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Piero Sraffa’s 1960 subversive classic was the leanest, most muscular missive ever to strike at the heart of economics orthodoxy. Short of a hundred pages, every word of the book was chosen with care. The math was transparent and constructive. More than once throughout his review of this slim volume, Ajit Sinha refers to its aesthetics as a representation of ‘minimalist art’. Since Sinha has long and assiduously, over publication in leading journals, crafted an interpretation of Sraffa’s evolution in the book under review, the aesthetics of this independent scholar also merit attention. Careful with exegesis, Professor Sinha has collaborated with imaginative mathematicians to push the Sraffa agenda decidedly forward (Cockshott & Sinha, 2008; Sinha & Dupertuis 2009A, 2009B).

The walls of the Gokhale Institute of Politics & Economics in Pune, India, were once adorned with the prints of Joan Miró to reflect sensibilities of the then Director, Ajit Sinha. These prints display everyday objects like a cork, a feather and a hatpin. They are not multidimensional and must be chosen. Arranged in a particular manner, they become works of art (Combalia, 2008). Miró sought the ‘assassination of painting’, a revolt against the mainstream of the day (Rowell, 1987, pp. 114-116). However, he never became a member of either of the opposing camps. Thus, his work was surreal but he was unlike the surrealists of his time.
The Sinha-Sraffa intellectual reconstruction not only starts with an empirical economy but also, as we will see, ends with the empirical economy as a system of production as a whole. The components of the structure are statistical givens in the sense of a system of National Accounts, but the sectors must be chosen and arranged to represent an economy cast in circular terms. To raise a point about metrics of an economic system below, we observe that the economy will be rich in variety, with many technological coefficients, differing profit rates across sectors, and so on. This ground-breaking first step demonstrates the ambition of the enterprise. No other research programme in either mainstream or radical political economy originates in an empirical economy. General Equilibrium theory (GE), for instance, follows the Bourbaki practice of axiom-theorem-proof. On this score, Sinha rues the went on with the exultation of the Cantabrians over their foes from Cambridge, Massachusetts in the ‘capital controversy’. The focus was the meaning of capital in the production function and the aggregation problem. But once a complete GE model was specified, the neoclassical / non neoclassical divide could be glossed over, and the marginal (no pun intended!) slip could be conceded. GE theorists went on with the the job of relaxing axioms, solving conundrums, and proving new theorems. The research programme of the Sraffians, on the other hand, has long shown signs of degeneracy. Partly independently and partly as a response to GE theory, agent-based modelling, laboratory testing of axioms, and the like have lately garnered their fair share of Nobel prizes. The idea is to look at how people really think, what they in fact do, how markets actually work, and so on. Heterogeneity is the rallying cry of modern economics.

The subtitle of Sraffa’s book is as revolutionary as its title: Prelude to a critique of economic theory. Sraffa was famously noncommittal about the best way to move forward. Sinha’s painstaking efforts have transformed the music of Sraffa’s book from a prelude to a fugue. As a conductor, he has done no more than quote copiously from Sraffa’s own notes – notes which are now available to other scholars at the Wren Library in Cambridge – with minimal interventions. Having juxtaposed various movements, he leaves the reader to create the music for herself. The economic theory of the subtitle, it turns out, does not exclude classical economics.
The system of equations of the circular economy must be solved for prices. The vector is no more than a truth statement for the given system. It is a point in space. The solution is neither the price taking nor the price making of GE. They are not equilibrium prices, short-term or long-run (Sinha & Dupertuis 2009C, 2009D).

The lodestone of Sinha’s architecture is the mutual influence exercised between the philosopher Ludwig Wittgenstein and Piero Sraffa. For Wittgenstein, all elementary propositions contain one ‘fact’ or ‘thing’. Higher-order propositions must have a logical structure that represent the structure of facts or things. The order in which simple objects combine with simple objects is the structure of the ‘state of affairs’. Herbert Simon (notably) and Kevin Hoover (recently) have both developed a vocabulary for causally ordering the variables of interdependent systems (Correa, 2009). The word ‘causation’ is shorn of any substantive meaning and used only to depict recursive and interdependent subsystems. For instance, it would discomfit many that the wage rate and profit rate are ‘given from outside’. A theorist would say that the fewer the exogenous variables the better. However, the wage rate and the profit rate are both outputs of an unspecified subsystem. The social accounting matrix should be properly enlarged to include the distributional subsystem. In 1928, Sraffa set out constructing a ‘frame’ into which classical theories could fit. The profit rate was the measure of the economic system and was not connected with other measures such as the rate of interest. Sraffa, following Wittgenstein, would deem ‘metaphysical’ any theorems about the connection between these two rates, and any theorems in which the rate of profit reflects the essential nature of capital to accumulate, because they do not correspond to facts. Real quantities must mirror lived experience. The general must give way to the particular.

Sinha tells us that Sraffa, the sculptor, proceeded according to the following blueprint. First, ensure that all Basics produced in the actual system are greater than the use made of them in the system in the aggregate. If this is not the case, rescale the system – keeping the aggregate use of labour constant – to bring it to such a state. Next, gradually reduce all outputs by an equal percentage of their total output, while leaving the inputs unchanged. Stop this chipping away process when the output of any commodity becomes equal to its use as an
aggregate input. Rescale again, so that all outputs are in excess of their aggregate use as inputs. Re-chip and rescale until all outputs are equal to their aggregate use as inputs. This is the subsistence system. Lastly, expand all outputs by the total percentage by which they were chipped off. The final system that emerges is the Standard system. A constructive proposal is to define the money commodity in terms of the Standard commodity, which will give us the money wage.

Now for the pièce de résistance, the *coup de grâce* to economic theory: expressing the wage in terms of the Standard commodity would provide the condition for a uniform rate of profit in the empirical system. This number would be independent of prices. Price movements expressed in terms of the Standard commodity would always measure the changes that have occurred in the price of a particular commodity due to changing wages, instead of measuring the Standard. Thus, beginning with a ‘non-repetitive’ real system that changes, in principle, every moment, we construct a snapshot of a ‘repetitive’ system. Another time, another place, and another snapshot of the economy. The modus operandi is depicted below.

The circular logic of production of commodities
The rest is silence. Sinha advises us to listen to Sraffa's silences (Sinha, 2012). How can we, lesser mortals, fill the silences between the musical cycles? This reviewer is inclined to offer some hints. Sraffa’s earliest major published work was on monetary matters in 1920. The issue was inflation. Most economists advocated the revaluation of the lira to its pre-war parity with gold. Sraffa objected to this because he believed that a mere comparison of the two points was dangerous. The move from one to the other would trigger a cumulative downward process. Even as a thought experiment, we would not be able to go back in time. On the other hand, a contract was an exercise in logic: the promise to pay a certain amount of lira in exchange for gold must be kept. Because there was nothing sacrosanct about an exchange rate established at a particular point in time, the solution lay in finding a different exchange rate.

Secondly, according to Sraffa, the questions that interested classical economists were driven by ideology and politics. The wage rate and the rate of profit in different photographs can be connected together in an unspooling of the moving picture that is the capitalist economic system. There will, no doubt, be crises and breakdowns that call for State intervention. But backs have been turned to revolutionary theory and revolutionary practice. Social democrats, for instance, embrace the variety in capitalism and regard workers as citizen-consumers, as Wolfgang Streeck (2014) and others have pointed out. Social services are tailored to differing tastes. The dignity of the public sector has, as a result, been compromised. If economists cannot fill Sraffa’s silences, historians and sociologists might be put to the task. The scholarship of Georg Simmel (2004) and Geoffrey Ingham (2004) might shed light on aggregate monetary arrangements in a way that is consistent with production conditions. Historians have been diligently forging conceptual tools that grapple with newly available data to give us a fresh perspective on epochs of capitalist history. Technical change might be inferior to wage-employment dynamics in shedding light on the transition from one epoch to another.

**References**


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