

REVISITING MARSHALL'S CONSTANCY OF MARGINAL UTILITY OF MONEY

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In spite of the paramount role played by the constancy of marginal utility of money in his economics, Marshall—as we all know—never explained clearly the reasons on which he based his position. Nor did he state explicitly whether he meant the marginal utility of money to be constant with respect to money or to price(s). As a result, Marshall's position became a *cause célèbre* in the economic annals. The debates were opened by Pareto with some brief remarks in his *Cours d'économie politique*. Among the subsequent debaters we should mention Pareto himself, E. B. Wilson, Milton Friedman, and Paul A. Samuelson. The unanimous verdict of all these mathematical economists is that Marshall's position is correct only in some realistically absurd cases. On the other side of the line, even his staunchest defender, A. C. Pigou, did not go beyond repeating Marshall's scanty remarks on the issue.

The aim of this paper is to show that if the case is reexamined in a different light than that of the strict rigor of mathematics, it is possible to vindicate Marshall at least for his intuition of the economic reality of which he was a witness. And surprising though it may seem, the diagrammatic analysis, so dear to Marshall, will prove a safer method for probing this position than the purely mathematical apparatus.

The argument will center upon two omissions in the mathematical writs by which Marshall now stands indicted.¹ The

¹How convinced Pareto was of Marshall's error is seen from a letter of September 15, 1907: "One cannot consider as constant the ophelimity of money. And we return to the usual refrain: in that manner one does not take account of the interdependence of phenomena. The Marshalls and the Edgeworths obstinate themselves in the error, so as not to confess that in the polemic

first omission concerns the fact that Marshall held that the marginal utility of money is quasi-constant, not a constant in the mathematical sense. The second is that these writs implicitly assume that "the utility structure is such that in absolutely any situation the optimal budget includes every commodity available on the market."² It is natural then that an analysis based on such a highly restrictive (and unrealistic) assumption should produce the strong conclusions against Marshall's position.

1. That Marshall did not have in mind a constancy in the strict sense of a function which has exactly the same value for every value of its argument, is beyond doubt. Otherwise, he would not have invoked the fact that one can neglect the elements that "generally belong to the *second order of small quantities*."³ Obviously, he referred to the formula $w(m_0 + \Delta m) \approx w(m_0) + w'(m_0)\Delta m$, where $w(m)$ is the marginal utility of money and Δm a *sufficiently small* amount of money.⁴

with Walras they had been wrong. Those English gentlemen believe that outside England and Germany there are only asses, I say that the English proposition of the constancy of the [marginal] utility of money is an *asininity*. This proposition is fundamental. If the Marshalls & Co. are right, I am wrong and vice versa. And with people who persist in saying such ineptitudes, I do not intend to associate in any manner. I cannot speak clearer than this." (Vilfredo Pareto, *Lettere a Maffeo Pantaleoni*, Rome, 1960, vol. III, p. 63. My translation.)

²The most inclusive and also the most polished of these arguments, that of Paul A. Samuelson, "Constancy of the Marginal Utility of Money," in *Studies in Mathematical Economics and Econometrics in Honor of Henry Schultz*, O. Lange, F. McIntyre and T. O. Yntema, eds. (University of Chicago Press, 1942), pp. 75–91, is a good example in point.

³Alfred Marshall, *Principles of Economics* (eighth ed., 1924), p. 132n.

⁴In spite of everything, the supposition that Marshall had in mind first of all the constancy