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Luigi L. Pasinetti: An intellectual biography
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ABSTRACT

This paper is an analysis with comments of the book by Mauro Baranzini and Amalia Mirante *Luigi L. Pasinetti: An intellectual biography*, London, Palgrave Macmillan, 2018

Keywords: Luigi Pasinetti, intellectual biography, Cambridge School of Keynesian Economics, growth theory, structural change

INTRODUCTION

Mauro Baranzini and Amalia Mirante's comprehensive and detailed biography on Luigi Pasinetti is a rare achievement in today's landscape of economic science. As a leading scholar, Pasinetti may be considered the most influential of the second generation of the *Cambridge School of Keynesian Economics* due to his achievements and his early involvement with the direct pupils of John Maynard Keynes. Since the early 1960s, Pasinetti has been one of the most significant economists of the so-called Anglo-Italian school of economics.

According to Baranzini and Mirante, the purpose of their work is threefold. First, it assesses Pasinetti's role in the second generation of the *Cambridge School of Keynesian Economics*. Second, it provides insight into Pasinetti's scientific work. Third, it examines Pasinetti's legacy.

The scientific contributions and the life of Pasinetti are closely intertwined throughout the book. The authors' narrative, which overflows with episodes of Pasinetti's academic life, is often enriched with citations from works, letters, and testimonies concerning the eminent scholar.

1. PASINETTI AS A LEADING SCHOLAR

The Introduction presents Pasinetti as a leading scholar of the second generation of the *Cambridge School of Keynesian Economics*. The authors highlight Pasinetti's arrival in Cambridge in 1956 as a graduate student, and that he grew up in contact with outstanding scholars like Richard Kahn, Nicholas Kaldor, Richard Goodwin, Joan Robinson and Piero Sraffa. Thus, Pasinetti found himself within an intellectual environment characterized by that unique mixture of radicalism, wisdom and social concern that was the distinct mark of Keynes's environment.

The authors argue that Pasinetti is a major contributor to controversies on the measurement of technical progress, capital theory, income distribution, and theory of value. These controversies were debated between Cambridge, England, and Cambridge, Massachusetts, during the 1950s, 1960s, and 1970s. Outcomes were realized in the 1980s, 1990s, and subsequent decades.

In his 1962 Cambridge Ph.D. thesis, Pasinetti put forward his contribution in the field of structural economic dynamics. In this pioneering work, Pasinetti defined conditions for an economic system to reach and maintain full labour employment and full capacity utilization when the system is subject to structural change caused by a differentiated and continuously changing technical progress of the

productive sectors, as well as a continuously changing composition of consumers' demand (Engel's law) (pp. 2-3).

Baranzini and Mirante underline Pasinetti's extraordinary clarity of mind and vision. Also, they note his ability to carry out a remarkably unified research programme encompassing many strands within its scope. Thus, according to Harcourt (2012)¹, Pasinetti became "the last of the great System-Builders" (p.137), and, as the authors of the volume point out, an extraordinary "tool maker".

Pasinetti's more than 60-year research programme followed a coherent pattern. It outlined the weaknesses of the marginalist or neoclassical model. Then it set the foundations for the reconstruction, on a mixed Classical and "pure" Keynesian bases, of a "more general theory" to explain the dynamics of modern economic systems.

2. PASINETTI'S PATH OF RESEARCH

The authors identify a major path of research in Pasinetti's work beginning with the 1981 *Structural Change and Economic Growth: A Theoretical Essay on the Dynamics of the Wealth of Nations*. It touches on two other articles titled "Rate of Profit and Income Distribution in Relation to the Rate of Economic Growth" (*The Review of Economic Studies*, 1962) and "The Rate of Interest and the Distribution of Income in a Pure Labour Economy" (*Journal of Post Keynesian Economics*, 1980/81). In these articles, Pasinetti underlined the "natural" feature, which is a distinctive feature of his research programme. This research path arrives at his 1993 *Structural Economic Dynamics: A Theory of the Economic Consequences of Human Learning*.

This path of research used powerful tools of analysis, particularly the methods of vertical integration and hyper-integration (Pasinetti, 1973, 1988). These methods allow for the understanding of several complicated phenomena in modern economic systems, including the unequal distribution and pace of technical progress and productivity, non-linear variations in the composition of demand, the presence of a great variety of asymmetric behaviours, the complex role of institutions² and the relevance of the distribution of income and wealth among factors of production and different socio-economic classes. Pasinetti's analytical formulation provides a logical framework in which technological and demand conditions may be integrated to give a comprehensive interpretation of the dynamics of the "wealth of nations."

The last Pasinetti's great work, that Baranzini and Mirante mention in their Introduction, is *Keynes and the Cambridge Keynesians: A 'Revolution in Economics' to be Accomplished*. This volume summarizes Pasinetti's vision of economic theorizing. In fact, Pasinetti (2007, p. 360) claims that it is necessary to go beyond the marginalist approach to economics. According to Pasinetti, it is important to operate at the 'natural' level before institutions are introduced into the analysis. He aims at a radical change of the current dominant paradigm, so that Keynes's 'revolution in economics', still unfulfilled may regain the lost strength and be accomplished. The Pasinetti's volume (2007) is subdivided in three parts, that he calls "Books". In Book I, Pasinetti reassesses the content of the 'Keynesian Revolution' after 70 years of its taking place, and he considers the issue of 'Scientific Revolutions and Alternative Paradigms'. In Book II, he offers five detailed and thoughtful scientific biographies of thinkers who sparked and carried the Keynesian revolution. These thinkers are Richard F. Kahn, Joan V. Robinson, Nicholas Kaldor, Piero Sraffa, and Richard M. Goodwin. Finally, in Book III Pasinetti looks to the future by developing a conceptual analytical framework that makes sense of Keynes's 'revolution in economics'.

Baranzini and Mirante point to the "Frame of Analysis of Pasinetti's Contribution", where Pasinetti's scientific vision is characterized by two important aspects. First, Pasinetti starts with a fundamental

¹ Harcourt, G. 2012. Luigi Pasinetti: The Senior Living Heir of the Cambridge School of Economics and the Last of the Great System-Builders. In R. Arena and P.L. Porta (Eds.) *Structural Dynamics and Economic Growth*, (pp. 137–144), Cambridge, UK: Cambridge University Press.

² Pasinetti, however, begins with a core model which is free from institutions.

distinction between the exchange paradigm and the production paradigm³. However, Pasinetti makes a clear choice toward the production paradigm. Next, he makes the distinction between the interdependence and the causality framework. To Pasinetti, the marginalist model may be represented by a system of interdependent equations in which “interdependence” refers to “simultaneous and symmetric relationships among variables.” On the contrary, classical, modern classical and Keynesian models are in historical time and are characterized by asymmetries. Therefore, the relations among variables are asymmetrical and proceed in a unique direction. Such models follow a causal order, which do not exclude set of relations of the interdependent type. Thus they combine causal and interdependent relationships to emphasize the causal chain of the forces that characterize the working of production economic systems.⁴

Finally, the authors single out nine strongly interrelated main lines in Pasinetti’s Research Programme. These are discussed in Part II.

Baranzini and Mirante conclude their introduction stressing Pasinetti’s original approach. This produced several empirical rules and theoretical frameworks often incompatible with traditional theory. Thus, the authors coherently argue that “*Pasinetti’s whole scientific life has been driven by the desire to provide new frameworks for the explanation of the mechanisms at the bases of modern economic systems*” (p. 24).

Following the Introduction, the book’s first part, which has three chapters, focuses on Pasinetti’s life and research. Chapter 2 narrates Pasinetti’s formative years at the Catholic University of Milan, Cambridge, Harvard, and again Cambridge. While at Cambridge under the expert guidance of Richard Goodwin, Pasinetti studied several authors, including Joan Robinson, Knut Wicksell, and Nicholas Kaldor. While at Harvard under the supervision of Franco Modigliani, he produced his first relevant work, “A Mathematical Formulation of the Ricardian System” published in *The Review of Economic Studies* (1960). In addition, he produced “On Concepts and Measures of Changes in Productivity”, his first dispute with Robert Solow, in *The Review of Economics and Statistics* (1959). Lastly, the article “Cyclical Fluctuations and Economic Growth”, published in the *Oxford Economic Papers* (1960).

Chapter 3 discusses Pasinetti’s studentship and research fellowship at Nuffield College, Oxford (1959-1961). During this time, he also started to get in touch with Sir John Hicks. In October 1961, Pasinetti was appointed University Assistant Lecturer and Fellow of King’s College, Cambridge. This chapter tells about Pasinetti’s academic life in Cambridge that spans from October 1961 to September 1976. Between October 1961 and September 1964, Pasinetti worked and taught in Cambridge as an Assistant Lecturer in the Faculty of Economics and Politics. On March 23, 1963, he received his PhD for his dissertation titled “A Multi-Sector Model of Economic Growth.” From March 1964 to September 1973, Pasinetti was a University Assistant Lecturer in the Faculty of Economics and Politics. In 1973 he was appointed Reader, thus he taught as University Reader from October 1973 to September 1976.

While at Cambridge, Pasinetti wrote seminal articles in *The Review of Economic Studies*. These works disputed Paul Samuelson and Franco Modigliani’s view on what they called “the paradox” in neoclassical models and the macro-economic theories of distribution.

Apart from the first debate relating to the measurement of technical progress with Robert Solow, the well-known two-Cambridges controversy covers several areas. One area of this controversy concerns profit determination, income distribution, and capital accumulation. It began with the formulation of the so-called Pasinetti’s Theorem, which established independence of the equilibrium rate of profits and distribution of income from the production function and the saving propensity of the workers. Baranzini and Mirante (2018, p.90) remind us that the controversy began with *The Review of*

³ Baranzini and Mirante observe that a similar distinction was proposed by John Hicks (1976), “Revolutions” in Economics. In S.J. Latsis (Ed.), *Method and Appraisal in Economics*, (pp. 207–218). Cambridge, UK: Cambridge University Press.

⁴ Pasinetti (2007, pp. 226-227).

Economic Studies (1962) article titled “Rate of Profit and Income Distribution in Relation to the Rate of Economic Growth.” This was followed by at least 15 papers, replies, notes, book chapters, and memoranda by Pasinetti. Approximately 400 titles by other scholars were published over the next five and a half decades. While the second area relates to capital theory, Pasinetti was the first to demonstrate the “falsity” of the Samuelson-Levhari non-switching theorem. He maintained that a monotonically decreasing relationship does not always exist between profit rate and capital-labour ratio. Pasinetti’s seminal contribution, “Changes in the Rate of Profit and Switches of Techniques” (the leading article of ‘Paradoxes in Capital Theory: A Symposium: Changes in the Rate of Profits and Switches of Techniques’), appeared in the 1966 issue of the *Quarterly Journal of Economics*⁵. Other contributions by Pasinetti continued to be published.⁶ A third area relates to structural economic dynamics and vertical integration.

Chapter 4 covers Pasinetti’s academic life at Catholic University through “Back to the Catholic University of Milan (1976 Onwards).” After resigning from his Cambridge readership position in 1976, Pasinetti focused on his full professor role in Milan. He remained at Catholic University until 2003 and retired and was appointed *emeritus professor*. After his return to Milan, Pasinetti was engrossed in issues related to distribution, structural dynamics, and the natural economic system. The authors stressed that “the link of Pasinetti with the Catholic University of Milan, which was never interrupted through his lifetime, was bound to become stronger from the early 1980s onwards.” (p. 107).

Pasinetti has made important contributions to many initiatives. In collaboration with Alberto Quadrio Curzio, Carlo Felice Manara, and PierCarlo Nicola, Pasinetti co-founded CRANEC at the Catholic University of Milan. He was a promoter of the University of Bergamo and the University of Lugano in Switzerland. From 1986-1989, Pasinetti was president of the Società Italiana degli Economisti (Italian Economic Association). He also served as the first president of the European Society for the History of Economic Thought (ESHET) from 1995-1997. In 2005, after being a member of the executive committee for nearly 20 years, he was elected honorary president of the International Economic Association (IEA). He also won prestigious prizes, including the 1997 Invernizzi Prize for Economics. In 1999, Pasinetti was conferred the honorary fellowship of Gonville and Caius College, Cambridge. He was appointed member of the Accademia Nazionale dei Lincei in 1993.

Part II of the book reviews Pasinetti’s main research lines through seven chapters. While at Harvard (1956-1957), he wrote his seminal essay titled “On Concepts and Measures of Changes in Productivity”. In it, Pasinetti faced questions surrounding technical progress and composition of demand, topics which developed his path-breaking research programme. Pasinetti’s 1960 paper, “A Mathematical Formulation of the Ricardian System,” provides evidence of two basic ingredients in his research program. The first focuses on the search for theoretical tools for a *dynamic* theory of growth and distribution. The second focuses on the inherent *historico-analytic* component of his research work. Baranzini and Mirante note that “the model contains the essence of Ricardo’s theory of value.” (p.123). However, Pasinetti uses the theory of value in Ricardo to illustrate the dichotomy in value theories (as between the two dominant traditions of classical and neoclassical). This is a distinction fundamental to Pasinetti’s vision. Moreover, Pasinetti’s simplification of the Malthusian principle of population provides a clearer picture of the accumulation process and the approach to the stationary state while abstracting from the offsetting influence of technical progress.

Chapters 6 and 7 of the book examine post-Keynesian income distribution and growth. The authors analyze Pasinetti’s 1962 paper in *The Review of Economic Studies*, which is his most widely known contribution in the field of income distribution, profit determination, and growth theory. In the article, Pasinetti provides a solution for the equilibrium rate of profits (the Kaldor-Pasinetti’s theorem or the new Cambridge equation). The Cambridge equation proved that distribution of income is determined

⁵ *Quarterly Journal of Economics*, 1966, vol. 80, pp. 503–17.

⁶ Pasinetti (1969). For more details, see Baranzini and Mirante (2018, pp. 90-91).

by the behaviour of the entrepreneurs. This solution was centered in a dispute between the two Cambridges. Moreover, the authors cite a list of contributions as they identify nine lines of research that have ramified from Pasinetti's theorem. Chapter 7 develops post-Keynesian income distribution and growth theory as it focuses on attempts to integrate the life-cycle theory with the post-Keynesian macro-model of distribution and accumulation. In this regard, the works of Modigliani, James Meade and related literature are discussed.

Chapter 8 reviews Pasinetti's view on capital theory. Baranzini and Mirante explain Pasinetti's fundamental contribution to the capital theory controversy. The controversy over the non-monotonic adverse relation between capital intensity and rate of profit has fallen into oblivion in the literature of mainstream economics. However, the authors underline that Pasinetti's dominant importance of capital-reversing was a victory for the *Cambridge School of Economics*. They correctly claim that the existence of different approaches in economic analysis cannot be considered simply as an anomaly, to be eventually eliminated with the disappearance of all conflicting views except one. But, on the contrary, the *Cambridge School of Economics* and Pasinetti's thinking represent a proactive and constantly evolving theoretical vision⁷, which it is continually resumed, as in the case of Piketty⁸.

Chapter 9 discusses structural economic dynamics and on the pure labour theory of value. Pasinetti's groundbreaking contributions relate to structural economic dynamics and the evolving structure of economies.

Pasinetti (1981) aims to develop a theoretical scheme that retains the analytical character of input-output analysis while dealing with uneven increases in productivity. Pasinetti's theory on structural economic dynamics is complemented by his vertical integration approach. This approach, first applied in Adam Smith's *The Wealth of Nations*, provides a way to represent the dynamics of the economic system crucial to the development of economic analysis. Moreover, Pasinetti's 1973 contribution to the study of vertical integration outlines the logic of uni-directionality in the specification of economic structure. In fact, Pasinetti's vertically integrated model is derived from the absorption of inter-industry flows of intermediate commodities, which allows a direct relationship between primary inputs (and the technological conditions of the economic system and final outputs (and the composition of effective demand). Furthermore, Pasinetti's structural economic dynamics contain a "pure labour theory of value." This allows Pasinetti to shift the theory of long-term economic development from a traditional framework based on capital accumulation to new foundations based on learning, technical progress, and diffusion of knowledge.

The relevance of Pasinetti's theory on structural economic dynamics led to many contributions by qualified scholars (most of these are cited in the book), special volumes, or journal issues devoted to its assessment and implications.⁹ In this regard, it is worth mentioning the volume edited by Richard Arena and Pier Luigi Porta, *Structural Change and Economic Growth* (2012) which connects the structural economic dynamics with growth. Also, the book contains an Epilogue (Part III of the book) that reports a precious discussion between Robert Solow and Luigi Pasinetti on 'Structural dynamics as part of the "unfinished [Keynesian] revolution"'. Another significant scientific initiative is the birth and development of the journal *Structural Change and Economic Dynamics*, which constitutes an important forum for discussing and continuously developing the themes of structural economic dynamics, and also the main Pasinetti's propositions on it.

⁷ Pasinetti (2003).

⁸ Piketty (2014) extensively quoted Pasinetti in relation to the controversy on capital. Although, Piketty seems do not fully grasp the meaning of the controversy and Pasinetti's contribution.

⁹ The author of this review contributed to Pasinetti's theory with one of the first empirical applications of his structural change model and vertically integrated sectors: Schilirò, D. (1984). 'Effetti del progresso tecnico sull'occupazione', Quaderno CRANEC, Università Cattolica, Milano. Published in *Flessibilità, concorrenza e innovazione: l'impresa minore e le nuove tecnologie*, *Studi e Ricerche*, 1986, n.11, Mediocredito Lombardo, Milano.

Chapter 10 focuses on the dichotomy between natural vs. institutional relations in Pasinetti's theory. Pasinetti stresses two distinct categories in economic relationships, which imply different methods of analysis. The "natural" relation corresponds to a set of relationships independent of the institutional framework and of particular behavioural features. An application of this distinction can be traced to his analysis of structural economic dynamics, namely transformations on the objective stock-flow network reflecting basic characteristics of technological, demographic, and consumption factors considered to be independent of the institutional framework (Pasinetti, 1981). These natural forces derive from a series of structural movements (or "natural" features) of a growing economic system. The final chapter discusses Pasinetti's legacy as the heir of a long and important tradition connecting Marshall, Robertson, Pigou, Keynes, Robinson, and Kaldor. The authors highlight Pasinetti's capacity to uphold the Classic Italian and British traditions of economic thought at the frontier of economic research. Pasinetti demonstrated the analytical strength of a different (non-mainstream) approach to economics. This approach focuses on economic dynamics and structural change, along the building blocks of Classical economists like Smith, Ricardo, and also of Sraffa and Keynes. To conclude, Pasinetti is a leading scholar of the Cambridge analytical tradition through his unique combination of the Classical and Keynesian thought and beyond.

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