the new theory should remain any longer beyond the reach of the ordinary English student" [1891, p. ix]. In the 2nd edition [1910] he writes "... my English-speaking colleagues have never given sufficient attention to that side of the one theory of Value ... which Jevons first laid stress on" [p.vii]. Thus he added an appendix II entitled

"Theory of Value: the Demand Side" to be studied by his students along with Book III of Marshall's Principles. However he did not use neither mathematical presentations and diagrams nor analysed Walras and other exponents of the new theory. He mainly concentrated on the Austrian explanation and presented Jevon's theory.

In 1893 J. Bonar published his historical analysis which concentrated on explaining the philosophical roots of the various economic theories. Bonar used very few references on the new theory sporadically mentioning Jevons, Menger, etc., in his discussion of the development of utilitarianism [see e.g. 1893, pp. 236, 247, 299].<sup>3</sup> Thus it seems that the historians of economics in the previous century with one exception, were not ready to accept the new consumer theory as having an important place on economics.

#### b) First quarter of the 20th century

Let us see turn now to the history books written on the first quarter of our century. One of the first book was that of Albert Whitaker, A. [1904].<sup>4</sup> He devotes the last chapter XI "The Ultimate Relation of Cost to Value" analysing the utility theory [1904, pp. 134-194]. In particular, he presents the views of Jevons, Menger, Bohm-Bawerk, Marshall, Clark with regard to utility theory of exchange and price and its relation to distribution and determination of product.

Apart from academic economists, the new theory is also present in the work of a plain historian John Bearrie Crozier. In his book [1906] and in Part III one can find a chapter entitled "The Academical Economists- Jevons, Bohm-Bawerk, Marshall- on Value" [pp. 385-415] where he analyses the utility based theory of value.

However the first [Howey, 1982, p. 66] general history book on economics devoting a fair amount of space to the new theory was that of Charles Gide and Charles Rist [1909]. In their Book V "Recent Doctrines" [pp. 515- 544] they concentrated mainly on the new consumer theory. More specifically, in chapter I "The Hedonists" and on section I "The Pseudo-Renaissance of the Classical School" they discussed Jevons' and Menger's consumer theories [pp. 517-521]. Then they distinguished the Hedonists in two branches: in section II "The Psychological School" [pp. 521-8]- where they included Jevons, Menger, Bohm-Bawerk, and section III "The Mathematical School" [pp. 528- 537] which contained the works of Jevons, Dupuit, Walras and Pareto. They also included a section IV "Criticism of the Hedonistic Doctrines" [pp. 537-544]. In other words, they devote about 30 pages in presenting the utility theory.

The second general history work in our century which discusses the utility school was Haney's [1911]<sup>5</sup>. In his part "VI. Attempts at Reconstruction" he included two chapters, the first entitled "1. Subjectivism and Marginalism" where he presents in one section the works of Gossen, Jevons, Walras, and the Mathematical School and in a second section the "Fully Developed Subjectivism: the Austrian School". In chapter 2 on "Neo-Classicism" he presents "Marshall and his System of Equilibrium". He uses about 73 pages [pp. 587-660] in discussing the protagonists of the new consumer theory and its critics. Haney, also in his part D "General Account of Recent Leading Schools" and in three chapters (XXXIII, XXXIV, XXXV) he examines the works of economists in Germany and Italy- England and France, and in the United States" respectively. In the first chapter he develops a brief account of the value theory of Austrians [pp. 665-6], and of the "Subjective School" [pp. 667] where he has a short note on Bohm-Bawerk, and on Wieser. In the chapter dealing with Italy [pp. 676- 683] he mentions Pareto's, Pantaleoni's works on

utility theory. In chapter XXXIV "England" he discusses the "Neo-Classicism of the Cambridge School" [pp. 693-698] and presents Marshall's contributions. In chapter on USA he mentions Clark [pp. 724-7], Patten [p. 727] and Fisher [728-9]. Haney's inclusion of the marginalists was not only important because of the influence to students of economics, but also because it had a "canonical impact" in selecting the living practitioners in the history of a discipline. Haney stresses that the relative space he devoted to each economist is determined by two tests: "first, what has been the writer's effect upon the stream of economic thought? Next, what important point in theory has he originated or developed? if his contribution has been both discovery in theory and a profound effect on his contemporaries, then he deserves considerable discussion" [1911, pp. vi-vii]. This is why Haney used as a subtitle of his book "A critical account of the origin and development of the economic theories of the leading thinkers in the leading nations".

Ingramm's first edition [1888] of his history work occupied an important place in academic and student libraries. He briefly mentions the attempts of Gossen, Jevons [e.g. p. 176] on the new utility theory and an extra two [pp. 227-8] on Jevons' theory of value. In the 1915 edition of this book, W. Scott incorporated a new chapter on "The Austrian School and Recent Developments" [ed. 1915, pp. 233-293] analysing Austrian ideas and also other similar developments in other countries such as England, USA, France and Italy.

### c) Second quarter of the 20th century

G. Myrdal in his lectures at the University of Stockholm in 1928 [edited in 1930 as a book] devoted many pages in presenting the methodological characteristics of the early marginalists Jevons, Menger and Walras [i.e. chapter I, mainly pp. 19-26, chapter II, pp. 39-41, 43-50,] and in analysing the

neoclassical theory of value in chapter 4 [pp. 93-121] without however using mathematical and diagrammatic presentation.

Cannan's textbook [1929] was based on his lectures from 1895 until 1926 [Corry, 1964, p. xvi] at the London School of Economics and Political Science. Cannan referred to the theory developed by Jevons, Marshall, Wicksteed (without however mentioning Walras, Wicksell and Clark) as the critics of the classical school. Cannan in his chapter VII "The Theory of Value in General" and section 8 "Utility" devoted some pages in analysing the theories of Jevons [pp. 200-3], Menger [pp. 203-4] and Marshall [pp. 204-6], in a non-mathematical way.

In the same year, Laird published an historical analysis from the philosophical point of view of the notion of value. He spent his section I of chapter I entitled "The Conception of Value in Economics" [pp. 1-32] in order to present the Austrian and marginal views on utility as a determinant of value. Also in his chapter X section I "The Idea of Moral Arithmetic" he analysed the views [pp. 325-349] of Bernouli, Bentham, Gossen, Jevons, the Austrians [quoted from Smart] and Edgeworth but without using mathematics and diagrams.

In the "The Encyclopedia of the Social Sciences" (1935) Knight's article on "Marginal Utility Economics" appeared. In this work, Knight analysed without the use of mathematics and diagrams, the utility theory advanced by Jevons, Menger, Walras. He also wrote [1935, ed. p. 149] that Smart popularized this theory in England, while this was done in America by J.B.Clark, Patten, Fetter and Fisher.

Thus it seems that until the end of 1940's the time was not mature to incorporate mathematical analysis in economic and mainly history of

economics textbooks. However in the period from 1940 until 1950, it is clear that the utility theory analysis was already a part of mainstream economics.<sup>6</sup>

#### **IV. The introduction of the new theory in the history of economic thought textbooks: from 1950 to the present**

In the history texts of the post World War II period the space devoted to the early and to the new generation of marginalists and on consumer theory (mainly along cardinal utility lines) was increased. For example, Hutchison's main treatise [1953] concerning the period from 1870 to 1929 discussed in full length the "leading economists" of the period the majority of which are marginalists. In particular, in part I [except from a section on the methodology of the classical school -J.S.Mill, Cairnes, etc.- and on some economic policy problems in England in the close of 1860's] from about 25 leading figures of the period, 17 were protagonists of the marginalist approach on economics. Also he spent about 220 pages in analysing the "leading economists ideas" out of which 170 concerned marginalism.

Doing some simple calculations<sup>7</sup> regarding the percentage of the space devoted by some modern general histories on the marginal utility theory from the old and new generation, we can make some observations which might indicate the way that this theory became established. First, in the period between 1950 to 1970 about 5% (mean estimate) is devoted by each history textbook on the achievements of the old generation marginalists on consumer theory, while only around 1% is devoted to the new generation (Hicks, Samuelson). At the same time about 4.5% is devoted to Keynes. Thus the space devoted to consumer utility theory seems to outnumber slightly the space devoted to Keynes. Furthermore, in the same period only the basic marginalist diagrams were reproduced (with the exception of Blaug). Second,

during the period of 1970 to 1980 the presence of Keynes was reduced to 3.5% in the histories of economic thought, whereas the mean measure of both old and new generation utility school was about 6%. In addition, the presence of the new consumer analysis (Hicks, Samuelson) was increased matching the increment of the mathematical presentation.

The above might be explained with the help of the "fashion thesis" of Viner [1957, p. 189] who argued that the content of the history of economic thought has a trend which resembles fashion which "may be with respect either to the objectives or the methods of their analysis" [1957, p. 191].<sup>8</sup> In addition one can draw from the "mathematization and modeling trend" in economics which has been increased in modern times [Bronfenbrenner, 1966, p. 538]. Another explanation given to the acceptance of utility theory is that it was incorporated in the pages of some "leading economists" [e.g. Samuelson's Economics].<sup>9</sup>

Thus the acceptance of a theory or of its parts may be assessed on the basis of its presence in modern textbooks. Taking a random sample of microeconomic textbooks and general economics textbooks for the period of 1960 to 1990 we found that the diagrammatic analysis of some topics of utility consumer theory has the following presence:<sup>10</sup>

(1) the analysis of indifference curves and consumer's equilibrium developed by Pareto, Fisher, etc. has 85%, (2) the income- price effect through substitutability advanced by Johnson, Slutsky and Hicks, has 85%, (3) the derivation of demand curve through substitutability advanced by Hicks has 65%; (4) the concept of demand elasticity developed by Marshall has 45%; (5) the declining demand curve deduced from declining utility curve has 40%; (6) the Marshallian consumer surplus has 40%; (7) the revealed preference analysis developed by Samuelson has 40%; (8) decreasing utility curve

analysed based on cardinal utility first developed by Jevons, Walras, Wicksteed and Wicksell is still present with 30%; (9) the new approach of preference ordering conducted with set theory only in 13% which shows that this approach has not yet been fully incorporated in general economics textbooks but only in advanced microeconomic texts.

One can also mention some additional reasons for the dominance of a particular theoretical schema. For instance, Stigler [1950, pp. 154-5] accounts for three criteria: (1) generality, (2) manageability, and (3) congruence with reality. The utility approach in its early development passed very well the first one but had some problems (additive, interpersonal comparisons) with the second and few success with the third. The development of the theory by Hicks and others in covering the disadvantages with the second criteria made possible its further acceptance among economists.<sup>11</sup> Shackle [1972, p. 103], on the other hand, stressed that the utility approach passed two criteria with success: determinacy with the general equilibrium and conceptual beauty.<sup>12</sup>

## **V. Conclusions**

In summary one can distinguish four main reasons for the delay of the establishment of marginalist consumer theory: a) the adverse methodological environment; b) the mathematical presentation of the new theory combined with the lack of mathematical training of the majority of established academic economics; c) the attack by institutionalists especially in the USA; and d) the non-professionalization of economics at that time and the limited academic power of the early exponents of utility theory. The first three reasons can be seen as internal and the last one as external in the sense of the sociology of knowledge.

Consequently, the following main reasons (the first two can be seen as internal and the rest as external) contributed to the gradual establishment of the new theory: 1) a favourable shift in economic methodology combined with the change in emphasis to questions of allocation; 2) the gradual acceptance of the formal presentation as a legitimate way of analyzing economic phenomena; 3) the increased influence of mathematical economists such as the influence of J. B. Clark in the USA; and 4) the general professionalization of academic economics. Thus, the delay and acceptance of the new consumer theory may be attributed to both internal and external reasons.

An examination of the presence of the new theory of value and consumer behavior in the HET texts, enabled us to make some observations concerning its establishment. It was seen that the historians of economics in the previous century were not prepared to accept the new theory as having an important place in economics. However, there was a rapid change in the first decades of this century. History of economic thought textbooks started to devote increasing space to the new theory but still the description of the concepts was done mainly in a non-formal way. The full discussion of the consumer theory started to take place in the post-war period. A detailed examination of the post-war texts confirmed the establishment and the prominent place of the theory in the main body of economics. For instance, it was seen that even at the height of the influence of Keynes's views, it occupied more space in HET textbooks. Finally the study, by examining general economic texts, drew a connection with frameworks which attempt to explain the process of the acceptance and establishment of a particular theory.

## Endnotes

1. This argument has already been mentioned by Veblen who wrote: "Since hedonism came to rule economic science, the science has been in the main a theory of distribution.... The exceptions of the rule are late and comparatively few, and they are not found among the economists who accept the hedonistic postulate as their point of departure" [1908, p. 172].
2. Stigler researching on the adoption of utility theory by the American economists comments that "Utility theory was not even a fashionable topic among economic theorists in the first two generations after it was introduced into economics" [1973, p. 317]. Looking at the American economic journals he found that "the interest in utility did not reach a high level, and there is no apparent tendency for it to increase over the thirty years" 1893-1923 [1973, p. 317]. Thus he concludes that "the effective acceptance of utility theory by economic theorists came almost a century after the marginal revolution" [1973, p. 318].
3. In the same year Wicksell's book though not a history text, included a whole chapter: "The New Theory of Value" and its section 1 "The Concept of value according to Jevons, Walras and the Austrian school" [1893, pp. 47-59] for such a target. Also he used the diagram of Jevons for the equilibrium between two goods through marginal utility curves [pp. 58-9].
4. This book was Whitaker's Ph.D. dissertation submitted to Columbia University in 1904.
5. Howey wrote [1982, p. 68] that his work was the second history after Gide & Rist "to include the development after 1870 and thus to mark the change from political economy to economics".

6. In Schumpeter's ten great economists book [1952], six of them were connected with utility theory (i.e. Walras, Menger, Marshall, Pareto, Bohm-Bawerk, Fisher). This reinforced the general acceptance of the theory.

7. Choosing randomly from the general history of economics textbooks we have the following simple estimations:

General history textbooks

Author	year	old utility%	modern utility%	Keynes%	maths
Roll	1938/1973	5%	-	3%	No
Lekachman	1959	5%	1%	5%	few diagrams
Whittaker	1960	4%	-	2%	few diagrams
Blaug	1962/1968	5%	1%	4%	many diagrams
Rima	1967/1972	5.5%	1.5%	6%	basic diagrams.
Ekelund & Hebert	1975	8%	-	4%	basic diag.
Landreth	1976	5%	1%	4%	basic diag.
Backhouse	1985	3.5%	1%	3%	No
Brems	1986	3.5%	1.5%	3%	Full

The term "old utility" signifies the theory developed by the first and second marginalist generations. The term "modern utility" refers to the developments of Hicks and Samuelson. We do not count the analysis of welfare economics based on consumer utility neither the general competitive equilibrium where such a subject is a major part.

8. Viner defined fashion in the broad view as "meaning: first, a widely prevalent procedure which endures, however, for only a limited period of time; second.... as a procedure which is questionable, even on the basis of what was known or could easily have been discovered in its own period of prevalence; and third, a procedure that is followed voluntarily, and often unconsciously, by its practitioners, rather than followed in submission to authority" [1957, p. 189].

9. Howey [1973, pp. 34-5] observed that in America the new theory received recognition from the wide circle of economists when R.Ely's popular textbook book "Outlines of Economics" [1908] incorporated marginalism in its pages.

10. From a random sample of 15 textbooks on microeconomics and on introduction to economics we have the following diagrammatic analysis in some topics of utility consumer theory.

Diagrammatic analysis of main topics of consumer utility theory

Topic/diagrammatic analysis developed by	Textbooks presented	
	No	% Total
1. decreasing utility curve Jevons (1871, p. 31) Walras (1874, pp. 118-9) Wicksteed (1888, p. 47) Wicksell (1911, p. 39)	4	30%
2. declining demand curve Walras (1874, pp. 94-5) Marshall (1890, ft.2)	6	40%
3. demand elasticity Marshall (1890, p. 86, ft.1)	7	45%

4. consumer surplus	6	40%
Marshall (1890, pp.388,ft.2,668, ft.1)		
5. indifference curve	13	85%
Edgeworth (1881, p. 114)		
Wicksteed (1888, p. 57)		
Pareto (1927, p. 119)		
6. consumer's equilibrium	13	85%
Fisher (1892, p. 68)		
Pareto (1927, pp. 122,132)		
7. income- price line	13	85%
Johnson (1913, pp. 102,104)		
Hicks (1934, p. 14, 1939, pp. 28-9)		
8. demand curve through substitution rate	10	65%
Hicks (1934, p. 19; 1939, pp. 30-1)		
9. revealed preference		
Samuelson (1947, pp. 107-8)	6	40%
10. preference ordering	2	13%
Arrow-Debrew-McKenzie		
total textbooks	15	

The books randomly chosen and searched in alphabetical order are: Allen,C.L. [1968], Apgar,W & Brown,H.J. [1987], Baumol,W. [1961], Bradley,M. [1980], Browning,E. & Browning,J. [1986], Deaton,A. & Muellbauer,J. [1980], Kogiku,K. [1971], Kohler,H. [1982], Koutsoyiannis,A. [1975], Malinvaud,E. [1972], Newman,P [1965], Ryan,W. [1967], Ruffin,R. & Gregory,P. [1983], Sloman,J. [1991], Walsh,V.C. [1970].

11. Robbins regarded the Hicks-Allen analysis as superior to that of the previous theorists in two aspects: "In the first place it rests its constructions solely upon the assumption of direct comparison of the valuation or substitutability of one commodity in terms of another and the possibility of arranging such combinations in terms of equivalence or higher or lower positions on a scale of order. It thus dispenses with all appeal to comparison of utilities, however conceived, and eliminates all necessity for the introduction of cardinal measurements".... its second aspect is that "by means of their distinction between the income and substitution effects of price changes, the authors were enabled to formulate with precision the conditions necessary for the assumption of demand as a diminishing function of price" [1970, p. 28].

12. Shackle wrote that subjective marginalism "answered a list of questions which seem to form a closed circle and to achieve a self-subsistent completeness. It invoked very few ultimate principles. It achieved a unified simplicity which powerfully commands assent. On its own terms it explained everything. All this had its price. Value theory cannot accommodate time. But time is in any case alien to reason. Value theory was the construct of reason, with only a minimal appeal to experience" [1972, p. 105].

## REFERENCES

- Allen,C.L. [1968] **The Framework of Price Theory**, Belmont, California: Wadsworth Publishing Company, Inc.
- Apgar,W & Brown,H.J. [1987] **Microeconomics and Public Policy**, Glenview, Illinois: Scott, Foresman and Company.
- Asley, W. [1907] "A Survey of the Past History and Present Position of Political Economy", in R. Smyth **Essays in Economic Method**, London: Gerald Duckworth & Co, Ltd, 1962.
- Bachkouse,R. [1985] **A History of Modern Economic Analysis**, Oxford: Basil Blackwell.
- Bagehot, W. [1879] **Economic Studies**, London: Longmans, Green, and Co, 1895.
- Baumol,W. [1961] **Economic Theory and Operation Analysis**, 3rd ed. 1972, London: Prentice/Hall.
- Blaug,M. [1962] **Economic Theory in Retrospect**, 2nd ed. 1968, London:Heimaan, 1970.
- Blaug,M. [1973] "Was There a Marginal Revolution?" in R.D. Collison Black, A.W. Coats, C. Goodwin (eds) **The Marginal Revolution in Economics**, Durham, North Carolina: Duke University Press,1973.
- Bonar,J. [1893] **Philosophy and Political Economy in some of their Historical Relations**, New York: A.M.Kelley.
- Bradley,M. [1980] **Microeconomics**, Glenview, Illinois: Scott, Foresman and Company.
- Brems.H. [1986] Pioneering Economic Theory, 1630-1980: **A Mathematical Restatement** Baltimore and London: The Johns Hopkins University Press.
- Bronfenbrenner,M. [1966] "Trends, Cycles, and Fads in Economic Writing", **American Economic Review**, vol. LVI, No 2, May, pp. 538-552.

- Browning,E. & Browning,J. [1986] **Microeconomic Theory and Applications**, Glenview, Illinois: Scott, Foresman and Company.
- Cairnes,J.E. [1875] **The Character and Logical Method of Political Economy**, London: Macmillan, 1965.
- Cannan,E. [1929] **A Review of Economic Theory**, 1st ed. 1929, 2nd. 1964, London: Frand Cass and Co Ltd.
- Corry,B. [1964] "Introduction" to E. Cannan **A Review of Economic Theory**, London: Frand Cass and Co Ltd.
- Crozier,J.B. [1906] **The Wheel of Wealth being a reconstruction of the Science and Art of Political Economy on the lines of Modern Evolution**, London: Longmans, Green, and Co.
- Deaton,A. & Muellbauer,J. [1980] **Economics and consumer behavior**, Cambridge: Cambridge University Press.
- Edgeworth,F.Y. [1881] **Mathematical Psychics**, New York: A.M.Kelley, 1967.
- Ekelund,R. & Hebert,R. [1975] **A History of Economic Theory and Method**, New York: McGraw-Hill Book Company.
- Fisher,I. [1892] **Mathematical Investigations in the Theory of Value and Prices**, New Have: Yale University Press, 1965.
- Gide,C. & Rist,C. [1909] **A History of Economic Doctrines from the time of the Physiocrats to the Present Day** [1st French 1909] Engl. trans from the second edition 1913 by R. Richards, london: George Harrap & Company, 1917.
- Haney,L. **History of Economic Thought: A Critical Account of the Origin and Development of the Economic Theories of the Leading Thinkers in the Leading Nations**, 1st ed. 1911, 3rd and enlarged 1936, New York: The Macmillan Company.
- Hicks,J & R. Allen [1934] "A Reconsideration of the Theory of Value", *Economica* February, pp. 52-76, May 196-219, repr. in J. Hicks **Wealth and Welfare: Collected Essays on Economic Theory**, Volume I, Oxford: Basil Blackwell, 1981.
- Hicks,J. [1939] **Value and Capital**, Oxford: At the Clarendon Press.

- Howey,R. [1973] "The Origins of Marginalism" in R.D. Collison Black, A.W. Coats, C. Goodwin (eds) **The Marginal Revolution in Economics**, Durham, North Carolina: Duke University Press, 1973.
- Howey,R. [1982] **A Bibliography of General Histories of Economics 1692-1975**, The Regents Press of Kansas, Lawrence.
- Houmanidis,L. [1954] **The Subjective Theory of Value from Classisists until Today** Ph.D. Dissertation, Athens (in Greek).
- Hutchison,T.W. [1953] **A Review of Economic Doctrines 1870-1929**, Westport, Connecticut: Greenwood Press, 1975.
- Jevons,W.S. [1871] **The Theory of Political Economy** 4th ed. London: Macmillan and Co, Ltd, 1911.
- Johnson,W.E. [1913] "The Pure Theory of Utility Curves", **The Economic Journal**, vol. XXIII, No 92, December, pp. 483-513 reprinted in W. Baumol & S. Goldfeld (eds) **Presursors in Mathematical Economics: An Anthology**, London: The London School of Economics and Political Science, 1968, pp. 97124.
- Ingram,J.K. [1888] **A History of Political Economy**, new and enlarged edition 1915 with a supplementary chapter by W.Scott and an introduction by R. Elly, New York: A.M.Kelley, 1967.
- Karayiannis,A.D. [1995] **History of Economic Methodology**, ed. Interbooks, Athens, (in Greek).
- Knight,F. "Marginal Utility Economics", The Encyclopedia of the Social Sciences, reprinted in F. Knight **The Etchics of Competition and other Essays**, London: George Allen & Unwin, Ltd. 1935.
- Kogiku,K. [1971] **Microeconomic Models**, New York: Harper & Row, Publishers.
- Kohler,H. [1982] **Intermediate Microeconomics: Theory and Applications**, Glenview, Illinois: Scott, Foresman and Company.
- Koutsoyiannis,A. [1975] **Modern Microeconomics**, 2nd ed. 1979, London: Macmillan.
- Laird,J. [1929] **The Idea of Value**, New York: A.M.Kelley, 1969.
- Landreth,H. [1976] **History of Economic Theory: Scope, Method, and**

- Content**, Boston: Houghton Mifflin Company.
- Lekachman,R. [1959] A History of Economic Ideas, New York: McGraw-Hill Book Company.
- Malinvaud,E. [1972] **Lectures on Microeconomic Theory**, Amsterdam: North-Holland Publishing Company.
- Marshall,A. [1890] **Principles of Economics**, 8th ed. London: Macmillan & Co Ltd. 1959.
- Myrdal,G. [1930] **The Political Element in the Development of Economic Theory** Engl. ed. 1953, Greek transl. K. Sofoulis, Athens; Papazisis 1971.
- Newman,P [1965] **The Theory of Exchange**, New Jersey: PrenticeHall, Inc.
- Pareto,V. [1927] Manual of Political Economy, Engl. trns. A. Schwier by 1927 French edition, New York: A.M.Kelley, 1971.
- Price,L. [1891] **A Short History of Political Economy in England from Adam Smith to Arnold Toynbee**, London: Methuen and Co.
- Rima,I.H. [1967] **Development of Economic Analysis** revised edition 1972, Homewood, Illinois: Richard D. Irwin, Inc. 1977.
- Robbins,L. [1970] **The Evolution of Modern Economic Theory**, London: The Macmillan Press.
- Roll,E. [1938] **A History of Economic Thought**, 1st 1938, 4th revised and enlarged in 1973, Faber and Faber, London.
- Ryan,W. [1967] **Price Theory**, New York: St.Martin's Press, 1967.
- Ruffin,R. & Gregory,P. [1983] Principles of Microeconomics, 2nd ed. 1986, Glenview, Illinois: Scott, Foresman and Company.
- Samuelson,P. [1947] **Foundations of Economic Analysis**, Cambridge: Harvard University Press, 1948.
- Schumpeter,J. [1952] **Ten Great Economists from Marx to Keynes**, London: George Allen & Unwin, Ltd.
- Shackle,G.L.S. [1972] **Epistemics & Economics: A critique of economic doctrines**, Cambridge: At the University Press.

- Sloman, J. [1991] **Economics**, 2nd ed. 1995, London: Prentice Hall.
- Smart, W. [1891] **An Introduction of the Theory of Value: on the lines of Menger, Wieser, and Bohm-Bawerk**, 1st ed. 1981, 2nd ed. 1910, repr. New York: A.M.Kelley, 1966.
- Stigler, G. [1950] "The Development of Utility Theory", **The Journal of Political Economy**, LVIII (August-October) reprinted in G. Stigler *Essays in the History of Economics*, The University of Chicago Press, Chicago and London, pp. 66-155.
- Stigler, G. [1973] "The Adoption of the Marginal Utility Theory" in R.D. Collison Black, A.W. Coats, C. Goodwin (eds) **The Marginal Revolution in Economics**, Durham, North Carolina: Duke University Press, 1973.
- Veblen, T. [1908] "Professor Clark's Economics", **Quarterly Journal of Economics**, vol. 22, pp. 147-95; reprinted in E.K. Hunt & G. Schwartz (eds) **A Critique of Economic Theory: Selected Readings**, Harmondsworth, Middlesex, England: Penguin Books, 1972, pp. 172-185.
- Veblen, T. [1909] "The Limitations of Marginal Utility" originally published in **The Journal of Political Economy**, XVII, November, and reprinted in **What Veblen Taught**; Selected Writings of Thorstein Veblen, edited with an introduction by Wesley C. Mitchell, 1936, repr. New York: A.M.Kelley, 1964.
- Viner, J. [1957] "Fashion in Economic Thought", in Jacob Viner **Essays on the Intellectual History of Economics**, edited by Douglas A. Irwin, ed. Princeton University Press, Princeton, New Jersey, 1991.
- Walras, L. [1874] **Elements of Pure Economics**, Engl. trans. W. Jaffe, 1st engl ed. 1954, repr. Philadelphia: Orion Editions, 1984.
- Walsh, V.C. [1970] **Introduction to Contemporary Microeconomics** New York: McGraw-Hill Book Company.
- Wicksell, K. [1911] **Lectures on Political Economy**, vol. I, Engl trns. E. Classen, edited with introduction by L. Robbins, by 2nd ed. of 1911, 1st might be in 1901, London: George Routledge and Sons, Ltd, 1934.
- Wicksell, K. [1893] **Value Capital and rent** Engl. trns. S. Frowein, London: George Allen & Unwin, Ltd. 1954.
- Wicksteed, P. [1888] **The Alphabet of Economic Science**, New York: A.M.Kelley, 1970.

Whittaker,A. [1904] **History and Criticism of the Labor Theory of Value in English Political Economy**, 1st ed. 1904, ed. A.M.Kelley, New York, 1968.

Whittaker,E. [1960] **Schools and Streams of Economic Thought** Chicago: Rand McNally & Company.