

Interpreting the capitalist order before and after the marginalist revolution

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In this article I compare the approaches to process and order of classical political economy and marginalist economics, taking into account the implicit ontological commitments of each perspective in their explanation of capitalism. I draw on the social ontology developed by Tony Lawson, especially the notion of social positioning. The classical political economists studied the capitalist economy as a process of reproduction and distribution of the economic surplus, where socio-economic order depends on the division of society into social classes. After the marginal revolution, the classical approach is definitely abandoned, in a context where the analysis of human institutions in terms of social positions is progressively replaced by methodological individualism. This leads to a conception where the notion of socio-economic order is interpreted always in terms of market exchange between individuals, and in many cases replaced with a concern with the stability of an equilibrium situation.

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1. Introduction

The classical political economists studied the capitalist economy and society in terms of the continuous reproduction and distribution of the surplus. The surplus is the part of production that is not necessary for the reproduction of the existing economic system, and can be used to expand and transform the existing economic system or in luxury consumption. The distribution of the surplus takes place according to the social class in which each individual is placed. This approach has precursors, such as William Petty and Richard Cantillon, and was developed more explicitly by François Quesnay, Adam Smith and David Ricardo.

In these contributions, process is a notion implicit in the conceptualisation of socio-economic reproduction. Social order is a notion implicit in the organisation of society into social classes. The notion of social class is central to Marx's subsequent study of the process of socio-economic change, which is interpreted in terms of class struggle. In so doing, Marx is drawing on the classical approach, where social classes play a

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central role in the distribution of income. The distribution of income, in turn, is seen by the classical authors as essential to the process of socio-economic reproduction. Quesnay, Smith and Ricardo stressed how the use of income is the key determinant of whether the economy progresses, stagnates or declines, depending on whether the surplus is allocated to social classes that use it in productive activities or social classes that use it in wasteful consumption.

Here I draw on the social ontology developed by [Tony Lawson \(2003, 2012, 2015\)](#) to further elaborate on the notion of social class. In particular, I draw on Lawson's approach to social positioning, which will prove most helpful to understanding the notion of social class, and the classical approach to capitalist order that is implicit in the use of this notion. Furthermore, Lawson's social ontology also helps understanding how the abandonment of the notion of social class after the marginal revolution led to an atomistic approach, which underpins contemporary mainstream economics. The marginal revolution brings a definitive turning point of a route that had already started after Ricardo, in which the notion of reproduction is replaced with the notion of equilibrium and the notion of social class is replaced by methodological individualism.

I begin by describing Lawson's social ontology and its approach to social positioning. I then draw on Lawson's social ontology to interpret the classical authors and the ways their contributions were subsequently developed by Marx in terms of class struggle. Afterwards, I address three influential (arguably the most influential) approaches to equilibrium and order that were developed after the marginal revolution, namely, Alfred Marshall's partial equilibrium theory, Léon Walras's general equilibrium theory and Friedrich Hayek's conception of a spontaneous order (which, unlike the contributions of Marshall and Walras, tries to explain order without drawing on a teleological notion of equilibrium). I argue that these various approaches that emerged out of the marginal revolution lead to the conclusion that the process of market exchange is always necessary for socio-economic co-ordination and order, whilst Marx's development of the classical approach leads to a conception where order can emerge in a plurality of institutional frameworks other than market exchange.

2. Social ontology and social positioning

[Lawson's \(2012, p 359\)](#) starting point for the study of society is human interaction, which takes place within a given community. Human interaction becomes manifest in various human practices, which can be seen as collective practices to the extent that those practices are collectively accepted by the community ([Lawson, 2012, p 360](#)). To be collectively accepted does not mean that a given practice is evaluated in a positive way by all individual members of the community. It simply means that it constitutes a way of proceeding that is widely adhered to by the members of the community in their daily affairs, even if individual reflection may lead them to question it.

As [Lawson \(2012, p 361\)](#) notes, the existence of collective practices that are widely accepted leads to a degree of predictability in human interaction, which enables the co-ordination of economic activity. Predictability is enabled by the reproduction of collective practices that persist through time, enabling socio-economic co-ordination. The persistence of collective practices, and the predictability grounded on the expectation that they will persist in the future, brings in normativity. For once those persistent collective practices become the expected way to proceed, they start to be seen as the usual norms of conduct, that each member of the community expects others to follow. This

means that certain collective practices are then seen as obligations for those who are expected to perform them, and others feel entitled to see such an expectation fulfilled, which gives rise to the associated notion of rights (Lawson, 2012, p 362).

As Lawson (2012, p 367) notes, rights and obligations are attached to social positions. Social positions, such as landlord and tenant or capitalist and worker, tend to persist through time, even as different individuals slot into them. Lawson (2012, p 368) uses the term 'social relation' 'to express the manner of connections of social positions'. In particular, a social relation 'is just an accepted set of rights and obligations holding between, and connecting, two or more positions or occupants of positions' (Lawson 2012, p 368). This set of inter-connected social positions leads to what Lawson (2012, p 372) calls a social structure. The social structure, and the set of rights and obligations associated with each position, gives rise to positional powers to a given occupant of a position. Social structures, constituted by social positions connected through social relations of rights and obligations, shape the distribution of positional powers and are ontological constituents of social reality in Lawson's conception.

One must avoid reifying the notion of a social structure constituted by social positions and social relations. Human agency draws on the existence of the social structure, but the latter provides a set of possibilities that may be actualised or not, depending on human activity, which does not merely reproduce social structures but also transforms them. This is certainly consistent with the classical approach, where the reproduction of socio-economic activity does not merely reproduce existing socio-economic structures, since it can lead to progress, stagnation or decline, depending on how the surplus is distributed amongst the various social classes.

The persistence of social reality is not so much the mere permanence of its components and mode of organisation, but springs from the fact that those components and mode of organisation are continuously reproduced. To reproduce means to produce something again, and denotes thus a dynamic process. Of course, reproduction need not mean an entirely new creation, since it draws on pre-existing collective practices. But as noted already, collective practices need not remain exactly the same, since they are also transformed to a greater or smaller degree throughout the process of reproduction. Human institutions can be seen as relatively enduring social structures, which tend to persist more than others throughout the dynamic process of socio-economic reproduction. But even human institutions are also transformed and reconstituted to some degree, since all social structures are in a process of change, even those that are relatively enduring in comparative terms.

Social positions, like collective practices, are reproduced through time and provide stability to human interaction, since the set of rights and obligations associated with a given social position persists through time even as different individuals slot into different positions. The persistence of collective practices associated with social positions, and the ensuing normativity of social life, constitute the aspects of social structures which most contribute to socio-economic order. Order arises out of the predictability of collective practices, which in turn arises due to their persistence. The notion of process, in turn, refers to the intrinsically dynamic nature of social reality, since persistence is the outcome of a dynamic process of reproduction, rather than a mere permanence of static entities. Even physical objects can be positioned, too, as artefacts, as Lawson (2012, pp 376–7) notes, and the social positions they occupy as artefacts depend on the dynamic reproduction of the social structure.

The particular aspect of this social ontology I wish to focus on here is the idea of social positioning. Social positioning can be seen as a process through which individuals or objects are placed as a component of a totality, such as a community. As noted, social positioning is essential to socio-economic order, since rights and obligations, which provide normativity and predictability to human interaction, are attached to social positions. I now draw on the notion of social positioning to shed a new light on the classical authors. I start by addressing the specific social position of being a member of a given social class, such as landlord, capitalist or worker, which were the social positions discussed more systematically by the classical authors.

It must be noted that someone who occupies a social position such as capitalist has specific rights and obligations towards specific workers, and is not related in a similar sense to all workers in society. Likewise, a landlord is socially related to specific tenants. The specific social position occupied by a given individual denotes specific relations between a given employer and employee or a given landlord and a given tenant. A social class denotes groups of individuals who are in similar social positions, such as landlord, capitalist or worker. Since individuals in the same social class have similar rights and obligations towards the distribution of the surplus, the notion of social class helps addressing the overall effects of the distribution of income in the whole economy.

I begin by addressing the classical approach to the process of socio-economic reproduction, where the notion of social class plays a key role. But when using the notion of social class, it is important to bear in mind that rights and obligations attributed to social classes are ultimately connected to specific social positions, which can be usefully grouped into a social class when looking at the process of production and distribution.

3. Socio-economic order and capitalist reproduction

According to classical economic theory, political economy consists of the study of the circuit of socio-economic reproduction. The classical economic theory does not address how order arises out of individual interaction, and assumes a given social structure, in which society is structured into social classes. Each social class, such as landlord, worker and capitalist, can be seen as a social position in the sense elaborated already, attached to a given set of rights and obligations, which constitute the positional powers of the occupant of each position. Rights and obligations are associated with the normative aspect of collective practices, as noted above. Collective practices enable predictability and co-ordination when they tend to persist, and become regarded as the proper and expected way of proceeding. This idea of persistence and normativity is also present in the classical analysis, where human activity is explained using such notions as habit and custom, which are the classical terms used to explain persistent collective practices and the ensuing normativity therein.

Of course, this is not explained so systematically by the classical authors who took the notion of social structure essentially for granted whilst using it to explain socio-economic reproduction. In fact, the classical authors used such terms as 'habit' and 'custom' according to the common sense of their time, without elaborating their ontological meaning. The social ontology described here remains essentially implicit in the classical study, even if [Smith's \(1759 \[2002\]\) *Theory of Moral Sentiments*](#) provides a more detailed account. Whilst the notion of socio-economic order remained essentially implicit in the classical characterisation of social structures in terms of

social classes, the process of socio-economic reproduction is explained in a more detailed way, drawing on the notion of social class. In fact, such an explanation of the process of reproduction is the fundamental question for the classical political economists.

To address this fundamental question, the central analytical concept used by the classical authors in their economic theory is the surplus, which is the part of production that is not necessary for the reproduction of the existing economic system. To understand the centrality of social positioning to the classical framework, it is essential to understand that for the classical authors, economic progress, stagnation or decline depends on how the surplus is distributed amongst the various social classes. Individuals positioned in different social classes typically use the surplus in different ways. The surplus can be distributed so that it is used by social classes who usually employ it in productive activities that expand and transform the existing economic system. Or the surplus can be used by social classes that typically use it in unproductive activities such as the wasteful consumption of luxury commodities (that is, commodities that are not necessary for the reproduction, expansion or transformation of the existing economic system), leading to economic stagnation or even decline. The (positional) powers of those whose positions make up specific social classes determine the right of those concerned to a relative share of the surplus. The (positioned) collective practices which they habitually perform determine whether the surplus contributes to economic growth, stagnation, or decline.

Landlords are typically seen as an unproductive class, as it can be witnessed in the writings of Quesnay, Smith and Ricardo. The workers are seen as a productive class, and Marx believed that they are the only productive class in the more advanced stages of capitalism, where small entrepreneurs are displaced by large joint stock companies. Marx noted that as larger firms emerge, new social positions are created, which are occupied by workers who acquire rights and obligations pertaining to the management and supervision of other workers, which in earlier stages of capitalist were rights and obligations connected essentially to those positioned as (specific concrete variants of) capitalists or entrepreneurs. In the more advanced stages of capitalism, the social position of capitalist becomes increasingly connected with its rentier dimension and the associated rights and obligations, rather than with entrepreneurial activity and the associated rights and obligations. Marx's analysis is simply a development of the classical concern with making sure that the surplus is appropriated and used by the productive class, which for Marx is the working class.

The distribution of the surplus throughout the various social classes is then essential to understanding the process of socio-economic change. The distribution of the surplus is seen by the classical authors as a process that depends on human institutions and social positioning in particular. That is, it depends on what was called the positional powers of each class, which confers to the individuals so positioned a set of rights and obligations. Thus, the distribution of positional powers is the essential aspect to study if we want to understand the socio-economic process of reproduction, and whether it leads to progress, stagnation or decline.

As noted, positional powers are attached to the social position that each individual occupies, rather than to the individual, who will lose those positional powers once the social position is abandoned or ceases to exist. The social position is connected to the division of labour, which gives rise to various social positions not only within the labour process but also in what concerns the distribution of the surplus produced in

the labour process, which is distributed as wages, profits or rents to the individuals occupying the appropriate social positions.

The classical authors took the social structure of their time essentially as given. They did not consider alternative social structures, even when they were critical of the parasitic social classes, that is, the classes that spend the surplus in wasteful consumption. This means that the classical authors took the distribution of positional powers essentially as given, rather than something that could be changed. It was quite otherwise with Marx who, drawing on the classical analysis, proposed a change in existing social structures. For this reason, Marx ended up providing a more explicit account of the distribution of positional powers within a given social structure. That is, since Marx was not merely positing existing social structures but also trying to see how they could be changed, he ended up paying closer attention to the distribution of the positional powers of landlords, capitalists and workers.

Also, Marx believed that there were tendencies within capitalism that lead to a change in existing social structures. For him, the distribution of positional powers leads to a constant antagonism between individuals positioned in different social classes. This antagonism is exacerbated by the fact that those positioned as workers have a set of rights and obligations (*vis-à-vis* those positioned as capitalists) that renders them unable to appropriate a share of the surplus that corresponds adequately to the labour power provided. This leads to a tendency for the increase of inequality in the distribution of the surplus, whilst capitalist competition and crises lead to concentration and the decrease in the proportion of social positions occupied by those who receive a greater share of the surplus, that is, a decrease in the proportion of capitalists *vis-à-vis* workers.

Marx believed that at some point those positioned as workers will be in an overwhelmingly greater number comparatively to those positioned as capitalists and conscious of their ability to manage the economy on their own, since they are in truth the only productive class, which in the more advanced stages of capitalism includes also workers positioned with rights and obligations of managing and supervising other workers. Under these conditions, workers will then put an end to the social positions of capitalist and landlord, leading also to a change in the social position of workers, since the rights and obligations connecting workers to capitalists and landlords disappear. This requires a revolution, since social positions tend to persist, thus enabling the reproduction of the existing social structure, and their elimination requires purposeful action in this regard.

Marx's perspective illustrates how socio-economic order based on social positioning can be found to persist at some level even through radically disruptive processes of change, such as a revolutionary process. Predictability and normativity is ensured even throughout the revolutionary process by the fact that the capitalist social structures have already prepared many of the social positions of the socialist society, the germs of which are already developed within the capitalist social structure. This is especially so in large joint stock companies where many workers already occupy social positions that endow them with rights and obligations concerning the management and supervision of the overall economic activity.

Marx's concern with changing the capitalist social structure leads him to explain the social positions of the capitalist structure more explicitly than the previous classical authors. The fact that Marx wrote at a time when large joint stock companies were increasingly more important leads him to consider further social positions within the

hierarchy of those companies, such as the social positions of administrator, director, worker and the like. Some of these social positions are occupied by the workers even within the capitalist social structure, enabling the persistence through change of several social positions which enable socio-economic order throughout the transition to socialism. Marx's account is illustrative of how the classical approach can be extended to address various institutional configurations that may arise due to class struggle.

4. Social positioning and the distribution of the surplus

As noted already, social positions are a central aspect for predictability and stability in human interaction. Another key aspect is the continuous reproduction of collective practices, which take place as the actualisation of the social relations connecting social positions, that is, as the exercise of rights and obligations associated with social positions. These collective practices take place in everyday economic activity, be it production, exchange and consumption.

The activity of production can be readily explained through the notion of social positioning. Individuals engaged in production occupy a given social position within the overall process of the division of labour. The reproduction of this social position, and the associated rights and obligations, provides stability, predictability and normativity to production activities. Consumption can also be explained in terms of social positioning, as one can see by studying the contribution of Veblen (1899), who saw conspicuous consumption as a means for an individual to become positioned in a leisure class.

As for exchange, social relations between those positioned as sellers and those positioned as customers also emerge, as Sraffa (1925, 1926) noted when explaining (or, indeed, anticipating the discovery of) imperfect or monopolistic competition. Predictability and normativity in exchange comes also from the expectations formed around prices. For the classical authors, market prices gravitate around what they called the natural price. By 'gravitation' the classical authors meant only a vague process of fluctuation around whatever custom dictates. As Garegnani (2012) notes, the fundamental idea is that of a price that persists through time. This persistency of the natural price enables the stability, predictability and normativity that is essential for the maintenance of socio-economic order.

The classical authors argued that the natural price depends on the underlying conditions of production, where the cost of production can be measured in terms of human labour and is constituted by wages, profits and rent. But the distribution of wages, profits and rent, in turn, depends on institutional factors and social positioning in particular. For the classical authors, wages tend to the subsistence level. But the subsistence level, in turn, is interpreted as the level that enables the achievement of a certain standard of living, which depends on habit, custom and the nature of society, as Garegnani (1984) notes. Wages are then determined by institutional factors, such as habit and custom. But these institutional factors, in turn, are connected to how an individual is positioned in society. As Sen (1999) reminds us, this is expressed in Smith's reference to the customary standard of living that enables an individual to 'appear in public without shame'. Appearing in public without shame enables the maintenance of a certain social position, which the subsistence wage is supposed to enable.

Once the share of wages is set, the remaining part of production constitutes profits and rent. As Sraffa (1960) noted, variations in the share of wages lead to variations

in relative prices, depending on the relative proportions of labour and other means of production in a given industry. In fact, the relative proportions of labour and other means of production across industries ultimately depend on the distribution of income between profits and wages, since changes in the distribution of income can lead to switching and re-switching between techniques of production, as [Sraffa \(1960\)](#) argued, drawing on the classical approach and Marx.

[Sen \(1982, 1999\)](#), also drawing on the classical approach and Marx, further noted that distribution has an impact on human capabilities and thus on the potential for socio-economic change. [Kalecki \(1971\)](#), drawing on Marx's development of the classical conception of socio-economic reproduction, also explained how the distribution of income between profits and wages influences effective demand and employment.

So prices, technology, industry structure, human capabilities, demand, employment and economic performance in general (leading to progress, stagnation or decline) depend ultimately on the distribution of income, that is, how the surplus is allocated. The distribution of income, in turn, depends on social positioning, since it is through social positioning that individuals acquire positional powers connected to the appropriation of a share of the surplus. One may add that it is not only the worker who requires a certain income for achieving a given social position, as noted by Smith, but also those who do not work, who wish a share of the surplus large enough so as to enable them to be positioned as members of the leisure class, as [Veblen \(1899\)](#) noted more explicitly.

5. Marginalism and partial equilibrium

The classical approach provides a basis for a development of an economic theory based ultimately (if implicitly in its detailed elaboration) on social positioning theory, where even prices, technology, industry structure, capabilities, demand, employment, and economic performance in general can be seen as ultimately relying on positioning. This is so because the distribution of the surplus is seen by the classical authors as an exogenous determinant of various economic aspects (from the point of view of economic theory), to be explained through institutional factors, as [Garegnani \(1984\)](#) notes, drawing on [Sraffa \(1960\)](#). And these institutional factors are ultimately connected to social positioning.

But the idea of social positioning was never explicitly developed within economics and ended up being abandoned after the marginal revolution, especially throughout the twentieth century. The twentieth century saw mainstream economics become a project characterised by the use of mathematico-deductivist techniques, rather than by specific theories, as [Lawson \(2003\)](#) notes. This tendency, which is fully developed throughout the twentieth century, starts essentially with the marginal revolution, but it can be traced back to previous authors who pioneered the use of mathematical methods in economics—see [Lawson \(2003, ch. 10\)](#) and [Martins \(2013, ch. 5\)](#).

A central mathematical technique that is developed within marginalism is differential calculus. Differential calculus had already been employed by Johann Heinrich von Thünen and Augustin Cournot, two authors who influenced decisively Alfred Marshall's methodology. But it is only after the marginal revolution that it becomes widely used, not least to formulate supply and demand curves drawing on the notions of marginal cost and marginal utility, respectively.

After the marginal revolution, distribution starts to be explained in terms of supply and demand curves. In fact, labour and capital are seen as commodities like any other, whose price can be explained in terms of supply and demand curves, too. This means that distribution is no longer explained in terms of social positioning, and of the positional powers of various social classes. Since the conditions of production are subsumed in the idea of a supply curve reflecting marginal cost, which is not necessarily influenced by distribution, positioning does not play a role in explaining prices as well. All prices are simply explained in terms of supply and demand curves, that is, marginal cost and marginal utility. The analogies between the analyses of production, consumption, labour and capital in marginal analysis springs from the use of the same mathematical technique.

Marshall saw the use of differential calculus as an important way of analysing the effect of a marginal change of a given variable on another variable whilst assuming everything else constant. This allowed Marshall to focus on separated parts of the economy (whilst assuming everything else to remain constant) through his method of particular (or partial) equilibrium. Marshall's method, influenced by differential calculus, leads to the consolidation of the switch from the classical analysis of the reproduction of a whole, to an analysis centred on the equilibrium between different parts. He was quite concerned with distribution, as one can see by the structure of his *Principles* (1920 [1890]), which seems to converge towards the topic of distribution. But his analytical framework, focussing (sequentially) on isolated parts, provides also a way for studying economic phenomena such as prices independently of distribution.

In classical political economy, the mathematical technique used (when used at all) was not differential calculus but rather arithmetic, since the emphasis was on aggregate quantities that are (re)produced in the economy (which is seen as a totality), rather than on marginal changes in quantities demanded and supplied, that lead to the formation of marginal utility and marginal cost, and govern the equilibrium between different parts. Marshall (1920 [1890]) writes in the preface of his *Principles* that it was the contributions of Cournot and Von Thünen that led him to focus on marginal increments in quantities, rather than aggregate quantities.

After the marginal revolution, the notion of order appears now subsumed under (or, indeed, replaced by) the notion of equilibrium, be it Marshall's particular (or partial) equilibrium or Walras's general equilibrium (the latter will be further discussed later). The tendency to focus on equilibrium between different parts already existed after Ricardo, in the writers that Marx labelled as 'vulgar' economists and their supply and demand analysis. In particular, Marx sees Thomas Robert Malthus, Nassau William Senior and John Stuart Mill as important authors where the search for equilibrium between supply and demand (rather than conditions for socio-economic reproduction) is already the central aspect. Only after the marginal revolution is that equilibrium definitely embraced as the central organising concept of economic theory.

Marshall (1920 [1890], 1923 [1919]) formulated supply and demand curves drawing on differential calculus, and noted that if we presuppose infinitesimal changes, we may focus on the effect of a given change on another change whilst assuming everything else remains constant. But in economics we are not concerned with infinitesimally small changes, and the use of supply and demand curves applies only to very specific cases, as Sraffa (1925, 1926) argued.

The circularity and logical inconsistency of the marginalist notion of equilibrium between supply and demand curves appeared again in the Cambridge controversies in the theory of capital, where [Sraffa \(1960\)](#) and [Robinson \(1953–4\)](#) argued that the production function and the notion of marginal productivity of capital it entails cannot be used to determine the interest rate, since the interest rate would be needed first to aggregate capital from different time periods—see [Harcourt \(1972\)](#) and [Cohen and Harcourt \(2003\)](#) for a discussion. Sraffa's reasoning can also be applied to Austrian capital theory, as [Sraffa \(1932\)](#) indeed did when criticising Hayek, who had tried to build on the Austrian capital theory of Böhm-Bawerk for studying production, whilst drawing on the notion of subjective time preference to explain the interest rate.

As Sraffa notes in his unpublished manuscripts, the fundamental problem of marginalism is that it depends on the pre-supposition that there must be marginal changes whilst everything else remains constant, so that marginal value (be it marginal utility or marginal cost) is found and used to determine prices through supply and demand analysis (see [Martins, 2013](#)). This may be a reasonable assumption in physics when studying infinitesimally small changes (and even there Sraffa had doubts, given the results of quantum physics that challenged Newtonian physics), but it is certainly not a reasonable assumption in economics.

A central notion for understanding the methodological issues at stake here is the notion of internal relation. As [Lawson \(2003, p 17\)](#) notes, 'Aspects or items are said to be internally related when they are what they are, or can do what they do, by virtue of the relations in which they stand'. That means one cannot look at a given component of reality without taking into account the overall system into which those components are organised. In philosophy, this idea was developed especially in connection to Hegel's dialectics. Marshall, who was influenced by Hegel, was well aware of this problem. In fact, Marshall's use of differential calculus was an attempt to avoid this problem—see [Martins \(2013, ch. 2\)](#) for a discussion.

Sraffa, however, thought that the most appropriate methodology, rather than looking at marginal changes that take place in a given interval of time, is to look at the conditions for the reproduction of the whole system at a given moment in time—see [Martins \(2013, ch. 2\)](#) for a discussion. If socio-economic processes are internally related, they cannot be explained in terms of mechanical changes whilst assuming everything else to remain constant, as Marshall believed.

Sraffa thought that the most appropriate framework is to look at the more general conditions for the reproduction of the socio-economic process at a given instant in time, without studying the specific way the economy may move towards a given equilibrium or another, which is too complex a task to be undertaken without taking into account the specific historical and institutional contingencies at stake. Sraffa also thought that this method, of looking at the conditions for the reproduction of the economic process as a whole, was the classical method, which was developed by Marx but abandoned by the marginalist economists.

6. Process and general equilibrium

The problem Sraffa identifies in marginalist theory is a specific case of a more general problem debated in philosophy since Heraclitus at least, which concerns the possibility of achieving knowledge of an internally related totality which is in (or, indeed, consists of) a process of permanent change. Plato tried to solve this problem by looking not at

the particular manifestations of this ever changing process but at the underlying forms, structures or ideas that persist (or are reproduced) through this process of change. In the Platonic view, order appears then in the timeless structures, forms or universal ideas that are actualised through a permanent process of change. Aristotle developed this idea, too, but stressed that forms are abstracted from concrete objects.

Sraffa's solution, which consists of looking at the conditions of possibility for socio-economic reproduction at a given moment in time, shares some similarities with this philosophical tradition initiated with Plato. However, there is no evidence that Sraffa made any explicit connection to this philosophical tradition, which was, however, quite influential in Cambridge for a considerable amount of time; see [Martins \(2013, ch. 9\)](#).

It is quite the contrary with Walras, who explicitly stated that his method was based on the Platonic philosophy which, according to Walras, consists in studying universals, rather than the corporeal entities in which those universals become manifest. Walras noted that a central part of his approach was the tatonnement process of trial and error through which prices are reached, and order is ensured by the existence of a general equilibrium determined by pure theory (at the level of universal ideas).

Despite this methodological similarity, Walras's theory is very different from the classical theory Sraffa is recovering. Walras's conception of equilibrium maintains a teleological orientation to economic theorising. The notion of order that is implicit in equilibrium analysis presupposes a final rest state towards which the economy and society are permanently tending. For the classical authors, in contrast, the notion of order was implicit in their conception of society, and of the distribution of income between individuals positioned in various social classes. This distribution could lead to a progressive, stationary or declining state of society. The classical analysis of the conditions for economic and social reproduction which spring out of a given socio-economic order need not pre-suppose a final, stationary state, which is only a particular situation that may or may not occur.

However, Walras's approach is also quite different from that adopted by his followers, who neglected his philosophical method and social concerns (the same happened with Marshall). Walras's pure economic theory was seen, for a time at least, as the ideal framework for avoiding the inconsistencies pointed out by Sraffa to marginalist analysis. This was so because Walras, like Sraffa, also looked at the economy as a whole in his general equilibrium analysis. Thus, as [Cohen and Harcourt \(2003\)](#) note, after conceding defeat on the Sraffa/Robinson assault to the production function, marginalist economics developed following Walrasian general equilibrium analysis.

But Walras's general equilibrium analysis suffers from inconsistencies, too. He wanted to explain value in terms of the interaction between supply and demand, in marginalist fashion. But he also wanted to define a long-period rate of return on capital, a procedure that is certainly in line with his Platonic method of focussing the more persistent (or timeless) forces of the economic system. However, as [Sraffa \(1960\)](#) noted, if we have a system of simultaneous equations aimed at finding prices, once we have also a uniform rate of return, prices are already determined in terms of cost of production (including the surplus, which we know if we know the uniform rate of return), and there is no need of a marginalist supply and demand framework for finding them. Walras's method conflates two different approaches, leading to an over-determined system.

The solution found to this problem by Kenneth Arrow, Gérard Debreu and Lionel McKenzie was to neglect the more persistent forces of the system, whilst pre-supposing highly unrealistic assumptions concerning stability and human behaviour, drawing on fixed point theorems, a mathematical technique that (at the time) had been recently applied by John Nash to game theory. Fixed point theorems became, together with differential calculus (developed by influential authors like Paul Samuelson), one of the central mathematical techniques of mainstream economics throughout the twentieth century, used in the explanation of the Nash equilibrium in game theory and in general equilibrium in the Arrow-Debreu-McKenzie approach.

Walras adopted an idealist philosophy and was not as concerned with concrete reality in the same degree as Marshall, for example, was. But Walras's method, where equilibrium is an ideal state that may never be reached through the tatonnement process of trial and error, is still much more realistic than the Arrow-Debreu-McKenzie approach to general equilibrium, where an economy jumps from a given equilibrium to the next one. If we use mathematics to describe not just the ideal equilibrium state, as Walras did, but also the tatonnement process of reaching equilibrium, as done in twentieth-century mainstream economics (see also Samuelson, 1947), we readily find that general equilibrium is highly unstable, and a very poor explanation (or no explanation at all) of the persistence of order in the economic system.

The continuing use of the marginalist framework entails problematic assumptions concerning not only production but also distribution. Under the marginalist framework, distribution can be explained in terms of the marginal productivity of labour and capital. Thus, the market for labour and capital, and its supply and demand curves governed by laws of marginal cost and marginal utility, determine the distribution of income in the marginalist framework.

For this reason, John Bates Clark (1899, 1907) argued that marginal productivity theory provides an analytical solution to the problem of the distribution of income, since each class (landlords, capitalists or workers) receives according to the marginal productivity of the factor of production it provides. The explanation of distribution in terms of marginal productivity replaces the classical distribution in terms of social positioning in a given social class. This is, of course, part of a process where the classical notion of socio-economic order, which depends on social positioning in a given class, is replaced with the search for mathematical equilibrium between supply and demand curves.

Clark was criticised by Veblen (1908), who possessed a conception according to which capital is the result of the accumulated collective knowledge of a community, and thus cannot be imputed to a specific individual or class within the community. For Veblen, the collective knowledge accumulated by a community through time is far more important for its technological capabilities, and its very survival, than the specific material objects which are produced using such collective knowledge; see Cohen (2014) for a discussion. For Veblen, the surplus produced by the community is also a result of this accumulated collective knowledge, so its distribution cannot be explained by laws of marginal productivity. Rather, Veblen sees the appropriation of capital and surplus by those positioned in the leisure class as a phenomenon connected to historical and institutional factors, which takes different shapes in different stages of economic evolution. His conception of capital as collective knowledge stands in stark contrast with marginalist analysis, where knowledge, as all subjective phenomena, is a property of each individual, which is revealed in market exchange through individual interaction.

In so doing, Veblen adopts a conception where social positioning is, again, essential for distribution. Like the classical authors, Veblen never developed an explicit social ontology that explains social positioning. He merely refers to instinct and habit when explaining the stability of human institutions. But his economic and social theory is certainly consistent with the approach to social positioning adopted here. For Veblen, the surplus is produced by a community, in a context where the contribution of each individual cannot be clearly distinguished and the distribution of the surplus takes place as individuals attempt to appropriate a share of the surplus large enough so as to enable social positioning in the leisure class through conspicuous consumption.

The results pointed out by Sraffa and Robinson further develop this line of criticism, whilst also pointing out the internal inconsistencies of the marginalist framework (including the mathematical inconsistencies), as noted by [Cohen \(2014\)](#). The difficulties surrounding marginalist theory identified in the Cambridge controversies in the theory of capital are then part of a long-standing tension between marginalist supply and demand analysis on the one hand, and approaches such as the classical, Marxian, institutionalist and post-Keynesian, that is, approaches where the distribution of the surplus depends on broader institutional factors that cannot be reduced to marginal productivities or to marginal utilities to be found solely in market exchange.

This tension is connected to the underlying conception of socio-economic order. The classical, Marxian, institutionalist and post-Keynesian approaches are consistent with a perspective where institutional factors connected to social positioning are at the core of our explanation of how socio-economic order is reproduced and transformed throughout the economic activities of production, distribution and consumption. Thus, [Lawson \(2003, ch. 7\)](#) argues that those heterodox approaches are ultimately characterised by a (often implicit) social ontology similar to Lawson's own. The marginalist approach, in contrast, explains production, exchange and consumption in terms of the equilibrium between supply and demand curves, which reflect marginal productivities and marginal utility.

7. The market process and the spontaneous order

As [Luigi Pasinetti \(1993\)](#) notes, the shift from the classical labour theory of value to the marginal utility theory of value has important implications for the conceptualisation of society. Labour is a social activity, that takes place within the (re)production process, in a conception where the social class is the central unit of analysis. Society is organised in terms of how individuals are positioned in relation to the division of labour or to the distribution of the surplus. The notion of a social order based on social positions can then be easily combined with the classical economic theory, where the latter can also be used to explain how the production and distribution of the economic surplus leads to contradictions and changes in socio-economic order, as Marx does.

In the marginalist approach, in contrast, value depends on subjective preferences, rather than the cost of production measured in terms of human labour. Subjective utility, the source of value, is an entirely subjective notion that only each individual knows. Thus, the only way of finding subjective utility is by looking at market exchange, which is the process through which subjective preferences become manifest. For this reason, [Samuelson \(1947\)](#) developed an approach where subjective utility is whatever becomes revealed in choice.

The emphasis on subjective preferences that only each individual knows (or at least is in a better position for trying to find out) leads to a theory that takes the individual as the only unit of analysis. When the human individual is the only unit of analysis, as in the schools of economic thought stemming from the marginal revolution, notions of process and order, when developed at all, take methodological individualism as a starting point. In particular, this means that the social position of the individual is not addressed at all. For once we start from individuals who are characterised solely in terms of entirely subjective preferences, which are taken as exogenous data, the very idea of social positioning does not appear at any stage in our analysis. For example, since preferences are entirely subjective and taken as exogenous data, the role of social positioning in consumption, not least in shaping consumption habits, too, is not even addressed.

Furthermore, since only the individual knows her or his subjective utility, market exchange becomes the fundamental process for economic co-ordination, since it is through market exchange that preferences become manifest, as noted. The emphasis on market exchange is another reason for the neglect of the idea of social positioning. If we focus on production, we readily find various social positions in the division of labour and various social positions in terms of access to the surplus produced. But once we focus on market exchange, studied through mathematico-deductivist methods, all individuals are a rational utility (or profit) optimiser. So we find no differences between social positions. Thus, the very idea of social positioning becomes neglected.

In marginalism, market prices provide essential information for the process of achieving equilibrium. But there are also attempts to explain order without resorting to the notion of equilibrium within the marginalist framework. Hayek, developing the Austrian approach following the lead of Menger, provided a conception where order is explained without reference to an equilibrium rest state defined in mathematical terms, in contrast to what marginalists other than Menger, such as Jevons, Walras or Marshall, did; see, for example, Fleetwood (1996).

Hayek (1948) argues that order emerges through a process of trial and error, such as that which we find in market exchange, where prices and rules of behaviour become central for the co-ordination of individual activity. Hayek notes that each individual is in a better position for finding out her or his preferences than anyone else, and that the process of decentralised market exchange is the ideal vehicle for preferences to become manifest. In particular, information concerning subjective preferences appears codified in market prices, enabling individual action to take place guided by price signals.

Human beings, having limited computational capabilities, cannot possibly co-ordinate the vast amount of information dispersed throughout the economy, especially because much of the information cannot be codified much less processed. Socio-economic order can emerge spontaneously because this vast amount of information influences market prices, which provide signals that enable human action to take place even when there is only partial knowledge of the relevant aspects at stake. The spontaneous order emerges as a result of human activity, but not of human design, and is explained in terms of the continuous process of market competition, rather than in terms of an equilibrium rest state towards which the economy and society would be tending.

The centrality of the market process springs from an assumption shared by all marginalists, namely, that value depends on subjective preferences which only each individual knows (or is in a better position for finding out). It is not only prices but also

human well-being that depends on subjective utility which only each individual knows (or is in a better position for finding out). This aspect is stressed even more after [Lionel Robbins \(1938\)](#) argued against the possibility of interpersonal comparisons of individual utility. Marshall, like Henry Sidgwick before him and Arthur Cecil Pigou after him, had a conception where inter-personal comparisons of utility were possible. Pigou articulated this conception more explicitly, noting that since individuals with lower incomes have a higher marginal utility, redistribution of income from individuals with higher income to individuals with lower income would increase overall utility.

[Marshall \(1920 \[1890\]\)](#) had also gone as far as arguing, against Jevons, that economics is primarily a science of human activities, rather than a science of human wants, opening the door for a more objective study of human agency and human well-being. But the conception that prevailed is Robbins's, according to which there can be no inter-personal comparisons of utility. Since the market is the only mechanism that provides information on these subjective elements, the market is essential for socio-economic order.

If we follow the classical conception, however, we reach quite different conclusions. The classical conception provides not only an objective approach to value but also an objective approach to the study of human well-being, which has been developed more recently by Sen. [Sen \(1982, 1999\)](#) criticises the use of subjective utility as a measure of human well-being, or the belief that there can be no interpersonal comparisons of well-being; see [Martins \(2013\)](#) for a more detailed discussion. Drawing on several classical authors like Smith and Marx, Sen develops a multi-dimensional (and Aristotelian) conception of human well-being, where human well-being depends on the objective human functionalities that can be achieved, which constitute the set of human capabilities. From a classical perspective, human well-being is not an irreducibly subjective phenomenon. Nor is value an irreducibly subjective phenomenon. In the classical conception, prices tend to the cost of production, which includes the surplus. But the cost of production, and the surplus, can be objectively measured, in terms of labour time, and resources used.

Even if we accept that price signals are absolutely essential for the co-ordination of socio-economic activity, in the classical conception we are not constrained to assuming that markets are the only institutional framework for finding out price signals. If prices can be obtained with objective data concerning costs of production, they can be found not only through market exchange but also through other institutional processes, such as the cost accounting exercise of a company. Cost accounting provides an objective basis for, for example, setting prices administratively, a procedure adopted by different institutions of various configurations, where individuals can be positioned in different ways.

8. Order and human institutions

It would be difficult to explain the emergence and persistence of large capitalist companies and corporations (which undertake much of their co-ordination through administrative processes that internalise their activities outside the context of market exchange) if the information necessary for socio-economic co-ordination could only be revealed in market exchange.

To be sure, market exchange certainly plays an important role in socio-economic co-ordination. But once we pass from a (marginalist) subjective conception of value to a (classical) objective conception of value, we need not see the market as the only

institution that can provide the necessary information about prices for socio-economic co-ordination. The classical framework, by assuming that prices can be objectively measured by looking at the process of (re)production, constitutes an economic theory that is compatible with various institutional frameworks, where the market is only one institution amongst many.

This emphasis on a plurality of institutional frameworks, in turn, makes the idea of social positioning central again. In market exchange, we find only sellers and buyers, and the emphasis of mainstream economists is typically on a rational utility optimiser, whilst ignoring social positioning. But in large corporations, for example, we find a plurality of social positions associated with the hierarchy of a given firm. For this reason, Marx, drawing on the classical perspective, was open to the possibility of various institutional arrangements, and indeed refused to give a final recipe for the design of a specific institutional arrangement which, according to him, would depend on the particular circumstances faced in each particular situation. Marx paid particular attention to joint stock companies, which were at the time (and still are) key drivers of change in capitalism, not least through the internalisation of much of the co-ordination of economic activity within their administrative procedures.

The internal structure of the firm, constituted by various social positions, leads to a form of socio-economic co-ordination that bypasses market exchange to a significant extent. Marx thought these developments of large companies signalled the abandonment of capitalistic market exchange, leading to contradictions in capitalism, and contained the roots of a new mode of production; see [Martins \(2013, ch. 15\)](#) for a discussion.

To understand these contradictions, one can draw again on [Lawson's \(2012\)](#) notion of social positioning, in particular the way he applies it to the study of credit and debt, which constitute specific forms of rights and obligations, respectively. As [Lawson \(2012, pp 377–80\)](#) notes, cash is merely an identifier of social relations of credit-rights and debt-obligations, which are essential for understanding financial crises.

Periods of economic expansion are characterised by the expansion of credit-rights and debt-obligations, where positional powers are distributed in such a way that the surplus created is appropriated essentially by those positioned as capitalists. Those positioned as workers also benefit from a tendency for wages to rise, but at a more moderate rate, in a context where the additional surplus obtained throughout an economic expansion is appropriated essentially by the capitalists who invest for a profit.

Investment, however, leads at some point to a level of excess capacity which requires no further investment, at least not at the same rate, as [Kalecki \(1971\)](#) notes. This leads to the reduction of investment, and thus a reduction of aggregate demand and profits ([Kalecki, 1971](#)). A crisis emerges, where not all debt-obligation connected to credit-rights can be paid. An important aspect at stake in this process is that even firms can also become positioned, as a legal person, as [Lawson \(2015\)](#) notes. In particular, firms can achieve a position of a legal person with limited liability. This means that in periods of crises, debt-obligations are often connected to the social position of the firm, rather than to the social position of the capitalist who owns the firm. But since the firm has only limited liability, its positioning enables those positioned as the capitalists who own the firm to avoid the payment of all debt-obligations.

An essential ingredient to the evolution of joint-stock companies that led to this situation is the belief that it is important to reduce the risks of capitalists, so that they are willing to use their share of the surplus in investment. The distribution of the surplus in

capitalism makes the decisions of capitalists concerning whether to invest essential to socio-economic reproduction. Of course, state investment can replace private investment, as [Kalecki \(1971\)](#) and [Keynes \(1936\)](#) noted. Indeed, modern states are positioned as a community with the obligation to foster the common good, and Keynesian policies of full employment relied on public investment to address the problem of unemployment.

But once large companies and corporations are regarded as important components for the fostering of the common good, it seems to be legitimate to demand that the state contributes to rescue large companies and corporations, especially those with an important impact on the economy in terms of production and employment. Of course, the state is simply the community of those positioned as its citizens, who are also taxpayers, who then contribute to fulfil the debt-obligations of large firms and corporations.

The capitalist social structure enables thus the persistence of order throughout capitalist crises, not only through the persistence of social classes but also through the specification of rights and obligations to citizens of the state and to entities positioned as firms, so as to enable the reproduction of the capitalist system throughout various crises. Crises are, in fact, essential to solve the contradictions of the capitalist system, enabling the destruction of installed capacity that precludes further investment which, in turn, is essential for recycling the surplus appropriated by those positioned as capitalists into the economic circuit.

The marginalist conception assumes that the economy is in a process of convergence towards equilibrium, or in a market process that leads to a spontaneous order. Marx, in contrast, developed the classical conception into a scheme where capitalism is characterised as a turbulent process, where crises solve existing contradictions and order is maintained through social structures, which shape the nature (including the length and degree of instability) of the crises and recovery. Marx notes that throughout this turbulent process, success or failure lead to further concentration in large companies, in a context where the state serves the interests of those positioned as capitalists.

The central issue, for Marx, concerned the possibility of achieving a social organisation of large firms that would avoid the exploitation of those positioned as workers by those positioned as capitalists. To do so, Marx found it most useful to draw on the classical conception, where the distinction between a productive class and a parasitic class, both with rights and obligations concerning the use of the surplus, plays a key role. His contribution is illustrative of how the theory initiated by the classical authors (and developed by many others), centred on the reproduction process and ultimately relying on social positioning, provides a broader framework for the study of socio-economic order.

It is not only in the fields of production and distribution but also in the field of consumption that we need not be limited to the results of marginalism when considering the various institutional settings in which socio-economic order may emerge. Subjective preferences can indeed be seen not as an exogenous aspect, as in marginalism, but as an endogenous aspect, influenced by the social structure (including, for example, the attempts by consumers at social positioning within the social structure, which is exploited by marketing techniques aimed at positioning a given product).

This does not mean that the classical authors neglected the role of the market. Quite the contrary, the market played a central role in the co-ordination of economic activities for the classical authors. All that follows from what was argued here is that the

underlying economic theory used by the classical authors is consistent with various institutional settings, as Marx saw quite clearly whilst drawing on classical economic theory. Another different question is which of the various possible institutional arrangements was typically studied by the classical political economists. Whilst the classical authors based their analysis on the study of the (re)production process in general, market exchange is the specific institutional arrangement which they studied in more detail.

9. Concluding remarks

The classical authors developed their view of socio-economic order centred on the division of labour that takes place in production. This leads to a perspective where social positioning in the structure of production and distribution seems essential to understanding socio-economic reproduction. This view was further developed by Marx, who focussed on how the distribution of positional powers throughout society could lead to tensions that in turn would lead to significant transformations in the capitalist social structure.

After the marginal revolution, the notion of social positioning in a given social class is abandoned, since economics now studies isolated individuals who engage in market exchange. Once the idea of social positioning is neglected, the distribution of positional power throughout society is also neglected. Positional powers are associated with social positions, connected to the (re)production process. But if social positions are no longer studied or regarded as an important category, the positional powers associated with them and the distribution of those positional powers are also neglected.

The marginalist theory of value leads to an emphasis on marginal changes whilst assuming everything else to remain constant, so that marginal value can be found. Such a need brings, in turn, several inconsistencies in the marginalist framework, since reality is a process of permanent change of an internally related totality, where a marginal change that leaves everything else constant rarely happens, and its effects are also difficult to imagine. As Sraffa argues when criticising the marginalist framework, in a reality that is a process of continuous change, the best method consists in looking at the conditions of possibility for the reproduction of socio-economic activity at a given moment in time. In the classical framework recovered by Sraffa, prices, like the industry structure and economic performance in general, depend on the underlying distribution, which is a consequence of social positioning, and the ensuing distribution of positional powers of access to the surplus.

Furthermore, the prices that enable the continuous reproduction of the capitalist economic system can also be found by looking at objective data, as Sraffa (1960) and Kalecki (1971) argued. In the marginalist framework, value depends on subjective preferences which are known only to each individual, and thus can be found only when they are revealed in market exchange. Since those prices are seen as essential for the co-ordination of economic activity, the market takes centre stage as the fundamental institution in the explanation of capitalist socio-economic order. This leads also to the neglect of social positioning, since individuals are fully characterised in terms of entirely subjective preferences, rather than positioned in a social structure.

If we accept that prices can be found by looking at the process of (re)production, which is indeed a more realistic view if we look at a variety of institutions that undertake pricing procedures, taking the cost of production into account, we find that there can be a variety of institutional arrangements that enable the process of reproduction

under a given socio-economic order, in a context where social positioning plays a key role. To be sure, the classical authors studied market exchange in considerable detail. But the essential ingredients of the economic theory they used to study prices and quantities can be applied to various institutional and historical contexts, from the medieval market to contemporary trans-national corporations.

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