



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Εθνικόν και Καποδιστριακόν
Πανεπιστήμιον Αθηνών

Ιστορία Οικονομικών Θεωριών

Ενότητα **8**: Η εδραίωση της νεοκλασικής
οικονομικής θεωρίας

Νίκος Θεοχαράκης

Σχολή Οικονομικών και Πολιτικών Επιστημών

Τμήμα Οικονομικών Επιστημών

Σκοπός μαθήματος

- Να καταδείξει την εδραίωση της νεοκλασικής οικονομικής θεωρίας στην Ευρώπη και στην Αμερική στις πρώτες δεκαετίες μετά την οριακή επανάσταση
- Να δείξει τις ειδικές μορφές με τις οποίες αναπτύχθηκε η νεοκλασική θεωρία σε διαφορετικές χώρες ιδιαίτερα δε
- στο Ηνωμένο Βασίλειο, στις ΗΠΑ, στην Ιταλία, στη Σουηδία και στην Αυστρία



Περιεχόμενα ενότητας

- **Ηνωμένο Βασίλειο**
 - Marshall * Edgeworth * Wicksteed * Pigou
- **ΗΠΑ**
 - Clark * Fisher
- **Ιταλία**
 - Pantaleoni * Barone * Pareto
- **Σουηδία**
 - Wicksell * Cassel
- **Αυστρία**
 - Wieser * Böhm-Bawerk



Belle époque



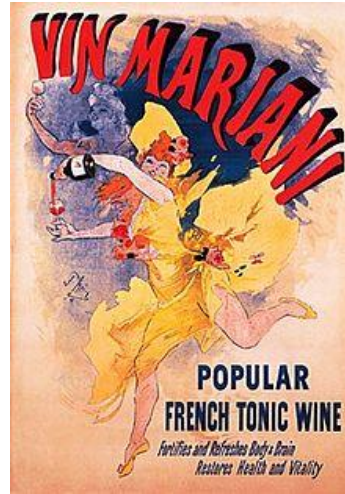
Belle époque 1871-1914



Queen Victoria
1837–1901



Edward VII
1901-1910



Expo Universelle 1901



Wilhelm I
1861-1888



Wilhelm II
1888-1918



Gilded Age



Ηνωμένο Βασίλειο

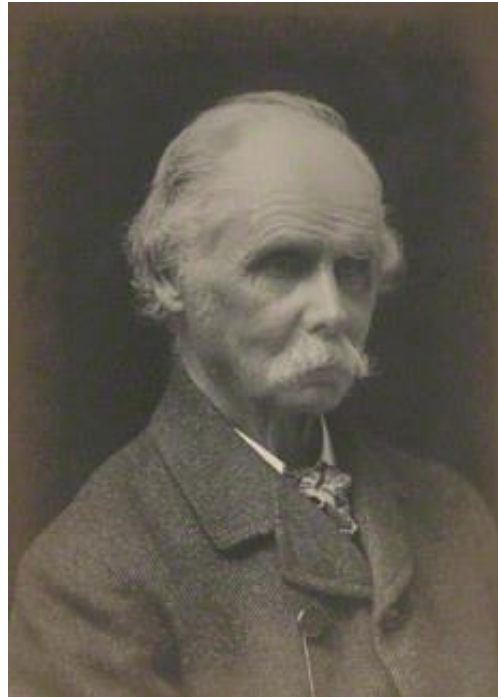


Alfred Marshall (1842-1924)

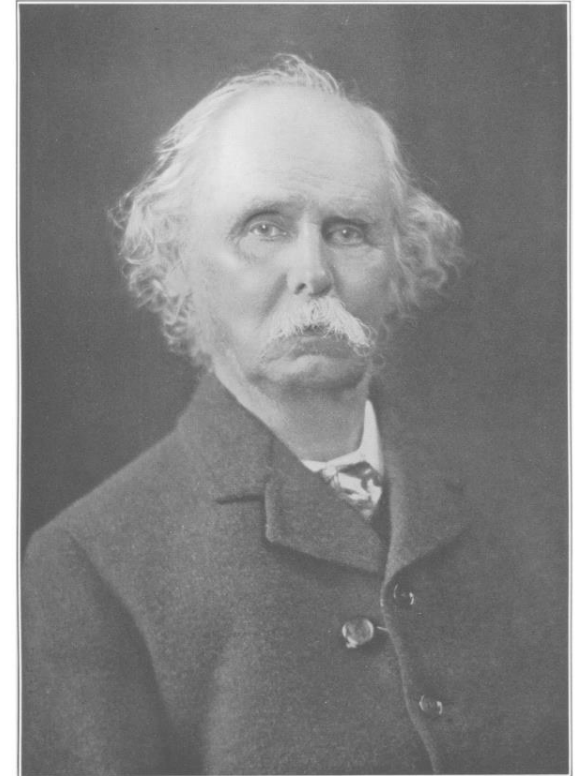


Alfred Marshall, First professor of political economy and first principal of University College Bristol

Photo: University of Bristol Library, Special Collections



by Walter Stoneman
platinum print, 1917, NPG



ALFRED MARSHALL, 1921.

Frontispiece.



Alfred Marshall (1842-1924)

1865 Cambridge Mathematical Tripos
Fellow St John's College
1868 College Lecturer in Moral Sciences
1879 *Economics of Industry* with Mary Paley
1879-1881 Professor of Political Economy &
Principal at University College Bristol
1884 Cambridge Professor of Political Economy
1890 *Principles of Economics*
1919 *Industry and Trade*
1923 *Money, Credit and Commerce*

Royal Economic Society
Συμμετοχή γυναικών στο Πανεπιστήμιο
Economics Tripos

Mary Paley
Marshall
(1850-1944)



St John's College, Cambridge



Alfred Marshall (1842-1924)

THE
ECONOMICS OF INDUSTRY

BY
ALFRED MARSHALL,
PRINCIPAL OF UNIVERSITY COLLEGE, BRISTOL;
LATE FELLOW OF ST JOHN'S COLLEGE, CAMBRIDGE;
AND
MARY PALEY MARSHALL,
LATE LECTURER AT NEWNHAM HALL, CAMBRIDGE.

London:
MACMILLAN AND CO.
1879

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1879

PRINCIPLES
OF
ECONOMICS

BY
ALFRED MARSHALL,
PROFESSOR OF POLITICAL ECONOMY IN THE UNIVERSITY OF CAMBRIDGE;
FELLOW OF ST JOHN'S COLLEGE, CAMBRIDGE;
SOMETIMES FELLOW OF HALLIOL COLLEGE, OXFORD.

VOL. I.

Natura non facit saltum.

London:
MACMILLAN AND CO.
AND NEW YORK.
1890

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1890
1^η έκδοση

PRINCIPLES
OF
ECONOMICS

An introductory volume

BY
ALFRED MARSHALL

EIGHTH EDITION

Natura non facit saltum
Systeme der Volkswirtschaft

MACMILLAN AND CO., LIMITED
ST MARTIN'S STREET, LONDON

1920
8^η έκδοση

Alfred Marshall (1842-1924)

INDUSTRY AND TRADE

A study of industrial technique and business organization ; and of their influences on the conditions of various classes and nations

BY

ALFRED MARSHALL

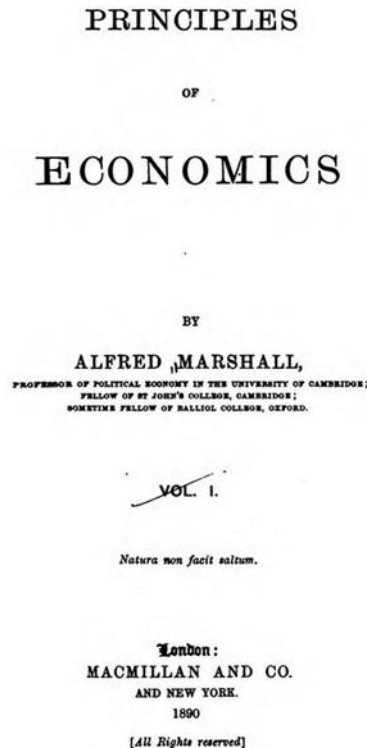
The many in the one, the one in the many

MACMILLAN AND CO. LIMITED
ST MARTIN'S STREET, LONDON
1919



1923

Alfred Marshall (1842-1924)



Ισορροπία μεταξύ προσφοράς και ζήτησης

Οικονομική πραγματικότητα: Θεωρία χρήσιμη σε όλους

Αποφυγή ρήξης με τους κλασικούς



Alfred Marshall (1842-1924)

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V, xv, 5.

Ricardo's theory of cost of production in relation to value occupies so important a place in the history of economics that any misunderstanding as to its real character must necessarily be very mischievous; and unfortunately it is so expressed as almost to invite misunderstanding. In consequence there is a widely spread belief that it has needed to be reconstructed by the present generation of economists. Cause is shown in Appendix I for not accepting this opinion; and for holding on the contrary that the foundations of the theory as they were left by Ricardo remain intact; that much has been added to them, and that very much has been built upon them, but that little has been taken from them. It is there argued that he knew that demand played an essential part in governing value, but that he regarded its action as less obscure than that of cost of production, and therefore passed it lightly over in the notes which he made for the use of his friends, and himself; for he never essayed to write a formal treatise: also that he regarded cost of

Ricardo's
theory of
value.

Σε αντίθεση με τον Jevons, ο Marshall δε θεωρεί ότι ο Ricardo έχει λάθος



Alfred Marshall (1842-1924)

Ρόλος μαθηματικών

In contrast, we have the famous letter to Arthur Bowley of 27 February 1906:

But I know I had a growing feeling in the later years of my work at the subject that a good mathematical theorem dealing with economic hypothesis was very unlikely to be good economics: and I went more and more on the rules—(1) use mathematics as a short hand language, rather than as an engine of inquiry. (2) Keep to them till you have done. (3) Translate into English. (4) Then illustrate by examples that are important in real life. (5) Burn the mathematics. (6) If you can't succeed in four, burn three. This last I did often. . . . I think you should do all you can to prevent people from using mathematics in cases in which the English language is as short as the mathematical. (Groenewegen 1995, 413)

Αν και σπουδαίος μαθηματικός ο Marshall, δε θεωρεί ότι τα μαθηματικά έχουν κυρίαρχο ρόλο στην οικονομική θεωρία



Alfred Marshall (1842-1924)

MATHEMATICAL APPENDIX.

NOTE I. (p. 93). The law of diminution of marginal utility may be expressed thus:—If u be the total utility of an amount x of a commodity to a given person at a given time, then marginal utility is measured by $\frac{du}{dx} \cdot \delta x$; while $\frac{du}{dx}$ measures the *marginal degree* of utility. Jevons and some other writers use “Final utility” to indicate what Jevons elsewhere calls Final degree of utility. There is room for doubt as to which mode of expression is the more convenient; no question of principle is involved in the decision. Subject to the qualifications mentioned in the text $\frac{d^2u}{dx^2}$ is always negative.

NOTE II. (p. 96). If m is the amount of money or general purchasing power at a person's disposal at any time, and μ represents its total utility to him, then $\frac{d\mu}{dm}$ represents the marginal degree of utility of money to him.

If p is the price which he is just willing to pay for an amount x of the commodity which gives him a total pleasure u , then

$$\frac{d\mu}{dm} \Delta p = \Delta u; \text{ and } \frac{d\mu}{dm} \frac{dp}{dx} = \frac{du}{dx}.$$

If p' is the price which he is just willing to pay for an amount x' of another commodity, which affords him a total pleasure u' , then

$$\frac{d\mu}{dm} \cdot \frac{dp'}{dx'} = \frac{du'}{dx'};$$

and therefore

$$\frac{dp}{dx} \cdot \frac{dp'}{dx'} = \frac{du}{dx} \cdot \frac{du'}{dx'}.$$

Μαθηματικά στο παράρτημα των Principles



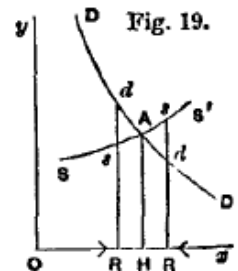
Alfred Marshall (1842-1924)

Διαγράμματα στις υποσημειώσεις

outrun the difficulties of some very real and practical problems of value. For indeed the demand and supply schedules do not

¹ Compare V. I. 1. To represent the equilibrium of demand and supply geometrically we may draw the demand and supply curves together as in Fig. 19. If then OR represents the rate at which production is being actually carried on, and Rd the demand price is greater than Rs the supply price, the production is exceptionally profitable, and will be increased. R , the *amount-index*, as we may call it, will move to the right. On the other hand, if Rd is less than Rs , R will move to the left. If Rd is equal to Rs , that is, if R is vertically under a point of intersection of the curves, demand and supply are in equilibrium.

This may be taken as the typical diagram for stable equilibrium for a commodity that obeys the law of diminishing return. But if we had made SS' a horizontal straight line, we should have represented the case of "constant return," in which the supply price is the same for all amounts of the commodity. And if we had made SS' inclined negatively, but less steeply than DD' (the necessity for this condition will appear more fully later on), we should have got a case of stable equilibrium for a commodity which obeys the law of increasing return. In either case the above reasoning remains unchanged without the alteration of a word or a letter; but the last case introduces difficulties which we have arranged to postpone.



Ο Μαρσαλιανός σταυρός:
Ισορροπία της προσφοράς
και ζήτησης

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V, III, 6.

Alfred Marshall (1842-1924)

Καμπύλη ζήτησης προκύπτει από τη σταθερή οριακή χρησιμότητα (marginal utility) του χρήματος

$$MU_x/P_x = MU_m$$

$$P_x = MU_x/MU_m$$

$$\frac{\frac{\partial U}{\partial x}}{P_x} = \frac{\partial U}{\partial m} \Rightarrow P_x = \frac{\frac{\partial U}{\partial x}}{\frac{\partial U}{\partial m}}$$



Alfred Marshall (1842-1924)

Εφαρμογή της ισο-οριακής αρχής

CHAPTER II.

TEMPORARY EQUILIBRIUM OF DEMAND AND SUPPLY.

§ 1. THE simplest case of balance or equilibrium between desire and effort is found when a person satisfies one of his wants by his own direct work. When a boy picks blackberries for his own eating, the action of picking is probably itself pleasurable for a while; and for some time longer the pleasure of eating is more than enough to repay the trouble of picking. But after he has eaten a good deal, the desire for more diminishes; while the task of picking begins to cause weariness, which may indeed be a feeling of monotony rather than of fatigue. Equilibrium is reached when at last his eagerness to play and his disinclination for the work of picking counterbalance the desire for eating. The satisfaction which he can get from picking fruit has arrived at its *maximum*: for up to that time every fresh picking has added more to his pleasure than it has taken away; and after that time any further picking would take away from his pleasure more than it would add¹.

V, II, 1.
A simple instance of equilibrium between desire and effort.

Το παιδάκι στο δάσος σταματά να μαζεύει βατόμουρα όταν η οριακή κόπωση από το μάζεμα είναι ίση με την ευχαρίστηση του οριακού βατόμουρου



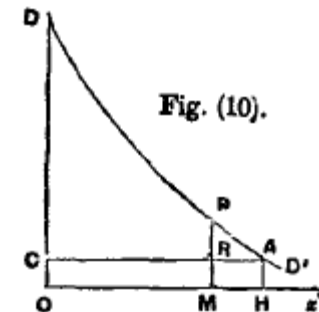
Alfred Marshall (1842-1924)

Από μια καθαρά υποκειμενική θεωρία αξίας σε μια θεωρία ισορροπίας προσφοράς και ζήτησης σε κανονικές τιμές.

Η χρησιμότητα έχει σημασία κυρίως για το **πλεόνασμα του καταναλωτή** (consumer surplus)

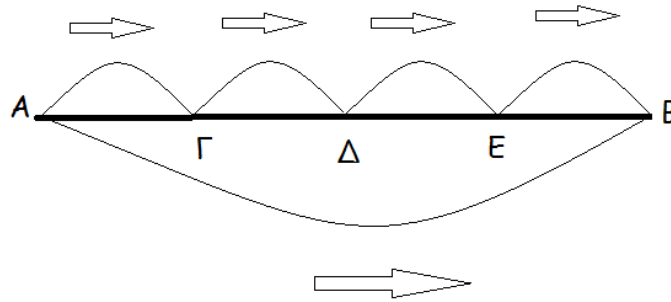
Ελαστικότητα ζήτησης

And as with the demand of one person so with that of a whole market. And we may say generally:—The *elasticity* (or *responsiveness*) of demand in a market is great or small according as the amount demanded increases much or little for a given fall in price, and diminishes much or little for a given rise in price¹.



The excess of the price which he would be willing to pay rather than go without the thing, over that which he actually does pay, is the economic measure of this surplus satisfaction. It may be called *consumer's surplus*.

Alfred Marshall (1842-1924)



Other things being equal
Ceteris paribus
Μερική ισορροπία

Alfred Marshall (1842-1924)

NOTE XIV.

It would be possible to extend the scope of such systems of equations as we have been considering, and to increase their detail, until they embraced within themselves the whole of the demand side of the problem of distribution. But while a mathematical illustration of the mode of action of a definite set of causes may be complete in itself, and strictly accurate within its clearly defined limits, it is otherwise with any attempt to grasp the whole of a complex problem of real life, or even any considerable part of it, in a series of equations. For many important considerations, especially those connected with the manifold influences of the element of time, do not lend themselves easily to mathematical expression: they must either be omitted altogether, or clipped and pruned till they resemble the conventional birds and animals of decorative art. And hence arises a tendency towards assigning wrong proportions to economic forces; those elements being most emphasized which lend themselves most easily to analytical methods. No doubt this danger is inherent in every application not only of mathematical analysis, but of analysis of any kind, to the problems of real life. It is a

danger which more than any other the economist must have in mind at every turn. But to avoid it altogether, would be to abandon the chief means of scientific progress: and in discussions written specially for mathematical readers it is no doubt right to be very bold in the search for wide generalizations.



Alfred Marshall (1842-1924)

There is no sharp division between long and short periods.

§ 8. Of course there is no hard and sharp line of division between “long” and “short” periods. Nature has drawn no such lines in the economic conditions of actual life; and in dealing with practical problems they are not wanted. Just as we contrast civilized with uncivilized races, and establish many general propositions about either group, though no hard and fast division can be drawn between the two; so we contrast long and short periods without attempting any rigid demarcation between them. If it is necessary for the purposes of any particular argument to divide one case sharply from the other, it can be done by a special interpretation clause: but the occasions on which this is necessary are neither frequent nor important.

Classification of problems of value by the periods to which they refer.

Four classes stand out. In each, price is governed by the relations between demand and supply. As regards *market* prices, Supply is taken to mean the stock of the commodity in question which is on hand, or at all events “in

Η χρονική περίοδος στην οικονομική ανάλυση. Διακρίνει 4 είδη:



Alfred Marshall (1842-1924)

LONG AND SHORT PERIODS

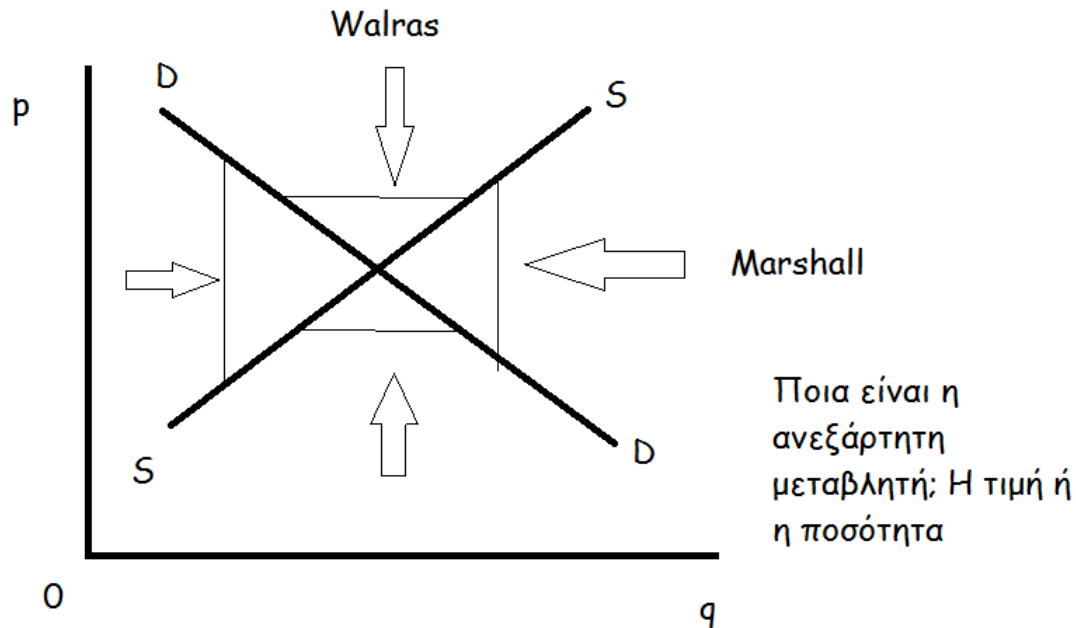
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sight.” As regards *normal* prices, when the term Normal is taken to relate to *short* periods of a few months or a year, Supply means broadly what can be produced for the price in question with the existing stock of plant, personal and impersonal, in the given time. As regards *normal* prices, when the term Normal is to refer to *long* periods of several years, Supply means what can be produced by plant, which itself can be remuneratively produced and applied within the given time; while lastly, there are very gradual or *Secular* movements of normal price, caused by the gradual growth of knowledge, of population and of capital, and the changing conditions of demand and supply from one generation to another¹. v, v, 8.

Αγοραία (market), βραχυπρόθεσμη (short), μακροπρόθεσμη (long), πολύ μακροπρόθεσμη (secular)



Alfred Marshall (1842-1924)



Στον Walras η επαναφορά στο σημείο ισορροπίας γίνεται μέσω της μεταβολής των τιμών, στον Marshall μέσω της μεταβολής των ποσοτήτων οι οποίες είναι και η ανεξάρτητη μεταβλητή, εξ ου και οι καμπύλες ζήτησης και προσφοράς έχουν τις ποσότητες στον οριζόντιο άξονα και τις τιμές στον κάθετο.

Alfred Marshall (1842-1924)

We might as reasonably dispute whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production. It is true that when one blade is held still, and the cutting is effected by moving the other, we may say with careless brevity that the cutting is done by the second; but the statement is not strictly accurate, and is to be excused only so long as it claims to be merely a popular and not a strictly scientific account of what happens.



Alfred Marshall (1842-1924)

Αύξουσες αποδόσεις κλίμακας
Εσωτερικές
Εξωτερικές

Αντιπροσωπευτική επιχείρηση
Βιολογικές μεταφορές



Alfred Marshall (1842-1924)

A summary of the later chapters of this Book.

Looking more closely at the economies arising from an increase in the scale of production of any kind of goods, we found that they fell into two classes—those dependent on the general development of the industry, and those dependent on the resources of the individual houses of business engaged in it and the efficiency of their management; that is, into *external* and *internal* economies.



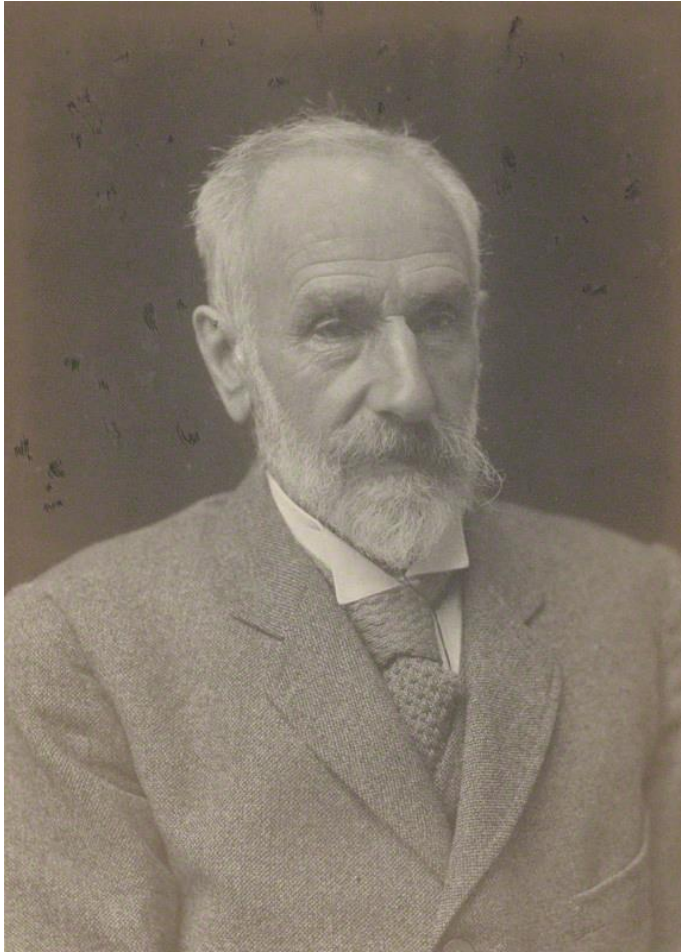
But here we may read a lesson from the young trees of the forest as they struggle upwards through the benumbing shade of their older rivals. Many succumb on the way, and a few only survive; those few become stronger with every year,

they get a larger share of light and air with every increase of their height, and at last in their turn they tower above their neighbours, and seem as though they would grow on for ever, and for ever become stronger as they grow. But they do not. One tree will last longer in full vigour and attain a greater size than another; but sooner or later age tells on them all. Though the taller ones have a better access to light and air than their rivals, they gradually lose vitality; and one after another they give place to others, which, though of less material strength, have on their side the vigour of youth.

And as with the growth of trees, so was it with the growth of businesses as a general rule before the great recent development of vast joint-stock companies, which often stagnate, but do not readily die. Now that rule is far from universal, but it still holds in many industries and trades. Nature still presses on the private business by limiting the length of the life of its original founders, and by limiting even more narrowly that part of their lives in which their faculties retain full vigour. And so, after a while, the guidance of the business falls into the hands of people with less energy and less creative genius, if not with less active interest in its prosperity. If it is turned into a joint-stock company, it may retain the advantages of division of labour, of specialized skill and machinery: it may even increase them by a further increase of its capital; and under favourable conditions it may secure a permanent and prominent place in the work of production. But it is likely to have lost so much of its elasticity and progressive force, that the advantages are no longer exclusively on its side in its competition with younger and smaller rivals.



Francis Ysidro Edgeworth (1845-1926)



by Walter Stoneman, bromide print,
1917, NPG



Francis Ysidro Edgeworth



Francis Ysidro Edgeworth (1845-1926)

MATHEMATICAL PSYCHICS

AN ESSAY ON THE
APPLICATION OF MATHEMATICS TO
THE MORAL SCIENCES

Francis Ysidro
BY
F. Y. EDGEWORTH, M.A.
BARRISTER-AT-LAW

LONDON
C. KEGAN PAUL & CO., 1 PATERNOSTER SQUARE
1881

PAPERS RELATING TO POLITICAL ECONOMY

BY
F. Y. EDGEWORTH
EMERITUS PROFESSOR OF POLITICAL ECONOMY AT THE UNIVERSITY OF OXFORD;
FELLOW OF ALL SOULS COLLEGE, OXFORD;
FELLOW OF THE BRITISH ACADEMY

VOLUME III

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ST. MARTIN'S STREET, LONDON
1925



Francis Ysidro Edgeworth (1845-1926)

ECONOMICAL CALCULUS.

DEFINITIONS.—The first principle of Economics² is that every agent is actuated only by self-interest. The workings of this principle may be viewed under two aspects, according as the agent acts *without*, or *with*, the consent of others affected by his actions. In wide senses, the first species of action may be called *war*; the second, *contract*.

MATHEMATICAL PSYCHICS

Πόλεμος ή
συμβόλαιο

The *field of competition* with reference to a contract, or contracts, under consideration consists of all the individuals who are willing and able to recontract about the articles under consideration.

Ορισμός της
ανταγωνιστικής αγοράς,
δυνατότητα
επαναδιαπραγμάτευσης



Francis Ysidro Edgeworth (1845-1926)

There is free communication throughout a *normal* competitive field. You might suppose the constituent individuals collected at a point, or connected by telephones—an ideal supposition, but sufficiently approximate to existence or tendency for the purposes of abstract science.

A *perfect* field of competition professes in addition certain properties peculiarly favourable to mathematical calculation; namely, a certain indefinite *multiplicity* and *dividedness*, analogous to that *infinity* and *infinitesimality* which facilitate so large a portion of Mathematical Physics (consider the theory of Atoms, and all applications of the Differential Calculus). The conditions of a *perfect* field are four; the first pair referrible¹ to the heading *multiplicity* or continuity, the second to *dividedness* or fluidity.

I. Any individual is free to *recontract* with any out of an indefinite number, *e.g.*, in the last example there are an indefinite number of Xs and similarly of Ys.

II. Any individual is free to *contract* (at the same time) with an indefinite number; *e.g.*, any X (and similarly Y) may deal with any number of Ys. This condition combined with the first appears to involve

Στο τέλει πεδίο του ανταγωνισμού τα αγαθά είναι πλήρως διαιρετά και ο αριθμός των συμμετεχόντων άπειρος. Όλοι μπορούν να διαπραγματεύονται και να επαναδιαπραγματεύονται με όλους



Francis Ysidro Edgeworth (1845-1926)

the indefinite divisibility of¹ each *article* of contract (if any X deal with an indefinite number of Ys he must give each an indefinitely small portion of x); which might be erected into a separate condition.

III. Any individual is free to *recontract* with another independently of, *without the consent* being required of, any third party, *e.g.*, there is among the Ys (and similarly among the Xs) no *combination* or precontract between two or more contractors that none of them will recontract without the consent of all. Any Y then may accept the offer of any X irrespectively of other Ys.

IV. Any individual is free to *contract* with another independently of a third party; *e.g.*, in simple exchange each contract is between two only, but *secus* in the entangled contract described in the example (p. 17), where it may be a condition of production that there should be three at least to each bargain.



Francis Ysidro Edgeworth (1845-1926)

There will be observed a certain similarity between the relation of the first to the second condition, and that of the third to the fourth. The failure of the first involves the failure of the second, but not *vice versa*; and the third and fourth are similarly related.

A *settlement* is a contract which cannot be varied with the consent of all the parties to it.

A *final settlement* is a settlement which cannot be varied by recontract within the field of competition.

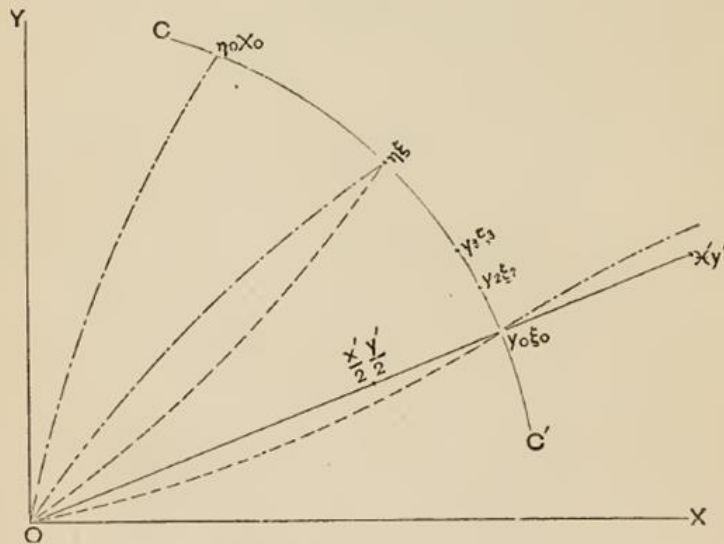
Contract is *indeterminate* when there are an indefinite number of *final settlements*.



To original Edgeworth box

It is not necessary for the purpose of the present study to carry the analysis further. To gather up and fix our thoughts, let us imagine a simple case—Robinson Crusoe contracting with Friday. The *articles* of contract: wages to be given by the white, labour to be given by the black. Let Robinson Crusoe = X. Represent y , the labour given by Friday, by a horizontal line measured *northward* from an assumed point, and measure x , the remuneration given by Crusoe, from the same point along an *eastward* line (See accompanying figure 1.). Then

FIG. 1.



any point between these lines represents a contract. It will very generally be the interest of both parties to vary the articles of any contract taken at random. But there is a class of contracts to the variation of which the consent of *both* parties cannot be obtained, of settle-

ments. These settlements are represented by an *indefinite number* of points, a locus, the *contract-curve* CC' , or rather, a certain portion of it which may be supposed to be wholly in the space between our perpendicular lines in a direction trending from south-east to north-west. This available portion of the contract-curve lies between two points, say $\eta_0 x_0$ north-west, and $\gamma_0 \xi_0$ south-east; which are respectively the intersections with the contract-curve of the *curves of indifference*¹ for each party drawn through the origin. Thus the utility of the contract represented by $\eta_0 x_0$ is for Friday zero, or rather, the same as if there was no contract. At that point he would as soon be off with the bargain—work by himself perhaps.

This simple case brings clearly into view the characteristic evil of indeterminate contract, *deadlock*, undecidable opposition of interests, ἀκριτὸς² ἔρις καὶ ταραχὴ. It is the interest of both parties that there should be *some settlement*, one of the contracts represented by the contract-curve between the limits. But *which* of these contracts is arbitrary in the absence of arbitration, the interests of the two *adversâ pugnantia fronte* all along the contract-curve, Y desiring to get as far as possible south-east towards $\gamma_0 \xi_0$, X north-west toward $\eta_0 x_0$. And it further appears from the preceding

ἔπειθ' ἡ Πελοπόννησος ἅπασα διειστήκει, καὶ οὐθ' οἱ μισοῦντες Λακεδαιμονίους οὕτως ἴσχυον ὥστ' ἀνελεῖν αὐτούς, οὐθ' οἱ πρότερον δι' ἐκείνων ἄρχοντες κύριοι τῶν πόλεων ἦσαν, ἀλλὰ τις ἦν ἀκριτος καὶ παρὰ τούτοις καὶ παρὰ τοῖς ἄλλοις ἅπασιν ἔρις καὶ ταραχὴ.

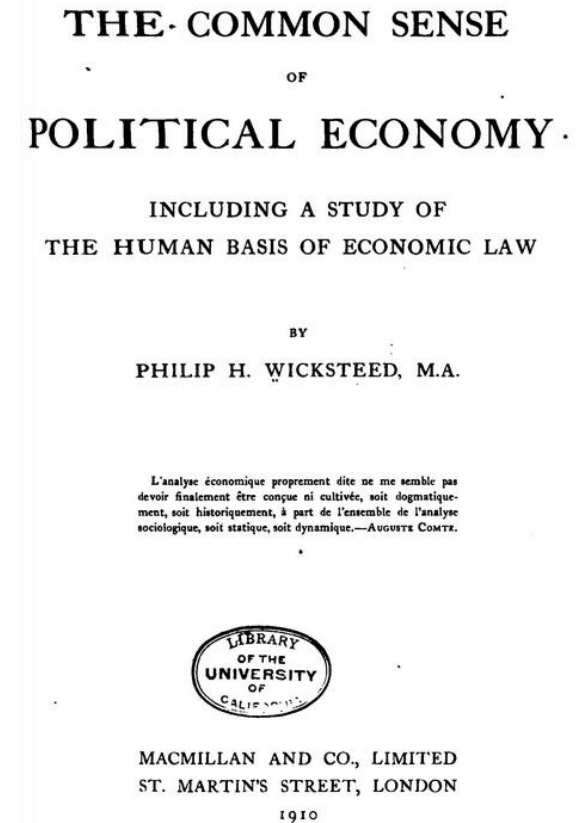
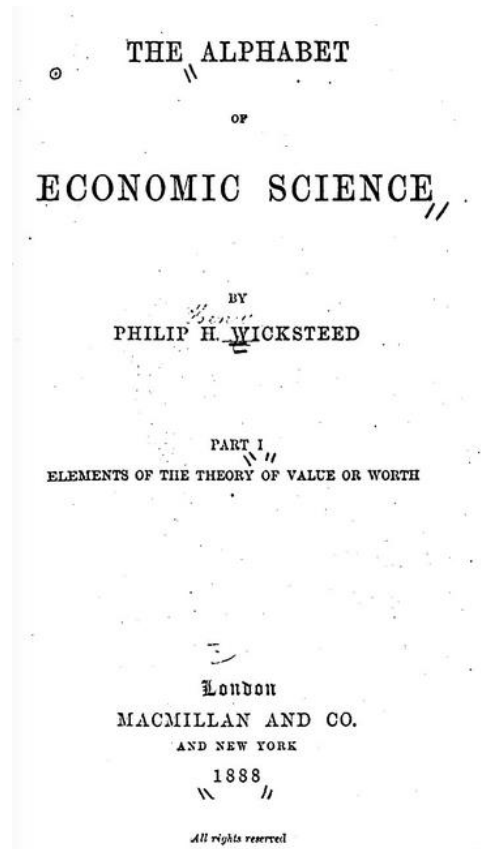
Francis Ysidro Edgeworth (1845-1926)

This being premised, let us now introduce a second X and a second Y ; so that the field of competition consists of two Xs and two Ys. And for the sake of illustration (not of the argument) let us suppose that the new X has the same requirements, the same nature as the old X ; and similarly that the new Y is equal-natured with the old.

Then it is evident that there cannot be equilibrium unless (1) all the field is collected at one point ; (2) that point is on the *contract-curve*. For (1) if possible let one couple be at one point, and another couple at another point. It will generally be the interest of the X of one couple and the Y of the other to rush together, leaving their partners in the lurch. And (2) if the common point is not on the contract-curve, it will be the interest of *all parties* to descend to the contract-curve.



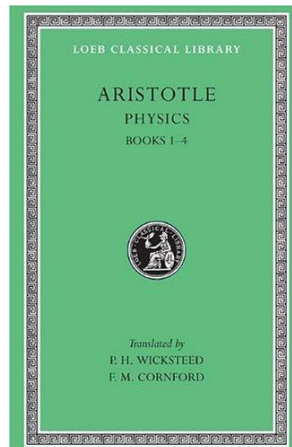
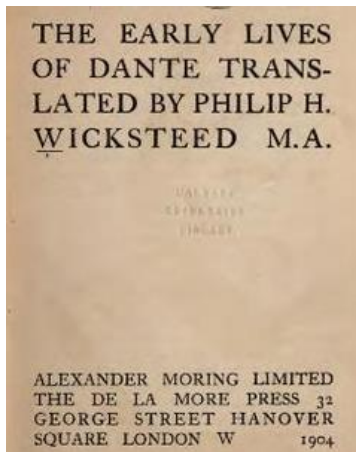
Philip Henry Wicksteed (1844 –1927)



Philip Henry Wicksteed (1844 –1927)

Κλασικιστής, μελετητής του Δάντη, μεταφραστής του Αριστοτέλους. Ασχολείται μόλις το 1882 με τα οικονομικά. Καθαρός οριακός, ο μόνος μαθητής του Jevons. Κριτική του Marx από τη σκοπιά του Jevons.

We can now see how "cost of production," which is simply and solely "the marginal significance of something else," directly affects the quantity of anything produced, and thereby indirectly affects its price, so that there is a constant tendency for prices to conform to cost of production; that is to say, for the price of the thing I make and the price of the thing I might have made instead of it to coincide; for, obviously, I shall always embrace that one of the alternatives still open that offers the best result, and I shall thus increase the supply and lower the marginal significance of the best, and reduce the supply and raise the marginal significance of the others, till they balance.



Philip Henry Wicksteed (1844 –1927)

The Product being a function of the factors of production we have

$$P = f(a, b, c, \dots)$$

and the form of the function is invariably such that if we have:

$$\Pi = f(\alpha, \beta, \gamma, \dots)$$

we shall also have:

$$v\Pi = f(v\alpha, v\beta, v\gamma, \dots)$$

Each factor being remunerated not in accordance with the *nature* of the service it renders, but in accordance with the (marginal) *rate* at which its unit is rendering such service, and a practical method of testing and estimating that rate having been discovered, it remains to enquire, whether from the known properties of F , we can deduce the property $\frac{dP}{dA} \cdot A + \frac{dP}{dB} \cdot B + \frac{dP}{dC} \cdot C + \dots = P$. For it can be shown that the formula $\frac{dF}{dK} \cdot K$ really defines the share of the product which will fall to any factor K , and if it can be

further shewn that when each of the factors has received its share the whole product is exactly accounted for, we shall then have accomplished our task of co-ordinating the laws of distribution.

Οριακή παραγωγικότητα
Νόμος εξάντλησης προϊόντος
Θεώρημα Euler για ομογενείς
συναρτήσεις (εν προκειμένω
πρώτου βαθμού)



Σημείωση: Θεώρημα του Euler για ομογενείς συναρτήσεις

Έστω $x = (x_1, \dots, x_n) \in \mathbb{R}_+^n$

Τότε η συνάρτηση $f(x)$ είναι ομογενής k βαθμού αν

$$\forall \lambda > 0, f(\lambda x) = \lambda^k f(x)$$

Το Θεώρημα του Euler για ομογενείς συναρτήσεις λέει ότι ισχύει

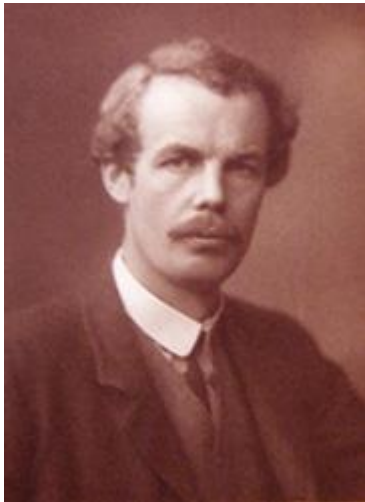
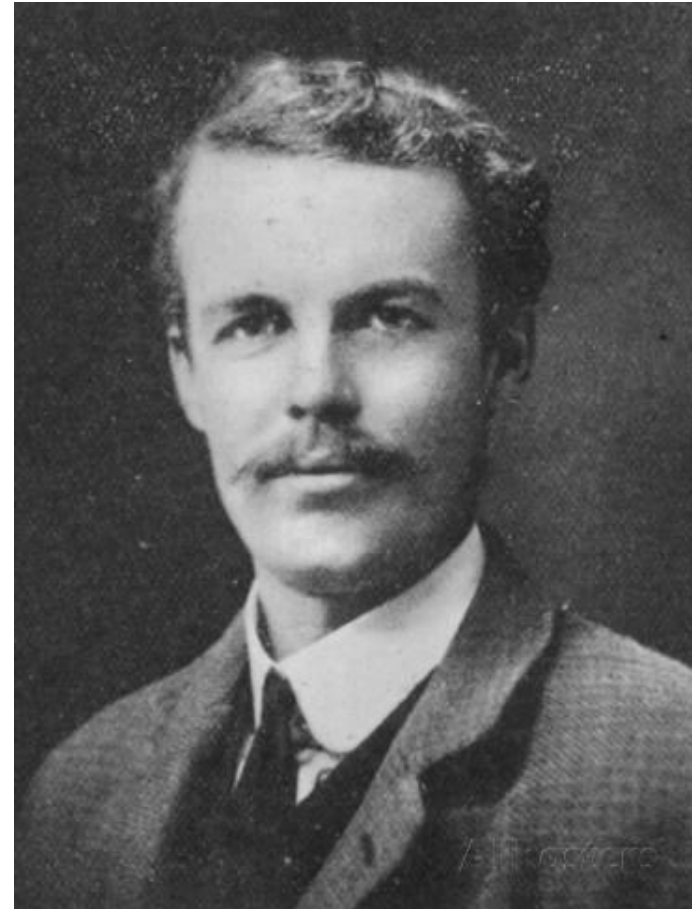
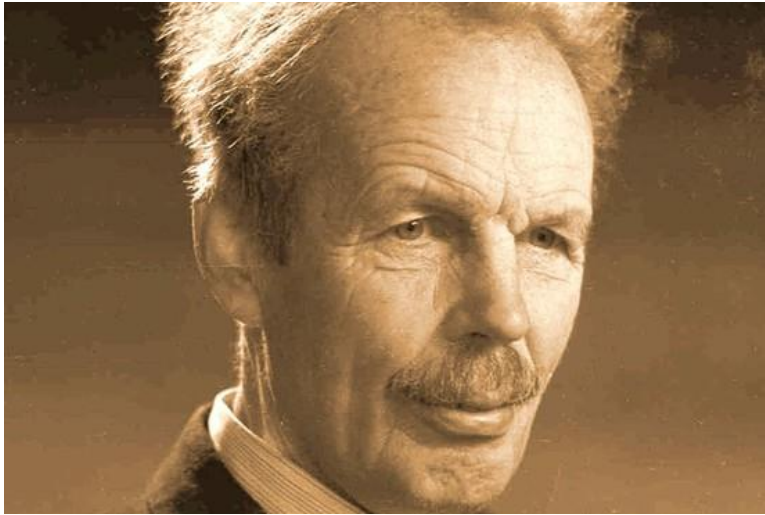
$$\frac{\partial f(x)}{\partial x_1} x_1 + \dots + \frac{\partial f(x)}{\partial x_n} x_n = kf(x)$$

Για $k=1$ τότε ισχύει ότι
$$\frac{\partial f(x)}{\partial x_1} x_1 + \dots + \frac{\partial f(x)}{\partial x_n} x_n = f(x)$$

Αν η $f(x)$ είναι μια συνάρτηση παραγωγής με σταθερές αποδόσεις κλίμακας – δηλ., είναι ομογενής πρώτου βαθμού – και κάθε παραγωγικός συντελεστής αμείβεται με το οριακό του προϊόν τότε η αξία του προϊόντος είναι ίση με το (εξαντλείται στο) σύνολο των αμοιβών των παραγωγικών συντελεστών



Arthur Cecil Pigou (1877 –1959)



Arthur Cecil Pigou (1877 –1959)

WEALTH AND WELFARE

BY

A. C. PIGOU, M.A.

PROFESSOR OF POLITICAL ECONOMY IN THE UNIVERSITY OF CAMBRIDGE
AUTHOR OF 'THE PRINCIPLES AND METHODS OF INDUSTRIAL PEACE'
'PROTECTIVE AND PREFERENTIAL IMPORT DUTIES,' ETC.

'Discontent, to be effective, must be shot with the colours of hope.'
CHARLES BOOTH.

MACMILLAN AND CO., LIMITED
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1912

THE ECONOMICS OF WELFARE

BY

A. C. PIGOU, M.A.

PROFESSOR OF POLITICAL ECONOMY IN THE UNIVERSITY OF CAMBRIDGE

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MACMILLAN AND CO., LIMITED
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Arthur Cecil Pigou (1877 –1959)

CHAPTER VI

DIVERGENCES BETWEEN MARGINAL SOCIAL NET PRODUCT AND MARGINAL TRADE NET PRODUCT

§ 1. WE now return to the caution set out in the last section of Chapter III. The returns per unit to resources in certain uses may differ from the value of their marginal social net product. When this happens, an arrangement which makes returns equal may make the values of marginal social net products unequal, and, consequently, certain specific acts of interference with normal economic processes may be expected, not to diminish, but to increase the national dividend. In developing this thesis the first step is to distinguish between the social net product of any unit of investment and the trade net product. By the "social net product" is meant the aggregate contribution made to the national dividend; by the "trade net product," the contribution (which may be either greater or less than the above) that is capable of being sold and the proceeds added to the earnings of those responsible for the industry under review. It is evident that, in general, industrialists are interested, not in the social, but only in the trade, net product of their operations. Clearly, therefore, there is no reason to expect that self-interest will tend to bring about equality between the values of the marginal social net products of investment in different industries, when the values of social net product and of trade net product in those industries diverge. But there does seem reason to expect that self-interest will tend to bring about equality in the values of marginal trade net products, because *prima facie* the value of the marginal trade net product of resources in any occupation must be equal to the

149

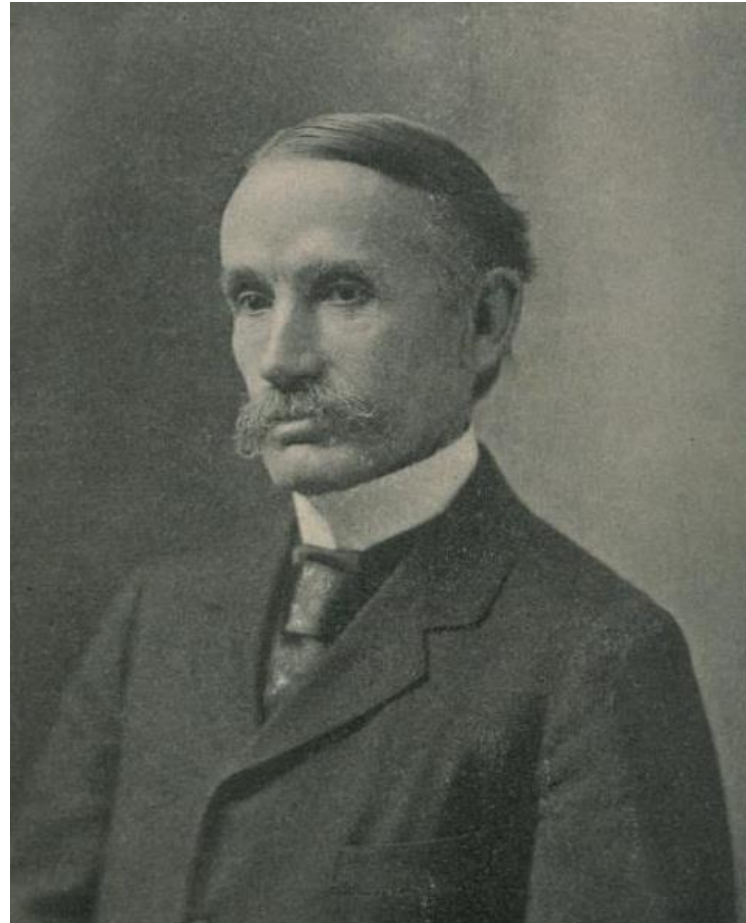
Εξωτερικότητες
Διαφορά ιδιωτικού και
κοινωνικού κόστους
Φόρος Pigou



Ηνωμένες Πολιτείες Αμερικής



John Bates Clark (1847 –1938)



John Bates Clark (1847 –1938)

J.B. Clark γεννήθηκε στο Providence στην πολιτεία του Rhode Island. Αποφοίτησε από το Amherst το 1872, με μεταπτυχιακά στη Γερμανία και στην Ελβετία. Το πρώτο του βιβλίο *The Philosophy of Wealth* (1886) δείχνει την επίδραση της Γερμανικής Ιστορικής Σχολής και έτρεφε συμπάθειες προς τον Χριστιανικό Σοσιαλισμό. Το μεγάλο του έργο *The Distribution of Wealth* (1899), αναφέρεται στην αρχή της οριακής παραγωγικότητας γενικεύοντας την θεωρία της γαιοπροσόδου του Ricardo. Ήταν ο πρώτος σημαντικός Αμερικανός οικονομολόγος διεθνούς εμβελείας και από τους ιδρυτές της American Economic Association το 1885, η οποία τιμά τη μνήμη του με το J.B. Clark Medal για τον καλύτερο οικονομολόγο κάτω των 40.

Distribution as Determined by a Law of Rent

John B. Clark

The Quarterly Journal of Economics, Vol. 5, No. 3 (Apr., 1891), pp. 289-318

THE DISTRIBUTION OF WEALTH

A THEORY OF WAGES, INTEREST
AND PROFITS

BY
JOHN BATES CLARK PH. D.
PROFESSOR OF POLITICAL ECONOMY IN COLUMBIA UNIVERSITY
AUTHOR OF "THE PHILOSOPHY OF WEALTH"



New York
THE MACMILLAN COMPANY
LONDON: MACMILLAN & CO., LTD.
1899

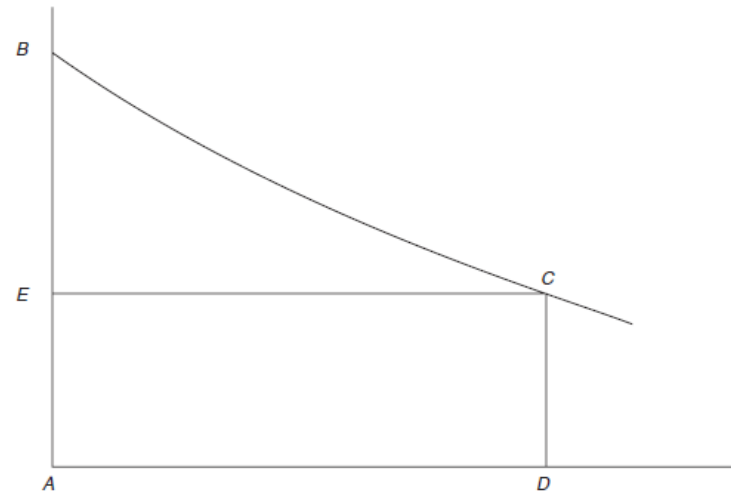
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John Bates Clark (1847 –1938)

So far as the men in an employer's service are thus interchangeable, it makes no difference to him which of them it is that leaves his service. If the man who departs has been doing some kind of work that is quite necessary in conducting the business, the employer has only to put in his place the man who has been doing the work that is least needed. The work that is left undone in consequence of one man's departure is always of the marginal kind. The men in a mill arrange themselves in different classes, in the order that expresses the importance of the work that they are doing. The first class does something that is indispensable, the second, something that is highly important but less so than that which is done by the first, etc. The last class does a kind of work that contributes least of all to the productiveness of the business. If a man belonging to the first class leaves his employment, the master has only to put into his place a man taken from the last class. It is the least needed work that will remain undone. The *effective* importance to his employer of any of these interchangeable men is measured by the *absolute* importance of the one that does the least necessary work.

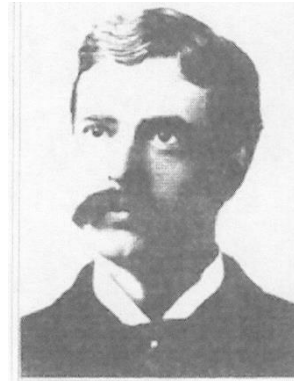
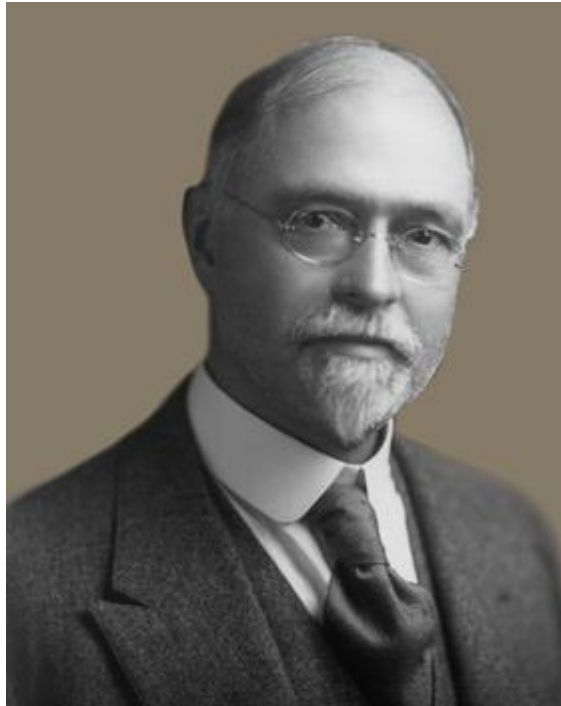
The principle of effective productivity.



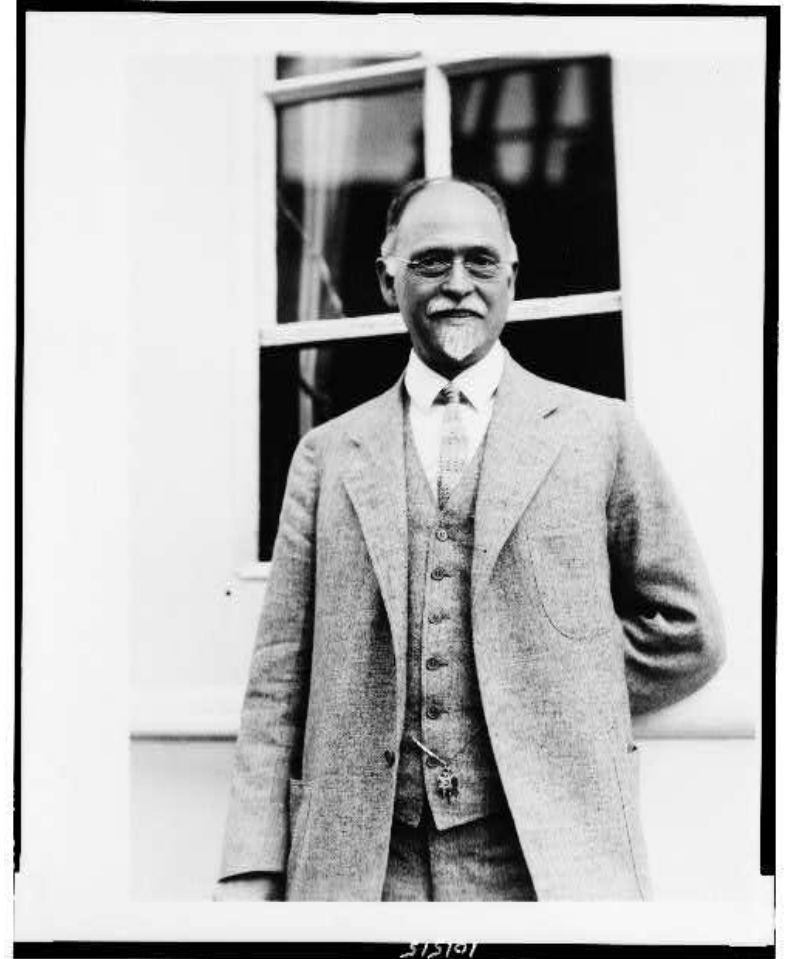
Στον οριζόντιο άξονα μετράμε μονάδες εργασίας και στον κάθετο το οριακό προϊόν της εργασίας. Το σύνολο των αμοιβών των εργατών είναι AECD, δηλ., ο αριθμός των εργατών (AD) επί το οριακό προϊόν του τελευταίου εργάτη (CD). Το εμβαδόν (EBC) πληρώνει τον άλλο παραγωγικό συντελεστή, δηλ., το κεφάλαιο



Irving Fisher (1867–1947)



Irving Fisher



Irving Fisher (1867–1947)

[The following memoir is in substance the writer's thesis for the degree of Ph.D. at Yale University, 1891.]

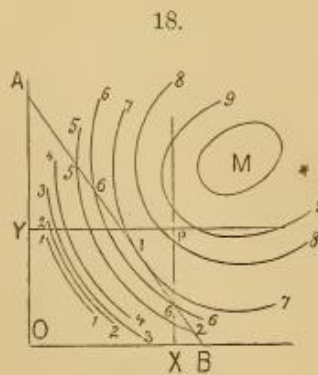
I. — MATHEMATICAL INVESTIGATIONS IN THE THEORY OF VALUE AND PRICES.

By Dr. IRVING FISHER.

[Read April 27, 1892.]

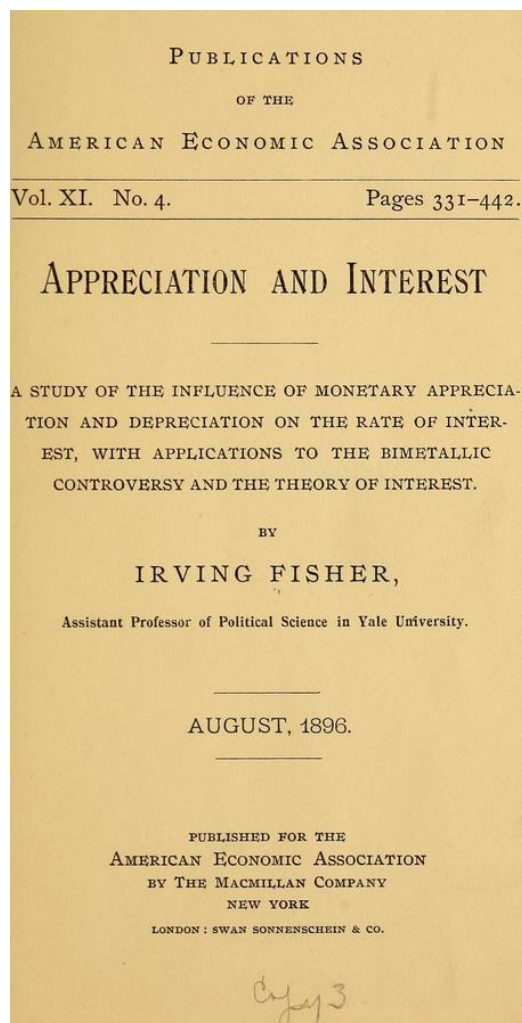
A_1 and B_1 .

In fig. 18 let the abscissa OX represent the quantities B_1 of (b) and the ordinates (OY) the quantities A_1 of (a). Any point P by its co-ordinates represents a possible combination of quantities A_1 and B_1 consumed by I. By varying point P all possible combinations of A_1 and B_1 are represented. At P erect a perpendicular to the plane of the page whose length shall represent the marginal utility of A_1 for the combination, that is, the degree of utility of a small addition of A_1 , (B_1 remaining the same). If P assumes all possible positions, the locus of the extremity of this perpendicular will be a surface.



Το πρώτο διδακτορικό στα
οικονομικά από το Πανεπιστήμιο
του Yale

Irving Fisher (1867–1947)



THE NATURE OF CAPITAL AND INCOME

BY
IRVING FISHER, PH.D.
PROFESSOR OF POLITICAL ECONOMY, YALE UNIVERSITY

New York
THE MACMILLAN COMPANY
LONDON: MACMILLAN & CO., LTD.
1906
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THE RATE OF INTEREST

ITS NATURE, DETERMINATION AND
RELATION TO ECONOMIC
PHENOMENA

BY
IRVING FISHER, PH.D.
PROFESSOR OF POLITICAL ECONOMY, YALE UNIVERSITY

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Irving Fisher (1867–1947)

THE THEORY OF INTEREST

As Determined by
IMPATIENCE
To Spend Income
and
OPPORTUNITY
To Invest It

BY
IRVING FISHER
PROFESSOR OF ECONOMICS, YALE UNIVERSITY

NEW YORK
THE MACMILLAN COMPANY
1930

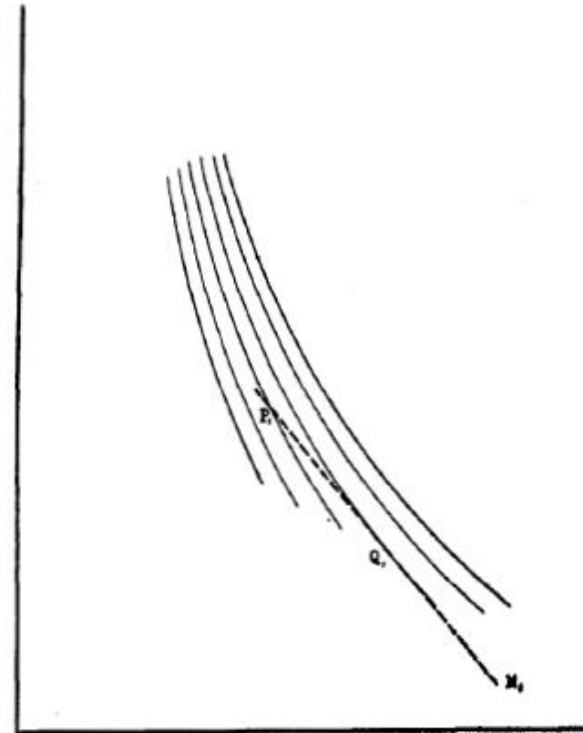
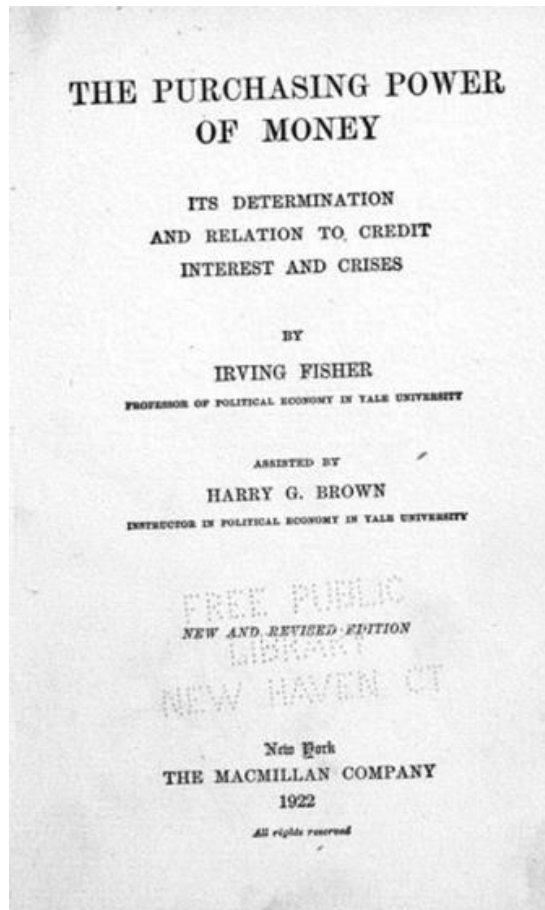


CHART 34

The Final Income Position (Q_1) of Individual 1 Fixed by Tangency of the W_1 Line to the M_1 Line at Q_1 .

Irving Fisher (1867–1947)



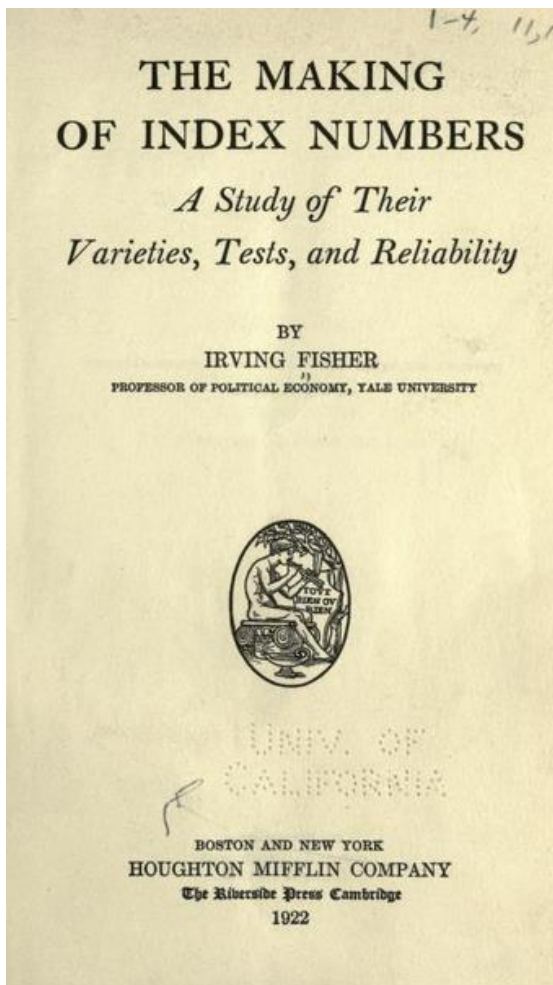
1911

$$MV = \sum pQ.$$

Ποσοτική θεωρία Χρήματος

$$MV=PQ$$

Irving Fisher (1867–1947)



466 THE MAKING OF INDEX NUMBERS

§ 3. TABLE 62. FORMULÆ FOR INDEX NUMBERS
(*V* is abbreviation for $\frac{\sum p_1 q_1}{\sum p_0 q_0}$)

ARITHMETIC TYPES

SYMBOLS FOR IDENTIFICATION			FORMULA	APPROVED BY
No.	Letter	Name		
1	A	Simple	$\frac{\sum \frac{p_1}{p_0}}{n}$	Carli Schuckburg- Evelyn <i>Economist</i> Sauerbeck, <i>Statist</i> Most others
2			$V + \frac{q_1}{q_0}$	
3*	A I	Weighted I	$\frac{\sum p_0 q_0 \frac{p_1}{p_0}}{\sum p_0 q_0}$	U. S. Bur. Labor Statistics
4†			$V + \frac{\sum q_0 p_0 \frac{q_1}{q_0}}{\sum q_0 p_0}$	
5†	A II	Weighted II	$\frac{\sum p_0 q_1 \frac{p_1}{p_0}}{\sum p_0 q_1}$	
6*			$V + \frac{\sum q_0 p_1 \frac{q_1}{q_0}}{\sum q_0 p_1}$	
7	A III	Weighted III	$\frac{\sum p_1 q_0 \frac{p_1}{p_0}}{\sum p_1 q_0}$	
8			$V + \frac{\sum q_1 p_0 \frac{q_1}{q_0}}{\sum q_1 p_0}$	
9	A IV	Weighted IV	$\frac{\sum p_1 q_1 \frac{p_1}{p_0}}{\sum p_1 q_1}$	Palgrave
10			$V + \frac{\sum q_1 p_1 \frac{q_1}{q_0}}{\sum q_1 p_1}$	

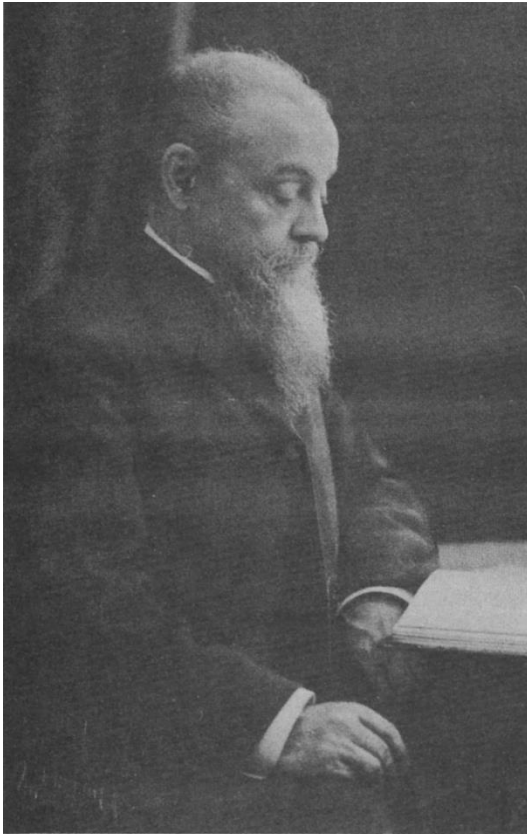
* Reduces to 53. † Reduces to 54.



Ιταλία



Vilfredo Pareto (1848 –1923)



Vilfredo Pareto

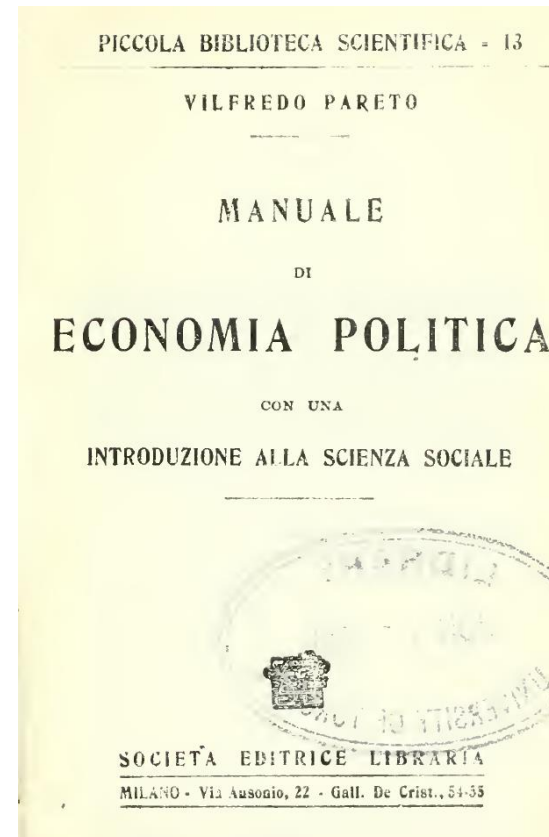


Vilfredo Pareto (1848 –1923)



1896

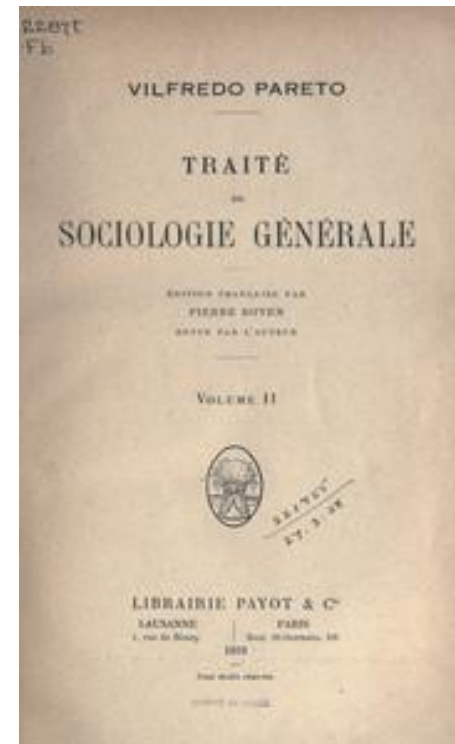
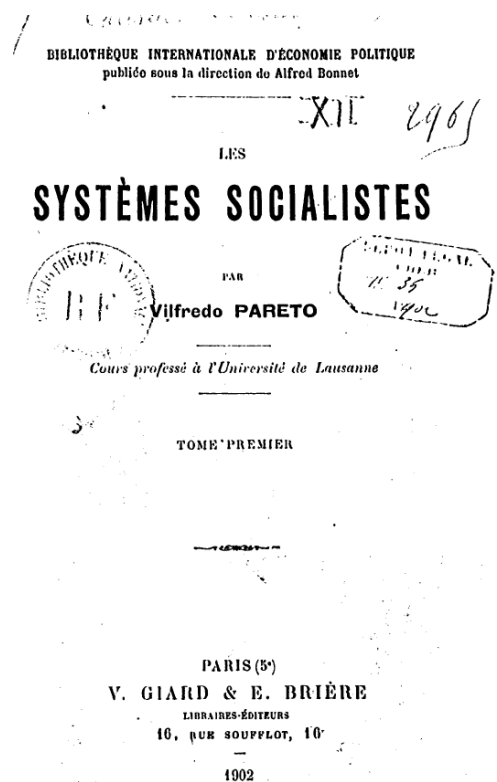
“Économie mathématique” (1911),
Encyclopédie des sciences mathématiques



1906



Vilfredo Pareto (1848 –1923)



Œuvres complètes / Vilfredo Pareto ; publiées sous la direction de Giovanni Busino, Droz, Genève, 1964-1989, 32 volumes.

Vilfredo Pareto (1848 –1923)

1869 Διδακτορικό Τορίνο (Μηχανική) “Οι βασικές αρχές της ισορροπίας στα στερεά σώματα”

Πολιτικός μηχανικός στους Σιδηροδρόμους,

1880 Γενικός διευθυντής στο Società delle ferriere italiane

1886 Λέκτορας στα οικονομικά και management στο

Πανεπιστήμιο της Φλωρεντίας

1889 Θάνατος γονιών του. Παντρεύεται την Alessandrina Bakunin

1893 Διαδέχεται τον Walras στη Λωζάννη.

1923 Γερούσιαστής του Mussolini. Παντρεύεται την Jeanne Regis



Vilfredo Pareto (1848 –1923)

53. L'argomento diventa molto più facile ad intendersi mediante figure grafiche.

Tiriamo due assi ortogonali, OA, OB; su OA portiamo le quantità di pane, su di OB le quantità di vino. Per esempio *oa* figura uno di pane, *ob* figura uno di vino; il punto *m* che ha quelle due coordinate indica la combinazione 1 kg. di pane e 1 kg. di vino.

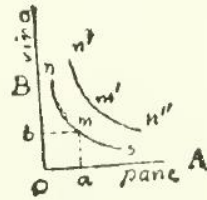


Fig. 5.

54. Così s'intende che potremo rappresentare tutta la serie precedente, ed unendo insieme i punti di quella serie con una linea continua, avremo la linea *n m s* che dicesi LINEA D'INDIFFERENZA O CURVA DI INDIFFERENZA (1).

(1) Questo nome è dovuto al prof. F. Y. Edgeworth. Egli supponeva che esistesse l'*utilità* (ofelimità), e ne deduceva le curve di indifferenza; invece io prendo come dato di fatto le curve di indifferenza, e da esse traggo quanto occorre per la teoria dell'equilibrio, senza che occorra considerare l'*ofelimità*.

Μαθηματικοποίηση των Οικονομικών

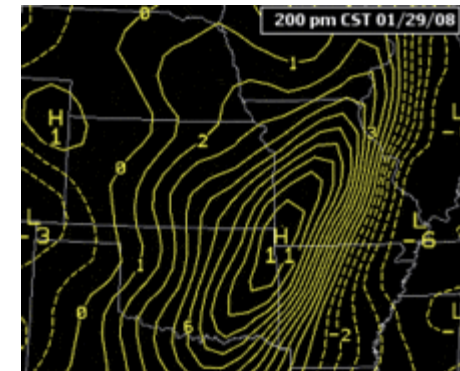
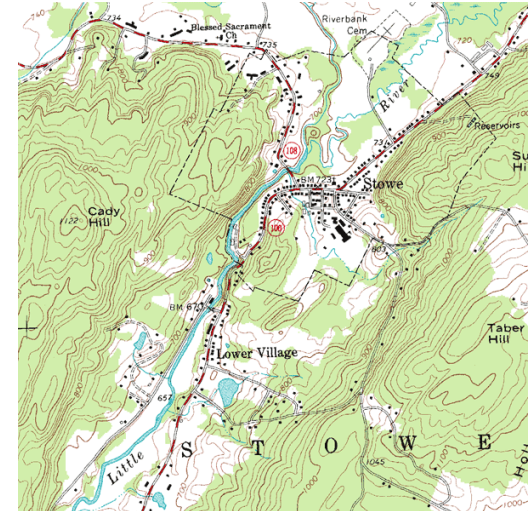
Καμπύλη αδιαφορίας

Vilfredo Pareto (1848 –1923)

Ωφελιμότητα

Χρησιμότητα μη μετρήσιμη

Cardinal vs Ordinal



Vilfredo Pareto (1848 –1923)

Άριστο κατά Pareto



Vilfredo Pareto (1848 –1923)

$$\bar{F}(x) = \Pr(X > x) = \begin{cases} \left(\frac{x_m}{x}\right)^\alpha & x \geq x_m, \\ 1 & x < x_m. \end{cases}$$

11. Répartition des revenus (I). — Par analogie avec des faits de même espèce, il est probable que la courbe des revenus doit avoir une forme semblable à celle de la *fig. 54*. Si nous faisons *mo* égal à un certain revenu *x*, *mp* égal à 1, la surface *mnqp* nous donne le nombre d'individus qui ont un revenu compris entre *x* et *x + 1*.

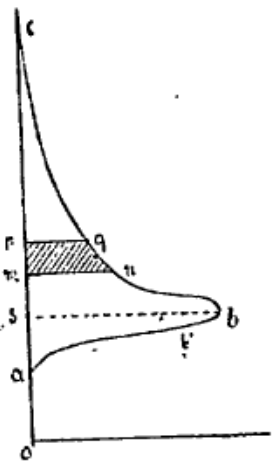
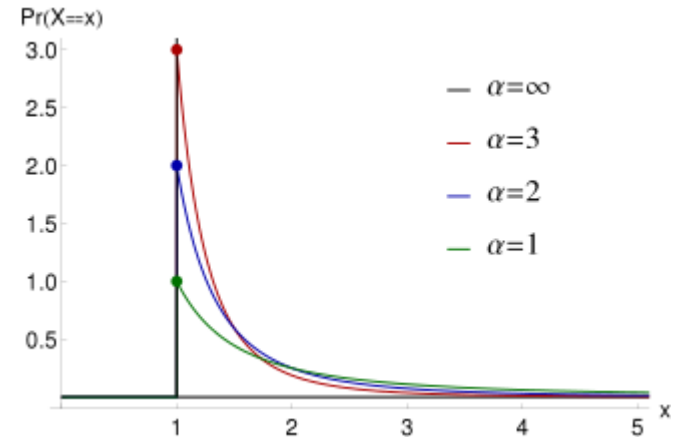


Fig. 54.

ab', ou mieux, *ab* reste purement hypothétique.

Mais pour les revenus totaux, la statistique ne nous fournit de renseignements que pour la partie *cqb* de la courbe, et peut-être, dans un très petit nombre de cas, pour une petite portion *bb'* de l'autre partie ; la partie



Νόμος του Pareto για τη
διανομή των
εισοδημάτων

Κατανομή Pareto

Maffeo Pantaleoni (1857–1924)

Enrico Barone (1859–1924)



Maffeo Pantaleoni



Enrico Barone



Maffeo Pantaleoni (1857–1924)

Enrico Barone (1859–1924)

PURE ECONOMICS

BY
PROFESSOR MAFFEO PANTALEONI

TRANSLATED BY
T. BOSTON BRUCE, Esq.
OF THE MIDDLE TEMPLE; BARRISTER-AT-LAW



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1898

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PRINCIPII
DI
ECONOMIA PURA

PER
MAFFEO PANTALEONI
DIRETTORE DELLA R. SCUOLA SUPERIORE DI COMMERCIO,
IN NAPOLI.



FIRENZE,
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1889.

IL MINISTRO DELLA PRODUZIONE NELLO STATO COLLETTIVISTA

IL MINISTRO DELLA PRODUZIONE NELLO STATO COLLETTIVISTA
ENRICO BARONE

Giornale degli Economisti, SERIE SECONDA, Vol. 37 (Anno 19), (SETTEMBRE 1908), pp. 267-293

Σουηδία



Knut Wicksell (1851 –1926)



Knut Wicksell (1851 –1926)

KNUT WICKSELL

Value Capital and Rent

With a Foreword by
Professor G. L. S. Shackle
Translated by
S. H. Frowein

1954

George Allen & Unwin Ltd
RUSKIN HOUSE MUSEUM STREET LONDON

*Über Wert, Kapital und
Rente nach den neueren
nationalökonomischen
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INTEREST AND PRICES

(Geldzins und Güterpreise)

A STUDY OF THE CAUSES
REGULATING THE VALUE OF MONEY

By KNUT WICKSELL

Translated by R. F. Kahn

With an Introduction by Bertil Ohlin

And the Article

The Enigma of Business Cycles

Translated by Carl G. Uhr

*Finanztheoretische
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des Steuerwesens
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Original publication date: 1898

*Geldzins und Güterpreise: eine
Studie über die den Tauschwert
des Geldes bestimmenden
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Knut Wicksell (1851 –1926)

LECTURES ON POLITICAL ECONOMY

By
KNUT WICKSELL

TRANSLATED FROM THE SWEDISH BY
E. CLASSEN
AND EDITED WITH AN INTRODUCTION BY
LIONEL ROBBINS
Professor of Economics in the University of London

VOLUME ONE
GENERAL THEORY

1934

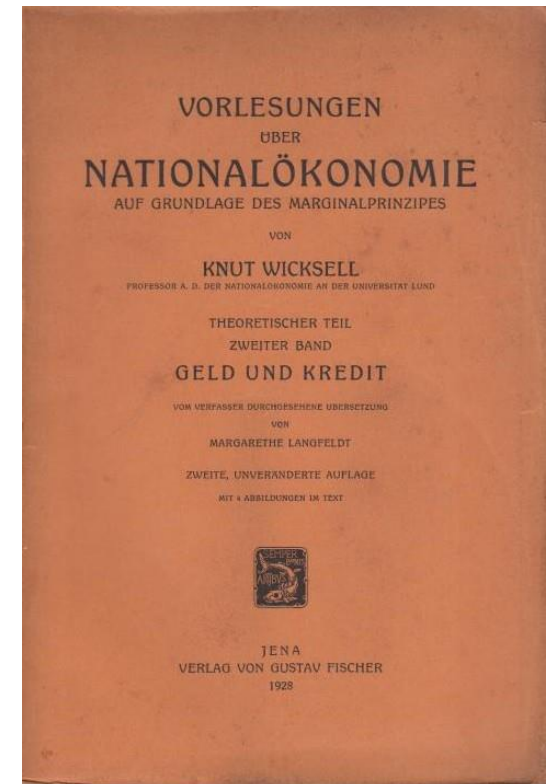
LECTURES ON POLITICAL ECONOMY

By
KNUT WICKSELL

EDITED WITH AN INTRODUCTION BY
LIONEL ROBBINS

VOLUME TWO
MONEY

1935



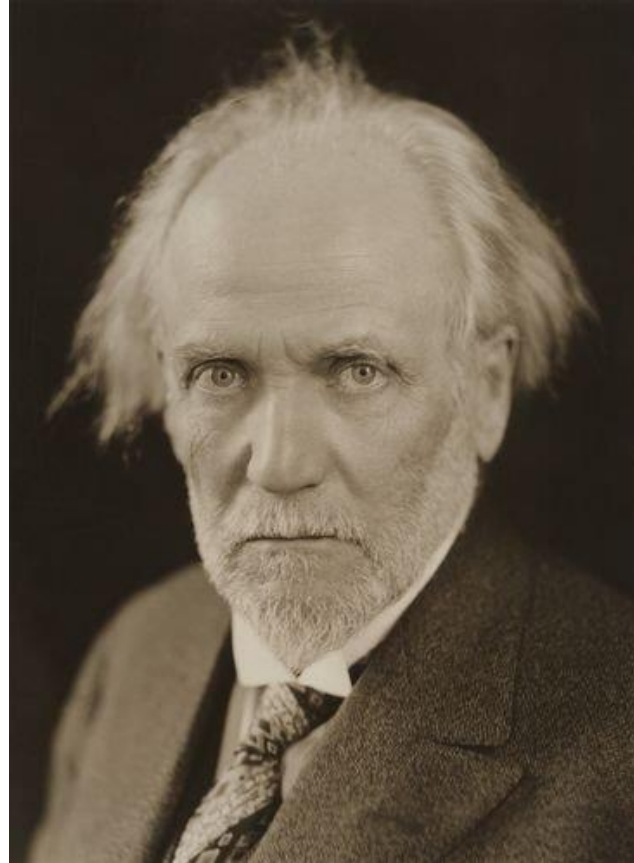
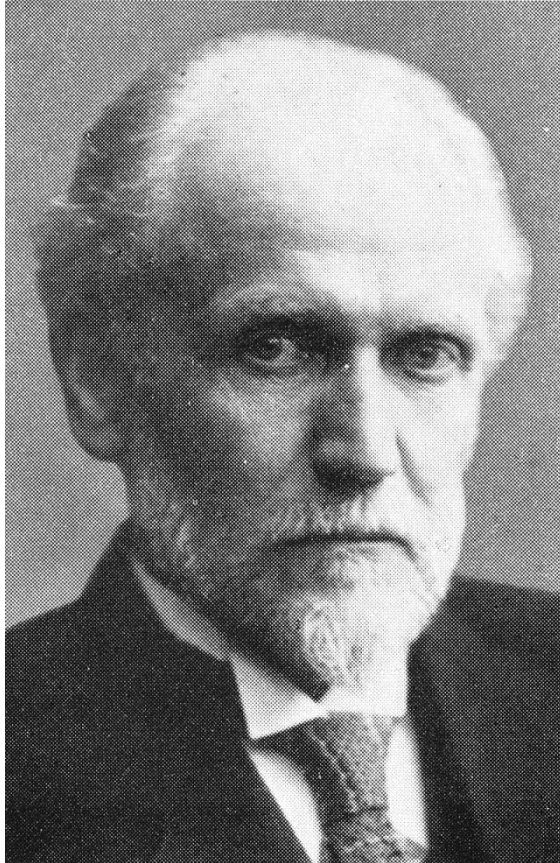
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Knut Wicksell (1851 –1926)

- Θεωρία οριακής παραγωγικότητας και εξάντληση προϊόντος.
- Αποτέλεσμα Wicksell
- Χρονική διάρθρωση κεφαλαίου
- Θεωρία χρήματος



Karl Gustav Cassel (1866–1945)



Karl Gustav Cassel (1866–1945)

Theoretische
Sozialökonomie

von
Gustav Cassel

Verlag, Verleger und Vertriebsstellen befinden sich auf dem Umschlag



1918
A. Deutscher Verlagshandlung Dr. Walter de Gruyter
Berlin

THE THEORY OF SOCIAL ECONOMY

By GUSTAV CASSEL

Professor at the University of Stockholm

Translated by JOSEPH McCABE

VOL. I.

T. FISHER UNWIN, LTD.
LONDON: ADELPHI TERRACE

Theoretische Sozialökonomie,
Leipzig, C. F. Winter. 1918

FIRST FORMULA

137

demand of the whole of the consumers, for any particular article is settled. If we call the total demand for the n goods during the relevant period $D_1, D_2 \dots D_n$, we can give these magnitudes as functions of the n prices, thus:

$$(1) \begin{aligned} D_1 &= F_1(p_1 \dots p_n) \\ D_2 &= F_2(p_1 \dots p_n) \\ &\dots \dots \dots \\ D_n &= F_n(p_1 \dots p_n) \end{aligned}$$

$p_1 \dots p_n$ being the prices of the n goods.

But in the equilibrium of the economy the demand for each individual article must be in harmony with the supply of it, as the fixing of prices in accordance with the principle of scarcity has to restrict the demand until it can be met out of the available supply of commodities. Consequently:

$$D_1 = S_1, D_2 = S_2 \dots D_n = S_n$$

and so according to (1):

$$(2) \begin{aligned} F_1(p_1 \dots p_n) &= S_1 \\ F_2(p_1 \dots p_n) &= S_2 \\ &\dots \dots \dots \\ F_n(p_1 \dots p_n) &= S_n \end{aligned}$$

Hence to solve the pricing problem in the simple case we are considering, we have only to regard the n prices as the unknown quantities of the problem, and take them as given in the usual mathematical way. We are then in a position to express the demand for the n goods in these prices according to equations (1), and equations (2) then follow as a consequence of the principle of scarcity.

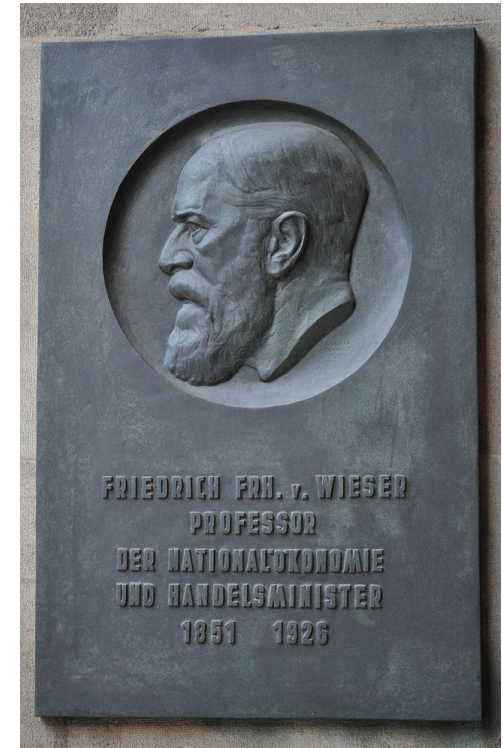
Schumpeter: 90% Walras, 10% νερό.



Αυστρία



Friedrich Freiherr von Wieser (1851 –1926)



Friedrich von Wieser (1851 –1926)

Grenznutz Οριακή ωφέλεια
Zurechnung Καταλογισμός
Κόστος ευκαιρίας

SOCIAL ECONOMICS

By

FRIEDRICH von WIESER

Translated by

A. FORD HINRICHS

Assistant Professor of Economics, Brown University

With a Preface by

WESLEY CLAIR MITCHELL



ADELPHI COMPANY
NEW YORK

DER NATÜRLICHE WERTH.

VON

DR. FRIEDRICH VON WIESER,

PROFESSOR AN DER DEUTSCHEN UNIVERSITÄT IN PRAG.



WIEN, 1889.

ALFRED HÖLDER,

K. K. HOF- UND UNIVERSITÄTS-BUCHHÄNDLER,
KOTRENBURKSTRASSE 15.

ÜBER DEN URSPRUNG

UND DIE

HAUPTGESETZE

DES

WIRTSCHAFTLICHEN WERTHES.

VON

DR. FRIEDRICH VON WIESER,

PRIVATDOCENT AN DER WIENER UNIVERSITÄT.



WIEN 1884.

ALFRED HÖLDER

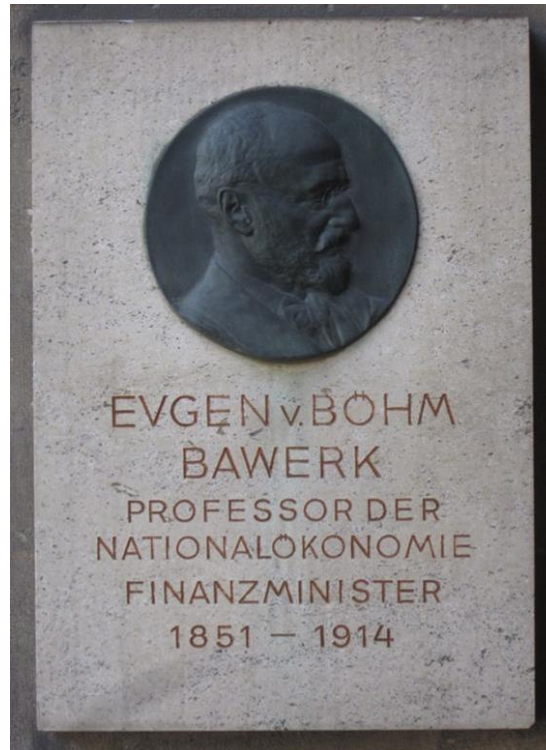
K. K. HOF- UND UNIVERSITÄTS-BUCHHÄNDLER
Kotrenburkstrasse 15.

*Theorie der gesellschaftlichen
Wirtschaft 1914*

Η εδραίωση της νεοκλασικής οικονομικής θεωρίας



Eugen Böhm Ritter von Bawerk (1851 – 1914)



Eugen von Böhm-Bawerk (1851 –1914)

KAPITAL UND KAPITALZINS.

VON

DR. EUGEN V. BÖHM-BAWERK,
O. Ö. PROFESSOR AN DER K. K. UNIVERSITÄT IN INNSBRUCK.

ERSTE ABTHEILUNG.

GESCHICHTE UND KRITIK DER KAPITALZINS-THEORIEN.

INNSBRUCK.
VERLAG DER WAGNER'SCHEN UNIVERSITÄTS-BUCHHANDLUNG.
1884.

Positive Theorie des Kapitals

von
Eugen von Böhm-Bawerk

Vierte, unveränderte Auflage.
Mit einem Nachwort von Prof. Dr. Friedrich Wiesner, Wien.

Verlag von
Gustav Fischer



1898
Verlag von Gustav Fischer
Jena

KARL MARX AND THE CLOSE OF HIS SYSTEM

A Criticism

By
Eugen v. Böhm-Bawerk

AUSTRIAN MINISTER OF FINANCE, AND HONORARY
PROFESSOR OF POLITICAL ECONOMY IN
THE UNIVERSITY OF VIENNA

Translated by Alice M. Macdonald

WITH A PREFACE
BY JAMES BONAR, M.A., LL.D.



London
T. Fisher Unwin
Paternoster Square
1898

Eugen von Böhm-Bawerk, "Zum Abschluß des Marxschen Systems", in *Staatswissenschaftliche Arbeiten. Festgaben für Karl Knies*, hrsgb. von Otto von Boenigk, Haering: Berlin 1896, S. 87-205.

Κριτική στον Marx για τον μετασχηματισμό των εργασιακών αξιών σε τιμές παραγωγής: Ισχύει μόνο για σταθερή οργανική σύνθεση του κεφαλαίου



Eugen von Böhm-Bawerk (1851 –1914)

(1) the justified expectation of an objectively more abundant satisfaction of future needs; (2) the subjective underestimation of future needs or overestimation of future resources, due to incorrect calculations or weakness of will which causes the apparent superiority of present over future goods; and (3) the technical superiority of present goods (including present productive goods) over those in the future.

Θεωρία επιτοκίου

Θεωρία κεφαλαίου



Τέλος Ενότητας

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