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ABSTRACT

Given the emphasis on social provisioning in heterodox economics, two of its central theoretical organizing principles are the concepts of the total social product and the social surplus. This appears to link heterodox economics to the social surplus approach associated with the classical economists and currently with Sraffian economists. However, heterodox economics connects agency with the social surplus and the social product, which the Sraffians reject as they take the level and composition of the social product as given. Therefore the different theoretical approach regarding the social surplus taken in heterodox economics may generate a different but similar way of theorizing about a capitalist economy. To explore this difference is the aim of the paper. Thus the paper is divided into four parts and a conclusion. In the first section social provisioning and the social surplus is introduced. In the second section, the Sraffian social surplus approach is delineated while in the third section the heterodox social surplus approach is delineated. In the fourth section of the paper, some of the implications emerging from the differences between the two approaches are discussed. The paper is concluded in the final section.

Keywords: social surplus, social product, social provisioning, agency, Sraffian economics, heterodox economics

JEL Classification Codes: B50, B51

SOCIAL SURPLUS APPROACH AND HETERODOX ECONOMICS

“the term ‘surplus approach’...should refer to Sraffian economists, in particular to Piero Garegnani and his followers...whereas...authors like [Post Keynesian economists]...do not belong to this specific school.” (Anonymous 2009)

The above quote suggests that the social surplus approach is reserved only for the school of Sraffian economists associated with Piero Garegnani. This is a rather peculiar claim since other Sraffian schools or approaches associated with Alessandro Roncaglia, Paolo Sylos-Labini, and Luigi Pasinetti (Roncaglia 1989; 2009, ch. 8; also see Aspromourgos 2004) as well as other heterodox approaches, such as Marxian-radical economics, Post Keynesian economics, and Institutional economics also claim a connection to it as well. What is at issue here is whether the social surplus approach lends itself to more than one analytical narrative. That is, if the structural core of the social surplus approach consists of technology, class, capitalist state, and a surplus producing economy qua social activities and the agency core consists of decisions by the business enterprise and the state, are there diverse ways of engaging with it? The Sraffians in general argue that their approach, which is closely aligned with the classical approach, is the only valid approach. In this paper we argue that there is also an alternative approach to the social surplus approach, one that draws up Sraffian as well as other heterodox traditions. This more integrative approach is denoted as the heterodox social surplus approach.¹ We also argue that the two approaches, while similar, generate different theoretical narratives of the provisioning process and theoretical puzzles to investigate. Thus, after a brief introduction to social provisioning and the surplus, the paper is divided into three additional sections and a conclusion. In the second section, the Sraffian social surplus approach is delineated; in the third section of the paper, the heterodox social surplus approach is delineated; and in the fourth section

of the paper, some of the implications emerging from the differences between the two approaches are discussed. The paper is concluded in the final section.

Social Provisioning and the Social Surplus

Economics and especially heterodox economics is about developing theoretical explanations of the social provisioning process. People have social lives; they have families, parents, children, and a history; and they need to be feed, housed, clothed, married, and schooled. And the needed and desired 'surplus' goods and services are produced to sustain their socially constructed, meaningful lifestyle. Thus the social provisioning process is a continuous, non-accidental series of production-based, production-derived economic activities through historical time that provide 'needy' individuals and families the goods and services necessary to carry out their sequential reoccurring and changing social activities through time. Hence, as social activities, economic activities are interlinked with various societal institutions (such as the legal system, household, and the state); in cultural values (such as individualism and egalitarianism) that are evaluative criteria for establishing which social activities are worthwhile and desirable; in norms and beliefs (such as property rights and the work ethic) that explain or justify particular social activities; and in the ecological system (such as land and raw materials) that provide the material basis for conducting social and economic activities (Polanyi 1968; Hayden 1982). These components or structures of the social fabric affect the pattern and organization of economic activities underpinning social provisioning: they give it meaning, they give it value. This means that the social provisioning process is embedded in a production-with-a-social surplus 'paradigm'. Consequently, the social surplus consists of the goods and services

determined by the values and forces that create the social activities which the provisioning process underwrites.

What is evident is that the above forces include both social structures and social agency. In particular the social structures include the structures of production (that is the organization of production and the use of inputs to produce the output), social-economic classes (capitalist vs. workers), and the capitalist state; while the social agency includes the production and investment decisions by the business enterprise and the expenditures by the capitalist state. Also evident is that the social provisioning process must ensure, broadly speaking, that the social activities reoccur over time. Consequently, the composition and magnitude of the social surplus is based on productive capabilities and agency decisions. But this further presupposes that the productive capabilities are capable of reproducing themselves while producing a surplus. What this means is that the social provisioning process is founded on the social and interdependent production of goods and services; thus the core framework of economic activity of a capitalist economy consists of its schema of social production and the income flows relative to goods and services for social provisioning. The schema of social production of the economy is represented as a circular production input-output matrix of material goods combined with labor power skills to produce an array of goods and services as outputs. Many of the social outputs replace the goods and services used up in production, and the rest constitute a social surplus of consumption, private investment, and government goods and services to be used for social provisioning through contributing to providing government services and making possible consumer social activities.²

Sraffian Social Surplus Approach

The classical surplus approach delineates the determination of the proportion between capitalists' profits and workers' wage income, given (1) the production technology, (2) the level and composition of the social product, and (3) real wage rates determined by the size of the industrial reserve army (in Marx) or at the subsistence level (in Ricardo). The Sraffian approach to the social surplus approach, which emerged out of Sraffa's *Production of Commodities by Means of Commodities* (1960), is an objectivist reconstruction of the classical social surplus approach concentrating on the theory of prices and distribution. Sraffians hypothesize that there exist two distinctive and interdependent domains in theory. At the core of the Sraffian approach lies the *pure* theory of value and distribution which elucidates the structural forces underlying the capitalist economic system. Applied theory, on the other hand, concerning actual behaviors by agents and historically contingent institutional arrangement is left outside the core. Only the core domain can be generalized in a rigorous and formal fashion and it precedes and governs the actual operation of the system. The purpose of pure theory, thus, is to illuminate the structural and persistent forces underlying the capitalist system. If one pursues a 'full economic analysis,' discretionary and complicated human behaviors and institutional set-ups are to be taken into account; but the latter cannot be a part of the pure theory. With this analytical dualism concentrating on the pure theory, two theoretical consequences follow; one being the long period method and the other being the macroeconomic foundations of the economic system (these are dealt with below). [Sraffa 1960; Eatwell and Milgate 1983; Garegnani 1984; 1987; Mongiovi 2002; Bortis 1997; 2003; Pasinetti 2005; Kurz and Salvadori 2008]

The Sraffian surplus approach starts with five assumed givens: technology (material production coefficients a_{ij} and labor production coefficients l_i), a viable economy (meaning that

the economy produces enough of the right kind of surplus to maintain the working class), the level and composition of the social product, a self-replacing with a surplus economy, and class (capitalist vs. workers).³ The first through fourth assumptions imply that the total amounts of the intermediate inputs $\mathbf{eG} = \mathbf{e}(\mathbf{Q}^T\mathbf{A})$ and total workers employed $\mathbf{Q}^T\mathbf{l} = L$ are known. Consequently, the overall social surplus is the difference between the total social product and the total amounts of inputs:

$$(1) \quad \mathbf{S} = \mathbf{Q} - (\mathbf{eG})^T$$

where \mathbf{S} is a semi-positive $n \times 1$ column vector of the social surplus;

\mathbf{Q} is a strictly positive $n \times 1$ column vector of the total social product;

\mathbf{e} is the sum vector whose elements are all 1;

\mathbf{G} is a semi-positive $n \times n$ matrix of intermediate inputs used in the production of \mathbf{Q} ;

\mathbf{A} is a semi-positive $n \times n$ technology matrix comprised of material production coefficients;

\mathbf{l} is a strictly positive $n \times 1$ column vector of labor production coefficients; and

L is the total amount of workers employed.

Finally the fifth assumption ensures that the overall social surplus is large enough to sustain the workforce and have goods and services left over for capitalists.

To allocate \mathbf{Q} to the various industries in accordance to the requirement of self-replacement and distribute \mathbf{S} between the capitalist and working classes, it is necessary to determine the distribution variables, the wage rate and rate of profit, and production prices. The classical variant takes the real wage, \mathbf{w}_r , as a vector bundle of products and hence the total real wage in terms of \mathbf{S} is \mathbf{S}_w , where $\mathbf{w}_r = \mathbf{S}_w/L$. Thus total profits in terms of commodities consist of the remaining surplus products: $\mathbf{S}_p = \mathbf{S} - \mathbf{S}_w$ (where \mathbf{S}_p and \mathbf{S}_w are $n \times 1$ semi-positive vectors).

With the division of the social surplus determined and a commodity numeraire assumed, then the uniform rate of profit, real wage rate, and production prices (which assure the allocation of the outputs among the various industries to ensure reproduction and replication) are determined. The more Sraffian approach is to assume a commodity numeraire and take either the uniform rate of profit or the wage rate as given and the resulting prices ensure that the output is appropriately relocated and the social surplus is divided between capitalist and workers. [Chiodi 1998; 2010; Garegnani 1984; 1987; Bortis 1997; Roncaglia 2009]

Central to the Sraffian approach is the total social product is given and the requirement of a viable, self-replacing economy with a surplus which implies a theoretical framework which is timeless in that no lags or leads enter into consideration (Bortis 2003, 94), exogenous variables (the real wage, social product, and technical condition) and endogenous variables (the relative prices of commodities and the distribution of surplus) are separated *a priori* so as to produce a theoretically closed system.⁴ Such assumptions imply that the surplus is a residual from which capitalist consumption, investment goods, and government goods emerge; furthermore, capitalist consumption is associated with unproductive labor, investment goods suggest an act of non-consumption hence savings, and government goods suggest that taxes pay for them and that they are associated with unproductive labor. More importantly, with the social product and social surplus given, the only issue left is the exchange and distribution of the social product so that production can take place again. Consequently, production prices are needed in so far that reproduction and replication of the economy can take place through market exchanges. Because of the commodity numeraire, production prices are exchange ratios of two commodities and market exchanges are essentially acts of barter.⁵ This means that prices are not just allocation devices to ensure the appropriate reallocation of the given output, they are also the mechanism

through which the disaggregated, atomistic economy is brought together as a whole—they coordinate economic activity through acts of bartering. In this manner, production prices perform tasks that are similar to the tasks of prices in a neoclassical world. This clearly weakens the claim of the Sraffians’ devotion to production over exchange (as well as to the principle of effective demand which is the dominant factor driving production and organizing and coordinating economic activity).

To extend the Sraffian surplus approach beyond the assumption of given level and composition of the social product so as to be able to deal with variations in economic activity without violating the other four assumptions and the derivative properties of production prices requires the introduction of long period methodology. Under the conditions of a viable, self-replacing, replicating economy with a surplus, there is no long period (or notion of equilibrium) since there is no change. So, its total social product does not represent some normal capacity utilization, just as returns to scale cannot characterize its technology and production prices are not related to market prices. The implication of changing the social product is that the other four assumptions may not remain given and the properties of production prices may cease to hold since change suggests agency. To deal with this, the Sraffians introduce long period methodology which they borrowed from classical political economy.⁶ The long period approach is intended to distinguish and identify between accidental, transitory and structural forces of the capitalist system in a specific stage of development. Because the latter is the central concern of Sraffians when examining the theoretical relationship between prices, distribution, and output, its “theory of output must be the natural, or normal, level of output, itself the centre of gravity of the transitory forces which affect output at any given time. Thus a long-period *normal* analysis of the formation of natural prices must be accompanied by a long-period *normal* analysis of output”

(Eatwell 1998, 599). Hence, in the long period, normal capacity utilization (or rates of accumulation) is taken as given. This means that the level and composition of the social product is known and given. Consequently, changes in long period normal capacity utilization can only come about by changes in technology or the definition of viability (that is what constitutes the real wage for workers) and/or the exogenous and autonomous determinants of the social product—private investment, government expenditures, and capitalist propensity to consume (or real capitalist consumption). Therefore, the economy in a long period position is a viable, replicating, self-replacing surplus economy and the production prices associated with it retain their properties of allocating the social product. [Serrano 1995; Bortis 1997; Aspromourgos 2004; Benetti, Bidard, and Klimovsky 2008]

What the recourse to the long period method does is to eliminate any substantive influence of agent-based investment and production decisions. In particular, with regard to Keynes's principle of effective demand, Sraffians argue that Keynes's 'short period' aggregate supply and aggregate demand framework is basically the 'physical-quantity adjustment mechanism' which represents generalized behavioral relations of economic agents and which are in their character less durable than the underlying socio-economic structures. Thus Keynes's system is, according to Sraffians, insufficient to analyze the fundamental characteristics of the capitalist system (Pasinetti 1997, 97-8). Alternatively, Sraffians propose that the principle of effective demand is "a far more fundamental and profound principle that goes much deeper below the surface of an economic system of the industrial type; a principle that descends far below the superficial level of a particular institutional mechanism (that is far below what simply appears from the operation of the market)" (Pasinetti 1999, 8). Consequently, Sraffians take up Keynes's effective demand in a classical line of reasoning. This became the long period social

surplus approach—the long period method is necessary since the determination of the social product or normal capacity utilization needs to be removed from agency and reasserted as autonomous and given.⁷

Heterodox Social Surplus Approach

Like the Sraffian approach, the heterodox surplus approach starts with some assumed givens: technology, class, capitalist state, and a viable economy. On the other hand, the level and composition of the social product and a self-replacing with a surplus economy are not assumed. In their place is agency embedded in the social structure qua social relationships qua social institutions. By ‘embedded’ is meant that agents, either individually or collectively, carry out a particular role assigned by the present social structures. The defining social structures of capitalism are the capitalist state (with its state money), class structure, and the structure of production in the sense that individual workers’ economic activities are directed by state and capitalists’ employment decisions; and the embedded agency regarding private employment, output, and investment decisions is the business enterprise who make the decisions for the purpose of making positive monetary profits, while state expenditure decisions (which includes employment and investment decisions) are made with the view of supporting the interests of the capitalist class. In this context the social surplus is defined as the difference between the total social product and the total amount of inputs at a point in time; and the total social product is determined by agent-based expenditure decisions and economic activities are organized and directed toward the creation of the surplus. That is, the social product is not given and the surplus is not a residual.

This conclusion is structured and modeled in the following manner. At the level of production, the technology matrix A is sub-divided into A_{11} of intermediate inputs used to produce intermediate outputs \mathbf{Q}_1 and into A_{21} of intermediate inputs used to produce consumption goods (\mathbf{Q}_{2C}), fixed investment goods (\mathbf{Q}_{2I}), and government goods (\mathbf{Q}_{2G}) which equal \mathbf{Q}_2 . \mathbf{Q}_1 are Sraffian basic goods and \mathbf{Q}_2 are Sraffian non-basic goods, and together they constitute the total social product \mathbf{Q} . Moreover, \mathbf{Q}_1 is completely used up in production so the entire social surplus consists of consumption, fixed investment, and government goods and services: $\mathbf{S} = \mathbf{Q}_2$. Therefore the quantity model of the economy is:

$$(2) \quad \mathbf{Q}_1 = [\mathbf{I} - \mathbf{A}_{11}^T]^{-1} \mathbf{A}_{21}^T \mathbf{S}$$

$$\mathbf{S} = \mathbf{Q}_2 = \mathbf{Q}_{2I} + \mathbf{Q}_{2C} + \mathbf{Q}_{2G}$$

$$\mathbf{L} = \mathbf{l}_1^T [\mathbf{I} - \mathbf{A}_{11}^T]^{-1} \mathbf{A}_{21}^T \mathbf{S} + \mathbf{l}_2^T \mathbf{S} + \mathbf{L}_{31}$$

where \mathbf{S} is a strictly positive $m-n \times 1$ column vector of the social surplus;

\mathbf{Q} is a strictly positive $m \times 1$ column vector of the total social product, \mathbf{Q}_1 is a $n \times 1$ column vector of the total amount of intermediate inputs used in production, and \mathbf{Q}_2 is $m-n \times 1$ column vector of consumption, fixed investment, and government goods;

\mathbf{A}_{11} is a semi-positive $n \times n$ technology matrix comprised of material production coefficients used in the production \mathbf{Q}_1 ;

\mathbf{A}_{21} is a semi-positive $m-n \times n$ technology matrix comprised of material production coefficients used in the production \mathbf{Q}_2 ;

\mathbf{L} is the total amount of workers employed;

\mathbf{l}_1 is a strictly positive $n \times 1$ column vector of labor production coefficients used in the production \mathbf{Q}_1 ;

l_2 is a strictly positive $m-n \times 1$ column vector of labor production coefficients used in the production Q_2 ; and

L_{31} represents the total amount of government employees.

Therefore, the decisions to determine S determines the level and composition of the total social product Q and the total amount of employment L . Hence the social surplus is not a residual and the total social product is not so much given as it is determined endogenously by the social surplus.⁸

The combination of the social surplus as the active factor in determining the social product and the basic/non-basic production schema of the economy generates a number of theoretical implications. First, the social product is not allocated via production prices to the various industries so as to enable economy-wide production to commence again; rather, the decisions to produce the social surplus ‘coordinates’ economic activity by requiring the various basic industries to produce the goods and services for the production of the social surplus. Therefore, the level and composition of the social product and level of employment are generated in the course of producing the surplus. Four subsidiary theoretical points emerge from this: (1) the production of consumption, fixed investment, and government goods and services are done independently of each other; (2) profits are produced (not saved) in the form of fixed investment and government goods and services and wages are produced (and not saved from the previous cycle of production) in the form of consumption goods, which implies that the volume of profits is unrelated to the volume of wages, the rate of profit and the wage rate are not inversely related,⁹ and the magnitude of the rate of profit and the wage rate are dependent on the decisions associated with the amount of the surplus that should be produced; (3) given the existence of state money, government goods and services are produced prior to and hence

independent of taxes; and (4) prices do not allocate the social product, wage rates do not allocate labor, profit mark ups do not allocate fixed investment goods or profits among the various industries.¹⁰

A second theoretical implication is that the level and composition of the social surplus are determined by the class-oriented values that direct the social provisioning process. That is, the objective of the social surplus is to provide for the social provisioning process. Hence the values of the business community and the political elite with regard to social provisioning determine the level and composition of goods and services that constitute the social surplus. This has three implications: (1) all productive activities are valued and all labor activity (whether workers or management) is productive which undermines the productive-unproductive labor distinction in classical political economy and the instrumental-ceremonial dichotomy in Institutional economics; (2) because profit mark ups and wage rates are the mechanisms through which the working class and the business community obtain state money income to gain access to social provisioning, their differential magnitudes reflect the values of the business community and political elite; and (3) the viability of the economy, while necessitating the reproduction of the working class, depends primarily on the continuation of the business community and the ruling elite to control the decisions concerning the determination of the social surplus.

The inference of the above is that the role of prices, wage rates, and profit mark ups in the economy is not one of allocation but one of access to the social provisioning process and agent reproduction and continuation. This implies in a Kaleckian fashion that the category of wage rates is created with the production of consumption goods for workers; that the category of the profit mark up is created with the production of capitalist consumption, fixed investment and government goods; and that it is the decisions of the business enterprises and the state that

determine the production of the consumption, investment, and government goods. Hence, it is agency and decision-making concerning the social surplus that is the central focus of the heterodox approach to the social surplus. What this suggests is that the critical issues at hand are how the social surplus is produced and how the social provisioning process is organized by the dominant agent qua class in the capitalist system. In this regard, the heterodox social surplus approach demonstrates that access to monetary resources is essential for agents to engage in the social provisioning process. This is partly captured in the theory of monetary production by Marx, Veblen and Keynes (see, specifically, Marx 1990 [1867], 293; Veblen 1904, 50-1; Keynes 1979 [1933], 66-7, 81-3). The participation in the social provisioning process by social agency (workers, capitalists, and the state) through state money can be systematically delineated in the determination of income distribution, prices, and output, rather than assuming one of them is fixed. A second implication is that the heterodox social surplus approach is an open system approach in the sense that agency embedded with uncertainty and hence fallible expectations creates the social surplus, the outcome of which there is no predetermined center of gravity, convergence position, fixed point, or path in the social provisioning process—structures do not act by themselves, although fallible human actions¹¹ are confined by historically contingent structures. That is, socio-economic structures change over time due to the unpredictable recursive interaction between agency and structures. Production of commodities, employment, distribution of income, and prices are sequentially, not simultaneously, determined by way of agents' deliberate efforts to advance production technology, to change institutional arrangements, and to change class relationships. Consequently, a final implication is that the heterodox social surplus approach requires both micro and macro accounts since agents' strategic decisions are made with a view to overall and future economic conditions. Such a micro-macro

synthetic heterodox analysis (or heterodox microfoundations of macroeconomics) of the system as a whole is rendered possible by way of input-output analysis coupled with the analysis of institution-dependent agency and causal mechanisms. It further implies that the determination of effective demand and the production surplus without the active and deliberate roles of agency has no meaning. [Eichner 1987; Lee 2009b; 2010; Jo 2007; Trigg 2008]

Heterodox Economics and the Social Surplus Approach

The heterodox social surplus approach so far delineated differs from the Sraffian surplus approach on the issues germane to the account of a capitalist economy. That is, the Sraffian surplus approach is one systematic way of looking at various issues centered around the structure of a capitalist economy, while the heterodox social surplus approach is another theoretical framework which, without losing relevant insights of the Sraffian surplus approach, extends the horizon of heterodox economics by incorporating active agency and institutional set-ups. The difference between two surplus approaches generates theoretical fertility which can contribute to the advancement of heterodox economics.

To be a viable economy, the economic system as a whole organizes economic activities and structures such that productive capacity is physically reproduced (that is, replacing vintage fixed investment goods and innovating cost-reducing production technology) and expanded (that is, the accumulation of the means of production in the classical sense) and that the working/dependent class is biologically-socially reproduced to maintain a certain level of effective demand that is necessary for the growth of the economy. As the social provisioning process as whole is controlled by the capitalist class and the state, so is the reproduction and accumulation of the means of production; the reproduction of the working/dependent class is

subservient to the reproduction of the ruling class. More to the point, the possibility for a viable economy has little usefulness unless the way the economic system as a part of a society is organized is explained. The Sraffian surplus approach is weak in this regard because it restricts viability to the real wage of the working class. As a result, the notion of the viability of an economy with regard to the long-period position does not add significant insights to the understanding of an ever-evolving capitalist economy. By contrast, because the heterodox approach connects viability to the economy as a whole, it lends itself to the variances and complexity of the capitalist system since it involves changing organizational patterns and causal mechanisms specific to a particular institutional set-up.

The heterodox social surplus approach fully grounded in the social provisioning process means that the decisions which determine social surplus drive the level and composition of the social product and hence employment. So, the amount and composition of labor power employed is determined by the business enterprise which is equipped with an array of fixed investment goods and a set of production technology in use at a point in time. Thus, the growth in the magnitude in the social product and employment is the outcome of strategic decisions and values by those who control the social provisioning process. Hence, the pace and path of accumulation is, by the same token, the result of and subordinate to such deliberate actions and values.¹² In short, the cumulative causation runs from effective demand for surplus goods to commanding surplus labor to the production of goods and services (and profits and wages).¹³ This causation implies that produced commodities, whether intermediate or final goods and services, are produced for needs put in place by effective demand via the values embedded in the social provisioning process, rather than commodities finding needs. Indeed, exchange of produced commodities in the market is an inseparable part of the social provisioning process since profits

are realized by actual demand for goods and services; but not in the neoclassical sense that markets coordinate consumers and producers. To secure the reproduction and expansion of the capitalist class, therefore, markets are to be governed and controlled so as to stabilize profitability. This is rendered possible by the continuous and concerted efforts of market governance and control by the capitalist class and the capitalist state. For the sake of controlling the capitalist economy and stabilizing economic activity, the capitalist class and the state qua the ruling class have a common agenda.

The fundamental methodology of the social surplus approach posits that its structures are relatively stable, real, concrete, measurable, and/or otherwise identifiable. The heterodox approach goes further and assumes that agency is real, concrete, and identifiable and it 'produces' concrete and measurable social surplus and hence social product. From this real, 'objectivist' position, the Sraffians utilize long period methodology to deal with changes in the social product. However, by doing so, problems with time and the concrete emerge that affect the theoretical concept of long period position as well as convergence or gravitation to it. With regard to the social product, Sraffians take the long period normal capacity utilization as given with the actual variations in capacity gravitating around it or converging to it. This presumes that actual fluctuations in capacity utilization tend to converge or gravitate to the long period positions of normal capacity utilization and thus the long period position is asymptotically stable. As a corollary and by the same token, actual prices converge to long period prices that are based on the same normal capacity utilization. This is supported by introducing a strong price-substitution effect (Boggio 1985; Hosoda 1985), a direct output adjustment (Duménil and Lévy 1987), a full-cost pricing mechanism (Bellino 1997), or a monetary mechanism (Duménil and Lévy 1999). In light of historical time, such a conjectural convergence process cannot be

sustained in general since in the surplus producing economy both the scale of production and prices changes over time (Lee 1985, 213-5; also see Lee 1994). That is to say, unless a viable, self-replacing surplus producing economy that is replicating itself on a larger scale is assumed, techniques, the composition and relative proportions of the social product, and real wages (or money wage rates) do not remain constant in historical time. For instance, even a small change in a pricing parameter at a point in time disrupts a whole convergence process and, hence, actual prices “cannot *a priori* be considered ‘good’ approximation for solution prices” (Lee 1996, 97-8). The interconnection between industries through the use and make of products (portrayed by the input-output table of an economy), furthermore, implies that a change in production in an industry “becomes progressive and propagating itself in a cumulative way” (Young 1928, 533). In this respect, D’Oltrando (2005) argues that the convergence to the long-period position is logically inconsistent because the long-period position requires the ‘chronological persistence’ which has little empirical evidence. Moreover, although the chronological persistence is assumed, “Sraffian models still have to face the theoretical problem of identifying an equilibrium in which the exogenously given data are compatible with the values of endogenously determined variable” (637-8).

There is an additional problem with the long period position which is its concrete nature. Sraffians generally argue that the long period concepts of normal capacity utilization and production prices are theoretical entities with no actual concrete counterparts, no actual existence. Thus, their claim of convergence of the actual to the theoretical entity is used to argue that a correspondence between them exists; for if there is no correspondence, then the theoretical entity can be dismissed as fictional and irrelevant. However, if the properties of the actual entity are different from the theoretical entity, then not only is there no convergence, there is also no

correspondence. Without empirical correspondence or even empirical grounding, long period theoretical entities are empirically unconstrained—they are hypothetical, non-actual theoretical entities that can potentially be whatever the theoretician wants them to be. Moreover, because the long period and convergence are located in logical time as opposed to actual historical time, the convergence of the actual entity in actual time to non-actual theoretical entities in logical time has no substantive meaning. Consequently, the long period method with its non-concrete, non-real theoretical entities and non-actual, logical time is fundamentally inconsistent with the real, objectivist methodology of the social surplus approach. With the long period method problematical, it appears that the Sraffian social surplus approach may be a dead end. Consequently, the Sraffian conception of theory is, as far as the general research agenda for heterodox economics is concerned, open to question. [Cesaratto 1996; Roncaglia 1990; 1995; 2009; Garegnani 1988; Vianella 1989; Salanti 1990]

Working within the methodology of the social surplus approach with its given structures, the heterodox approach introduces real decisions made by real agents in historical time (which implies a transmutable world and uncertainty) that result in actual, concrete social product, social surplus, and prices. As a result, the social product, social surplus, and prices are both concrete and theoretical entities that exist in historical time; and the existence of historical time stands in place of logical time, long period, and convergence and gravitation. This means that actual long period positions (or equilibrium and disequilibrium positions) and market clearing are not fundamental organizing concepts for economic theorizing.¹⁴ It further means that the actual social product or actual prices are not based on accidental, random, or autonomous factors; rather, they reflect the current structures and agency. That is to say, there is no distinction between actual and theoretical, a point that is fundamentally at odds with the long period

method. Because agency takes place in historical time, decisions regarding the social surplus and/or prices cannot be separated from the decisions about investment, production, employment, and competitive strategies. Such decisions have an impact on both structures and agency; so the result of this cumulative causation are historical narratives of real social provisioning based on actual, real changes in the social surplus, social product, and prices.

Conclusion

The social surplus approach is the central analytical concept of the heterodox theoretical narrative of the social provisioning process. Its primary structures are technology, class, capitalist state, and an economy that is capable of producing a surplus that constitutes social provisioning. As befitting structures, they are relatively stable but do change. The Sraffian approach introduces additional structural conditions of viability vis-à-vis the working class and a self-replacing economy, while the heterodox approach introduces the structural conditions of ruling class viability and non-self-replacing economy. Finally, the Sraffian approach assumes a given total social product or normal capacity utilization while the heterodox approach assumes agency which determines the social surplus that determines the total social product to complete the concept and make it 'operational'. It is the differences in the secondary structures and most importantly in the assumptions which produce the two distinct analytical and methodological paths of development of the social surplus approach.¹⁵ Indicative of the differences is that in the Sraffian approach production prices are long period theoretical prices (not real or actual prices) that govern the allocation of the theoretical (not actual) social product, whereas in the heterodox approach, prices are real or actual prices govern the reproduction of the business enterprise and not the allocation of the social product. Another way of highlighting the differences is that the

Sraffians believe the way forward is to go back to the past, back to classical political economy. Given its questionable ideologically embedded theoretical concepts such as competition and the uniform rate of profit, the heterodox approach instead draws selectively from the past and melds it with the ‘current’ theoretical developments of Leontief and Keynes in order to go forward. So to claim that there is only one social surplus approach and that it is ‘Sraffian’ is quite misleading. To maintain such a position and reject the possibility of controversial discourse weakens the pluralism and intellectual dynamism of heterodox economics.

Notes

1. This is in keeping with the definition of heterodox economics as an intellectual community comprised of various kinds of heterodox economists and as a theory that integrates the theoretical contributions of the various approaches that make up the community (Lee 2009a, chs. 1, 10). To emphasize, the primary objective of this paper is not to reject the Sraffian surplus approach, but to enhance the relevance of the surplus approach in line with the recent development in heterodox economics.
2. Relatively scarce factors of production (and by extension the relatively scarce produced goods and services) do not exist in this schema of production. This implies that the propensity to truck and barter or exchange is not scarcity-based, and prices are not scarcity indexes. Moreover, it is not possible to establish functional relationships between ‘scarce factors’ of production or produced inputs and their prices. Hence the social surplus approach is the foundation of a theoretical approach that is distinctly different from the relative scarcity approach that underpins mainstream economics. Consequently, it is not possible to transport mainstream theoretical concepts into heterodox economics. [Matthaei 1984; Campus 1985;

Garegnani 1987; Steedman 1988; Vianello 1989; Roncaglia 2009, ch. 6]

3. The capitalist state is implicitly assumed by Sraffians but little reference is made to it.

However, the capitalist state is less implicit in the account of welfare following the Sraffian tradition since it is necessary to discuss the welfare state. In the context of welfare provisioning the state plays a role as a producer of social-wage goods and as a fiscal authority who manages the demand for social-wage goods (see Cesaratto 2008).

4. Sraffians defend themselves by stating that “[g]ranted simple truth that the ‘givens’ are not necessarily constant and the ‘constants’ are not necessarily givens, the quantities and the rate of interest are taken as givens in Sraffa’s theory of prices, although they can be assumed to change and they can be explained by a separate theory in which they would not be taken as given” (Parrinello 2002, 244; also see Garegnani 1985, 1987). However, such pre-determined variables are required to proceed to a theory of price and distribution.

5. The Sraffian social surplus approach is devoid of money, especially state money, and the financial system (Minsky 1990; Kregel 1985). As a consequence, it is possible to construct a moneyless, theoretically self-contained economic system, where the inherently unstable nature of capitalist system tends to escape Sraffians’ notice.

6. To legitimize this theoretical innovation, it is necessary to argue, as do the Garegnani-Sraffians, that the long period is either implicit in or compatible with *Production of Commodities by Means of Commodities*. They do this by arguing that Sraffa pointed the way forward to a new economics by returning to classical political economy and its long period methodology (Garegnani 1984; 1987; 1990; Bharadwaj 1985). However, other Sraffians, such as Roncaglia (1989; 1996; 2009, 50), argue that Sraffa is not connected to the long period methodology and its notions of convergence and the center of gravity since some of the

convergence (and stability) arguments are based on determinant relationships between prices and quantities – demand curves (Caminati 1990).

7. In fact, the notion of agency does appear in the Sraffian surplus approach; agency is interchangeable with labor who is knowledgeable, insightful, and inventive and is solely defined in the production process (Bellofiore 2001, 270; Pasinetti 2001, 388). But labor qua agency in the Sraffian approach plays no role in the determination of prices, distribution, or output. That is to say, with the rejection of Marx's labor theory of value, the Sraffian approach is the agency-free theory of value and distribution.
8. This implies that the social product is not brought to the market to be exchanged, but is produced for the market in which its exchange has, in a sense, already been predetermined independently of prices. This suggests that demand creates its supply with no prices or realization problem.
9. The wage rate and rate of profit are also independent of each other when state money is the 'numeraire'.
10. As argued elsewhere (Lee 1994; 1996; 1998; 2009b; 2010), in the heterodox approach, prices are determined independently of actual or long period output; and, moreover, the matrix of pricing coefficients is different from the matrix of production coefficients. Consequently such prices cannot allocate the social product and hence are distinct from production prices.
11. Human actions are defined in the process of social interactions. Thus actions refer to, but not limited to, psychological variation, thought operations, and habitual conduct.
12. This implies that capitalism is not predicated on accumulation *per se*, but on the viability of the ruling class which in turn can, in part, be based on the accumulation of the means of production.

13. This suggests that the concept of labor commanded and the exploitation of labor are restricted to the Sraffian and classical social surplus approach. In particular, workers are not exploited in the labor theory of value sense in that they get less than what they produce. Rather, they are directed by the ruling class to produce surplus goods and services for them and as a by-product produce their own goods and services. The end result is the same but the analytical narrative is different. [Lee 2009b; 2010]
14. This argument can also be applied to short period positions. Consequently, efforts by Post Keynesians to retain short period methodology while rejecting long period methodology are equally problematical. There is even a more subtle problem here and this is whether the concept of short period is compatible with the social surplus approach. That is, in classical political economy there is no short period, just actual and theoretical. Sraffians borrowed this methodological point when developing their social surplus approach. Hence for Keynes to be acceptable to them, he has to be long-periodized; there is no other option.
15. What is important to note is that the Sraffian or heterodox social surplus approaches are not based on any specification of markets and competition. This implies that assumptions of perfect/imperfect competition or uniform rate of profit are of secondary theoretical importance, a point often made by Pasinetti and other Sraffians. [Pasinetti 2001]

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