**Tiziano Raffaelli**, *Marshall's Evolutionary Economics*, London and New York: Routledge 2003, pp. xiii + 178.

"It's all in Marshall" is the wellknown motto attributed to Lavington and in common use among the Cambridge economists to stress the unique role and breadth of view of Marshall's *Principles of Economics*. The expression has also been called to witness that the Cambridge School, sticking to the old master's Word, prevented the growth of economic knowledge (Samuelson).

Whatever the meaning given to the motto, and the judgement passed on Marshall, doubtless he has never ceased to be on the spotlight. Interest in Alfred Marshall has always run very high, but it was particularly intense in three different periods: 1) in the 1930s, with the attack waged against what at the time appeared both his most fundamental contributions and weakest points (the representative firm, increasing returns and competition, partial equilibrium and period analysis); 2) in the 1970s and '80s, with Whitaker's publication of Marshall's Early Economic Writings (1975), and, later on, in Italy, Dardi's original interpretation, in a fundamental book (Il giovane Marshall: accumulazione e mercato, 1984), which reconstructed the background of Principles of Economics and clarified Marshall's position vis-a-vis both the classics and the marginalists. To these two works, may be added another Italian contribution: Becattini's long introduction to the Italian translation of Economics of Industry (Economia della produzione, 1975), which invited to a "special re-reading" of Marshall's writings and thought; 3) in the 1990s, with the celebrations of the centenary year of the first edition of Principles and the edition of a number of unpublished manuscripts: the early philosophical papers which Marshall presented at the Grote Club, in the second half of the '60s (Raffaelli, 1994, The Early Philosophical Writings of Alfred Marshall); the two sets of notes - one by Alfred and the other by Mary, who was in the attendance - of the lectures to women, delivered by Marshall at the beginning of the 1870s in Cambridge (Raffaelli, Biagini, McWilliams, 1995, Alfred Marshall's Lectures to Women); the evidence given by Marshall to Governmental Commissions and not included in Keynes's 1926 edition of Official Papers (Groenewegen, 1996, Official Papers of Alfred Marshall. A Supplement); the creation of a new journal, entirely devoted to Marshall (1991, Marshall Studies Bulletin); and, last but not least, the publication of two monumental works, essential for the understanding of Marshall's life and work: the impressive biography written by Groenewegen (1995, A Soaring Eagle) and the complete correspondence edited by Whitaker (1996, The Correspondence of Alfred Marshall Economist).

To this last Marshallian revival belongs Raffaelli's Marshall's Evolutionary Economics. It can be seen as the final outcome of the author's long, thought out investigation of Marshall's early philosophical and psychological writings, which he first brought to the attention of Marshallian scholars in the early 1990s. Thanks to the contextualization and interpretation of one of these writings in particular, 'Ye machine', Raffaelli wishes to advance "the general and ambitious claim ... o flaving bare the evolutionary scheme hidden behind his [Marshall'] system of thought". The book is divided into three parts. In the first part - "The Origin" - the meaning of the early writings is explained and special attention is devoted to highlight the model of the human mind put forth in "Ye machine", which envisages "a powerful evolutionary device, formed of the complementary and conflicting relationship between innovation, change, creativity or contrivance on the one hand, and repetition, automation, routine or instinct on the other". This relationship causes the evolutionary growth of the human mind and the progress of human action and character. The second part of the book - "The Oeuvre" - aims to prove that the evolutionary model outlined in "Ye machine" provides the key to better understand relevant aspects of Marshall's later thought, such as: the nature and meaning of partial equilibrium (a subject dealt with at length in Dardi's 'Partial equilibrium analysis: dynamics in disguise', in R. Arena and M. Quéré (eds) The Economics of Alfred Marshall. Revisiting Marshall's Legacy, 2003); the role of ceteris paribus; the growth of knowledge; the rejection of "economic man" and its replacement with a man "of flesh and blood"; Marshall's political views (especially on socialism) and his attitude towards social issues.

Moreover, this evolutionary model throws light on the fundamental topic of organisation, developed by Marshall in Book IV of *Principles* and in *Industry and Trade*. The human mind presents the same evolutionary pattern as any industrial and social organisation: innovation, automation and progress. The root similarity between mind and organisation that needs stressing is their hierarchic structure, formed by several interrelated levels, which continuously evolve through creativity and standardisation.

This evolutionary model represents the basic grammar of Marshall's economic and social thought, as Raffaelli

emphasizes, and opens the way to new interpretations of main Marshallian themes: education, which plays a decisive role in economic and social progress; the division of labour, which must not be carried too far, to avoid negative effects on the individual and society; industrial organisation, which should be a mix of large firms, joint stock companies, and also - and preferably - small and medium firms; the industrial district, which offers a working - and better - alternative to giant firms; national leadership, which in the long run depends on individuality and creativity.

The outlined evolutionary scheme is also helpful to clarify Marshall apparently eclectic methodological tenets: his critical attitude towards mathematics, useful but unable to grasp the evolutionary process; the motto "The One in the Many, the Many in the One"; the role of the principle of continuity, epitomized in the motto "Natura non facit saltum"; the meaning and uses of his two famous analogies (mechanical and biological); the ethic dimension of his economic and social thought.

The third part of the book, "The Aftermath", sketches the way in which Marshall's research programme, centred on the evolutionary core, was misinterpreted in the 1920s and '30s. Raffaelli notes how deeply Marshall's fundamental ideas influenced his pupils, but in the end he has to acknowledge that the evolutionary dimension of Marshall's thought befell oblivion and a misleading interpretation became the common view. Clapham, Sraffa and Robbins worked out a reading of Marshall's work which even the heir to Marshall's Cambridge chair - and favourite pupil - Pigou was unable to contrast.

Indeed, Marshall's evolutionary ideas survived in a small group of industrial economists - "the old Cambridge school" as Becattini calls it: MacGregor, Sargant Florence, Chapman, Lavington. But if this was no more than a "trickle", new and more powerful springs are seen by Raffaelli in modern writers who have come to recognise their indebtedness to Marshall: Nelson and Winter's evolutionary economics, the capabilities approach to the firm, originated by Penrose and Richardson, Loasby's cognitive economics and the study of industrial districts, promoted by Becattini, Brusco, Porter, Pyke and Sengenberger.

The last chapter deals with the Marshall-Keynes relationship. Following Groenewegen and other interpreters, such as Leijonhufvud and Clower, Raffaelli maintains that Keynes was more Marshallian than most Keynesian scholars were able to recognize (Carabelli, in particular). Raffaelli also underlines Marshall's strong influence on Keynes's social, philosophical and methodological views.

The Alfred Marshall depicted in this book, "striking in its simplicity", is brand-new: the generally assumed incoherence, ambiguities and eccentricities of his thought disappear from view. The model outlined in "Ye Machine" provides the precious key necessary to solve the puzzle of Marshall's sundry and apparently confused reflections, scattered throughout his writings in which original ideas are disguised by his way of writing, already criticised by Keynes "Like a duck leaving water, he [the reader of Marshall's *Principles*] can escape from this douche of ideas without scarce a wetting" (*Memorials of Alfred Marshall*, p. 48).

Readers should go back to Marshall once more, keeping in mind the functioning of "Ye machine"; they may thus discover inner treasures which it is all too easy to pass by unnoticed. Raffaelli himself confesses: "I cannot understand how, on my first reading of this work [*Industry and Trade*], I failed to realize that the interplay between variation and routine, which shapes the evolution of the machine's brain, is also the leading idea of the book" (p.140).

The "special re-reading" made by Raffaelli, who ideally answers the invitation made by Becattini 30 years ago – allows us to reach the "core" of Marshall's thought and opens up, I dare to say, a new interpretative perspective capable of further development.

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