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SOCIAL SURPLUS IN ANCIENT ECONOMIES: A PLEA FOR AN ALLIANCE BETWEEN ANCIENT STUDIES AND CLASSICAL POLITICAL ECONOMY?

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Social Surplus in Ancient Economies: a Plea for an Alliance Between Ancient Studies and Classical Political Economy?

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Abstract

Students of ancient societies critical of New Institutional Economics (NIE) seem ineffective or intimidated in expressing a full alternative to its current hegemony. Yet a conceptual ghost continues to haunt many works in this field: that of economic surplus. The notion of social surplus is indeed distinctive of the classical economists' approach, continued by Marx, and more recently revived by Piero Sraffa and Pierangelo Garegnani, after having been 'submerged and forgotten' by the Marginalist revolution of the late Ninetieth century. This paper builds upon the familiarity that students of precapitalist societies have with the concept of surplus to delineate a robust economic alternative to NIE. After a brief presentation of the surplus approach, the paper examines some motives of unsatisfaction with NIE and with some more recent mainstream studies of the onset of inequality we label 'marginalist materialism'. The criticism Karl Polanyi has moved to the surplus approach is then constructively reconsidered. The paper underlines the bidirectionality of the interest in communication between economic history studies and surplus theory.

Keywords: Surplus Approach, Marginalism, New Institutional Economics, Samuel Bowles, Sraffa, Marginism

JEL Codes: A12, B51, B52, N01, Z13

Introduction[1]

Relations between the study of ancient societies and economic analysis has always been controversial (Morley 2021). More recently, a *Pax Romana* in this fields seems to have been established by New Institutional Economics (NIE)—a branch of mainstream neoclassical

[1] I thank George Pantelopoulos and Giancarlo Bergamini for help in editing the paper, which will be published in: *The Archaeology of Affluence: Comparative perspectives on surplus, wealth, and social organisation in pre-modern societies*, S. Privitera, F. Iacono, and P. Notizia (eds.), Archaeopress, 2026, pp. 216–225. This WP version contains a few minor adjustments which I was unable to include in the final proofs of the book.

economics (or 'marginalism'). Nonetheless, the NIE's current hegemony is sometimes a source of dissatisfaction for students of past economies (Murray and Bernard 2024; Viglietti 2021). Yet, critics seem ineffective or intimidated in expressing a full economic alternative to mainstream economics, which often succeeds in presenting itself as the only game in town (Cesaratto 2025a). However, despite the NIE hegemony, a conceptual ghost continues to haunt many works, even those of the mainstream: that of economic surplus. In fact, it creeps into the narrative of many contributions on ancient societies, although without being generally listed in the analytical index. The notion of social surplus is indeed distinctive of the classical economists' approach, continued by Marx, and more recently revived by Piero Sraffa (1951, 1960) and Pierangelo Garegnani (1960 [2024]), after having been 'submerged and forgotten' by the Marginalist revolution of the late Ninetieth century. It is time, therefore, to exploit and build upon the familiarity that students of precapitalist societies already have with the concept of surplus – acquaintance of which this book is representative, e.g. Halstead 2026 – to delineate a robust economic alternative to NIE. In this paper I will emphasise that the interest in communication between economic history studies and surplus theory is bidirectional.

The paper has four sections. After a brief presentation of the surplus approach (first section), it examines some motives of dissatisfaction with NIE (second section) and with some more recent mainstream studies of the onset of inequality we label 'marginalist materialism' (third section). The criticism Polanyians have moved to the surplus approach is then constructively reconsidered (fourth section). Some reflections on future interactions between the 'Classical-Keynesian approach' and the study of ancient economies conclude the paper.

The surplus approach and the 'Cambridge controversy'

By *social surplus* classical economists referred to what remains of social output after the necessities for workers and for the maintenance of the means of production are put aside to allow the economy to reproduce itself, at least at the same level, in the next production cycle. The concept of social surplus is conveniently captured by the formula $P – N = S$, where P is the social output (net of the reproduction of the means of production consumed during the production process), N being the historically given 'necessities' to be given to the working population in order that it can survive and reproduce itself, and S the social surplus. In capitalism, the measurement of the economic magnitudes (P, N and S) involved in calculating the social surplus requires a sophisticated economic analysis, such as a consistent theory of prices and distribution, as Ricardo and Marx well knew (Garegnani 1960 [2024], 1984). The concept can, however, be used legitimately in a heuristic way for pre-capitalist societies when appropriately completed by historical and institutional analysis (Cesaratto and Di Bucchianico 2021a, 2021b). The approach has, in fact, been applied to 'primitive' societies since the time of the early classical economists like Jacques Turgot (Meek 1976), and of course by Adam Smith. Sraffa (1951) and Garegnani (1960 [2024]) provided a solution to the analytical problems left open by Ricardo and Marx (a solution not unanimously accepted by the most orthodox Marxists).[2]

The deeper understanding of these problems also paved the way for the famous 'Cambridge controversy' on neoclassical capital theory, whose results left the foundations of neoclassical distribution and growth theory in tatters (Petri 2021). Summing up a complicated analytical dispute, according to neoclassical distribution theory the incomes respectively accruing to the owners of the three 'factors of production' labour, land and capital are determined by the factors' relative scarcity which depends, in turn, on their respective supply and on the given technical conditions of production. Thus, if labour becomes more abundant relative to the *given* quantity of capital, wages will fall and the rate of return on capital rises. The question is how to measure the *given* quantity of capital (labour and land can be measured in physical terms, namely by heads and hectares, respectively, possibly distinguishing between labour and land of different quality). Capital is a collection of means of production that can be summed up only if the respective prices are known. Prices are not, however, known until distribution is determined. Yet to determine distribution the quantity of capital *supplied* in the market (its given 'supply value') must be known in advance. We are thus in a vicious circle

[2] For the sake of completeness, it is worth recalling that also marginalism has a concept of surplus with a different meaning (consumer's surplus and producer's surplus). The producer's surplus is the quantity of net product left to the producer after wages are paid to labour. Unlike classical theory, however, for the marginalists this surplus is not a result of exploitation. The producer's surplus finds its origin in the contribution that capital makes to production (technically its marginal productivity), based on the assumption that all factors of production simultaneously receive a share of the product proportional to their respective (marginal) contributions to production. As noted by Levrero (2022: 44), exploitation is admitted by marginalists whenever labour is paid less than what dictated by the marginal product rule, as in slavery or serfdom (see Domar 1970). In classical studies, by contrast, there are no free markets and 'fair' equilibrium distribution to violate. Income distribution is in fact viewed as the outcome of the bargaining power of the various social actors, with the élites' income resulting from surplus' appropriation.

(Garegnani 1960 [2024]). While these problems were well-known to the early (and much more rigorous) marginalists, after Sraffa (1960), the ‘Cambridge controversy’ brought to light further problems concerning the *demand* of ‘capital’ as a ‘factor of production’. The impossibility of solving these problems was recognised by the *Sveriges Riksbank* Prize in Economics laureate Paul Samuelson (1966) who unsuccessfully led the American Cambridge side (the MIT) against the UK Cambridge side in the unsuccessful defence of traditional theory. The strategy adopted by neoclassical economists has since been to hide these problems from new generations (Cohen and Harcourt 2003).[3]

In summation, in the modern surplus approach we may thus distinguish a *pars destruens*, the capital theory critique, which justifies the abandonment of mainstream economics, and a *pars construens* that regards the revival of the classical distribution theory. In this respect, the familiarity that many students of the ancient economies have with the concept of surplus, which sometimes results in an open endorsement of the classical approach (e.g. Childe 1942; Risch 2018), may pave the way to a reciprocally beneficial conversation between those students and modern classical economists. The latter would underline the noble origins of the concept of surplus in the classical economists’ tradition, and the analytical reasons for abandoning neoclassical economics. The former would give historical content to the surplus approach by placing it in the context of the socio-economic formations under examination.

The constructive part of the surplus approach doesn’t rely on a pre-packaged definition of human behaviour; instead, this is studied in a historical, socio-economic context. In this sense, the relations between the surplus approach and the other social sciences are of mutual respect and integration and not of unilateral economic colonialism. In fact, the theory of surplus is a simple scheme to approach income distribution that can be applied to any historical epoch, articulated in the specific historical-institutional context. Each economic-institutional complex (which Marx referred to as ‘mode of production’) gives rise to historically specific behaviours (or agency), fed by the prevalent ideologies and cultures (Cesaratto

[3] To be sure, classical economists also talked of ‘capital’, intended as the stock of *produced* means of production with no theoretical necessity of knowing its value *ab ovo*. As produced commodities, the price of capital goods is determined along that of all the other commodities. The control of the means of production by a specific social class was for Marx the prerequisite of the specific form of labour exploitation that characterizes capitalism. The term ‘capital’ assumes in this regard also a socio-political sense.

2024c).[4] This is particularly important for the pre-capitalist economies in which the economic relations on which the extraction of the élite's surplus was based were *prevalently* mediated by personal-political relations and not by prices. But also in capitalism, where markets and competition dominate, a 'core' of *formal* price relations that govern income distribution must be located in specific historical contexts following the methodology of Garegnani [1984]). Marx's method of the 'determined abstractions' (Ginzburg 2016; Cesaratto and Di Bucchianico 2021b: 12) well suits the relation between surplus theory and history in that it suggests the need first to distance oneself from chaotic reality to define some abstract economic relations, and then to go back to history to give blood to the theory through historical and institutional elements, the latter now more consistently located within an organic framework. For Ginzburg (2016) while the classical surplus approach was compatible with this method, marginalism is a typical example of Marx's 'generic abstractions', generalizations without history (in NIE institutions are considered, this is true, but only by default, as a result of market failures: 'in the beginning there were markets' is the notorious starting point of NIE, see Ankarloo and Palermo 2004).

In continuity with this tradition, Sraffa's 'anthropological way'—as named by Ludwig Wittgenstein (see Arena 2013: 92; Sen 2016)—expresses the necessary connection between the relatively abstract notion of social surplus and the historical-institutional circumstances that ultimately explain its mobilization (Cesaratto and Di Bucchianico 2021a, 2021b).[5] In this

[4] Some problems of Historical Materialism are discussed in Cesaratto (2025b). This is favourably seen as a commonsensical approach to the social compact of material and cultural factors, while both an economistic explanation of social formations and a finalistic grand view of history are firmly rejected (in my opinion both more typical of the younger than of the mature Marx).

[5] An excellent synthesis of Sraffa's openness to institutional analysis can be found in Capraro, Panico and Torres-González (2024: 210). Sraffa asked himself, they report, how we transit from the mere material *possibility* of a surplus to its *effective* production and distribution. His solution 'was to consider that the economic field is an open system within which outside causes operate. In the case of production and distribution the outside or external causes are the historical elements' affecting income distribution. In this way 'Sraffa made the formation of rules, legislation and institutions an integral part of the analysis of production and distribution' as 'the result of the conflicting relations among different sectors of society, mirroring their ability to enact agreements over the distribution of benefits and the future of society, which are functional to their interests'. Sraffa was thus able to reconcile his objectivism, that is the representation of the economy in materialist terms (much against the

regard the surplus approach is consistent even with culturalism, intended as the reconstruction of 'another reality relativistically and responsively—that is, by integrating the scholar's scientific perspective and the lived reality of the natives (…) without projecting criteria of evaluation that are characteristic of Western "common sense"' (Viglietti 2018: 227). The only provisos are that quite often there is not a unique natives' point of view, but a multiplicity of views depending on income distribution and the related social groups. Moreover, subjective perspectives can well be self-deceiving, the result of prevailing and subtly imposed cosmologies aimed at creating consensus (Herskovits 1952; Wolf ([1982] 2010). Economic, cultural and institutional analyses are anyway irrevocably intertwined (the social and not merely the technical nature of the concept of social surplus is underlined by Risch 2016: 35 and passim).

Another substantial advantage of classical economics is that it allows the overcoming of the time-honoured diatribe on the relevance of markets, or even of economics tout court, in ancient economies. This step forward is possible by following the central question de Ste. Croix (1981: 172) asked himself: whence do the élites derive their surplus? The surplus approach is flexible enough to admit the coexistence of different modes of production in the same economic formation, identifying the dominant or most characteristic one as that related to the surplus extraction in favour of the élite. This dominance is not necessarily quantitative, since what is relevant, de Ste. Croix notes, is not 'the way in which the bulk of the labour production is done, but how the extraction of the surplus from the immediate producer is secured' (1981: 53). Moreover, a surplus extraction may well take place both in market and non-market institutional setups (so both are 'exploitative' in this sense).[6] In this regard, any

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individual subjectivism of marginal theory), with the socio-historically determined human agency.

[6] Another *Sveriges Riksbank* Prize in Economics laureate, John Hicks, openly endorsed the surplus approach at least regarding the ancient non-market, command economies. 'Their central economic nexus', he writes, 'is revenue: the tax, or tribute, or land rent (for in the absence of a market these are not distinguished' (1969: 22). He also points out that: 'This …description of a non-market economy as a Revenue Economy in which a 'surplus' of food and other necessaries is extracted from cultivators, and used to provide sustenance to public servant, is the final point which I want to emerge from this chapter' (1969: 24). Hicks finds an antecedent of this view in the French Physiocracy, but fails to notice that the same theoretical scheme was later applied by Adam Smith and particularly by David Ricardo to market economies.

nostalgia for previous 'embedded' economic relationships should be resisted (Cesaratto 2026).

The elusive New Institutional Economics and the new materialist marginalism

NIE is said to have brought fresh air in economic history providing a much-needed general scheme of interaction between economics and institutions. More precisely, in this scheme differing institutions would explain the variations (diachronically or synchronically) in economic performance between different economic formations. This has been widely perceived as a better integration of history and economics leading, more specifically, to the overcoming of Moses Finlay's stagnating view of ancient economies (Von Reden and Kowalzig 2022: 347; Viglietti 2018: 223). NIE's new hegemony was also accompanied by a new impetus to quantitative studies (the apex of this push is often identified with Scheidel *et al.* 2007). I have no authority to assess the specific historical results of these quantitative studies, which are probably valuable in themselves (see, however, Eich 2022). Nonetheless, objections have been raised for their excessive focus on aggregate growth while neglecting or looking with contempt at social, moral and equity issues (Murray and Bernard 2024; Viglietti 2021). Discomfort has also emerged with the intellectual support that NIE's theses provided to the so-called Washington Consensus, the prescription of laissez-faire institutional reforms made particularly to developing countries (Von Reden and Kowalzig 2022: 348–349; Kron 2024: 415; Rodrik 2006: 978–979). Ober and Scheidel (2022: 406) is for example a Tocquevillian elegy to the virtues of democratic institutions and respect for property rights in classical Greece, observing just *en passant* that those benefits regarded only native males. The same Scheidel defends inequality with the argument that forcing equality has historically produced even worse outcomes (see Viglietti 2021: 312). While appreciating the uneasiness of many scholars of ancient societies about NIE, Cesaratto (2025a) pushed for a more radical rejection of the marginalist foundations of NIE with the adoption of an alternative economic analysis based on the classical economists' concept of surplus.

Presumably less fanatical about the WEIRD7[7] ideology than Walter Scheidel and Ian Morris (Viglietti 2021), the *Sveriges Riksbank* prize winner Douglass North, the main inspiration of NIE in economic history, constantly revised his approach moving from the idea that institutions are born to fix market failures delivering trade efficiency (*inclusive* institutions in Acemoğlu

[7] Western, Educated, Industrialized, Rich and Democratic.

and Robinson's [2012] terminology), to a conception of institutions producing violence and legal arbitrariness (*extractive* institutions) (Krul 2018: 1). The first version of his theory has, nonetheless, remained the most influential since it operatively fits well into (marginalist) general equilibrium theory (see e.g. Temin 2012 and Bresson 2016).8[8]

Douglass North must have perhaps felt uncomfortable with his former view, realising that the second was more realistic for developing 'a theory of the interaction between beliefs, institutions, political orders, and economic outcomes' (Krul 2018: 5). For Krul (2018), North felt the main challenge as coming from Polanyi. In my opinion the main challenge North felt was in fact that of Marx since it is in Historical Materialism, and not in Polanyi, that we find the consistent combination of history, institutions and economics that North also aimed for. Deprived, however, of the surplus approach that underpins Marx's comprehensive framework, and neoclassical theory being unable to play that role, North's ambition could only fail (Cesaratto 2024b).

North's failure to give a solid basis to his ambitions is all in this passage: 'Where do the rules, informal norms, and for that matter the effectiveness of enforcement, come from? They are derived from the beliefs humans have' (North 2005, quoted by Krul 2018: 57). Belief that feeds beliefs, as Ogilvie (2007) pointed out. According to Krul (2018: 230), North was then trapped in a 'catch 22': neoclassical theory is a poor support for a theory of (extractive) institutions, but one would feel lost after abandoning it. This is what happens to North's theory, left with a 'problem of indeterminacy' (Krul 2018: 224). Likewise, the deep origin of institutions has remained analytically rather elusive both in North and in Acemoğlu and Robinson (2012). To avoid the 'infinite regress' of explaining an 'institution by reference to another (previous)

[8] It can readily be admitted that 'inclusive' governments that introduced pro-market institutions may have promoted production, trade and material wealth (for some). What must be rejected is the vision of history as a fight between the good (free markets) and the bad (oppressive States), since labour exploitation takes place within both. In *Capital* vol. I Marx (1867 [1954]): 85 fn 1) reports an excerpt from his earlier *Misery of Philosophy* (1947) which sounds as a comment on the above vision: 'Les économistes ont une singulière manière de procéder. Il n'y a pour eux que deux sortes d'institutions, celles de l'art et celles de la nature. Les institutions de la féodalité sont des institutions artificielles, celles de la bourgeoisie sont des institutions naturelles. Ils ressemblent en ceci aux théologiens, qui, eux aussi, établissent deux sortes de religions. Toute religion qui n'est pas la leur est une invention des hommes, tandis que leur propre religion est une émanation de Dieu'.

institution, and that one by another, and so forth', Krul argues, some 'deeper level theory' must exist 'about why and how institutions come to be as they are at particular times and places' (2018: 239). Ogilvie (2007) proposed the regulation of distributive conflicts as the main justification for institutions. This has, of course, a classical flavour—although Ogilvie does not venture to explore the classical Ricardian and Marxian roots of her view.

What is interesting is the strategy adopted by some mainstream economists in recent works on ancient economies (Cesaratto 2026). They *openly* reject the role that the surplus approach may play in explaining the origins of income inequality, but de facto also neglect NIE (possibly looked at with contempt by some mainstream economic circles). The elusiveness about the origin of extractive institutions in NIE is replaced, so to speak, by a 'marginalist materialism'.

Marginalist materialism

The strategy of these authors is to pick up from archaeological research some materialist hypotheses about the onset of inequality (original hypotheses that often rely on the concept of surplus), reinterpreting them through marginalist tools (i.e. the changing productive factors' relative scarcity due to technical change). Archaeologists are often directly involved. What sounds as a sort of retrieval of old formalism is not easily challenged. We provide here a flavour of the problem by considering one example of this approach by Bogaard, Fochesato and Bowles (2019) and Bowles and Fochesato (2024).[9] These authors pick up the hypothesis advanced by various archaeologists of a nexus between the adoption in the Late Neolithic - Early Bronze Age of the oxen-drawn plough suitable for extensive cultivation, the consequent arable-land relative scarcity, and the dawn of social inequality in Western Europe and elsewhere (Goody 1976; Gilman 1981; Bogucki 1993; Halstead 1995, and others). Most authors such as those just cited loosely employ the concept of surplus extraction to identify the source of income and power by the emerging élite (the exception being Bogucki 1993).

[9] Other examples of marginalist revision of archaeological material hypotheses about the onset of inequality and state institutions are: Allen *et al.* (2023) on the old 'hydraulic hypothesis', and Mayshar *et al.* (2022) on the 'appropriability (storage) hypothesis' (earlier advanced by e.g. Testart's [1988] and Scott [2017] among others). On this literature see Cesaratto (2025c).

Sam Bowles and his associates prefer instead modelling the correlation between the adoption of oxen-drawn ploughing and the occurrence of stratification on marginalist principles, namely the changing relative scarcity of labour and land after an episode of technical progress that modifies the relative demand of the 'factors of production'. Income equality, so they argue, was roughly prevalent both in hunter-gatherer communities and, after the adoption of agriculture, in earlier Neolithic societies (e.g. Bowles and Fochesato 2024). Explained in marginalist terms, social stratification emerged later resulting from the transition from an earlier, relatively labour-intensive 'garden farming system', to a relatively land-intensive 'field-based farming' permitted by the adoption of the oxen-drawn plough (Bogaard *et al.* 2019: 1130–1131). In other words, inequality bloomed from a 'change in limiting factors—from labor to land and other forms of material wealth' (Bowles and Fochesato 2024: 1513) after technical change made, respectively, land more precious (more demanded) and labour less precious (less demanded) in production. The change in the relative scarcity of factors affected in turn the two factors' respective remunerations along well-known marginalist lines (rent on the by now relatively scarcer land rose, and 'wages' on the by now relatively more abundant labour fell).

Technical change has thus brought about a new relative proportion between the 'factors of production' such that the community moves from moderate inequality—albeit sufficient to prompt the acquisitive action of some household to invest in the new technological opportunity—to a 'class' stratified society with some owning 'a considerable amount of land and one or more teams of oxen, and others working for them under some kind of subordinate relationship as renters, sharecroppers, clients, employees or unfree labour' (Bogaard *et al.* 2019: 1136–1140). These are 'plausible precursors of temple- and palace-based landholding institutions', the authors continue, concluding that: 'the transition to a land-limited economy may therefore have been a step along the way not only to sustained wealth inequalities, but also to the emergence of permanent political inequalities formalised in new structures of governance'.

The marginalist apparatus employed by Bowles and his associates is disputable under at least two profiles.

Firstly, criticism of neoclassical capital theory is fatal to the marginalist theory, as alluded above (sect. 1). However, the negligible role – or rather, the not-strictly-capitalist nature – of investment in ancient economies somehow defuses this critique.[10] Secondly, in his manuscripts Sraffa often returned to a second critique to the marginalist apparatus, formulated even earlier than that to the neoclassical notion of capital, albeit eventually deciding not to present it in *Production of commodities* (Sraffa 1960) where it is nonetheless recalled (Rosselli and Trabucchi 2019; Trabucchi 2011). In a nutshell, to determine income distribution, marginal theory uses production functions, drawn on the basis of a given (general) technical knowledge.[11] These functions (graphically represented as curves of various shapes) express an infinite number of specific applications (or techniques), being that of alternative technical combinations of production factors, perfectly known to producers and ready to be selected *at any moment* according to the factors' relative prices. For instance, a given *technology* would comprehend an infinite number of specific *techniques* lying along an *isoquant*, with each technique potentially and readily adoptable depending on the productive factors' relative prices. On this basis, the demand functions for factors of production are drawn which, coupled with the respective given supply functions, determine income distribution. Sraffa's criticism precisely concerned the artificiality of the marginalist production functions in that these curves presuppose that producers know a continuum of techniques (each characterised by a certain proportion of the factors used in production) that can be readily adopted whenever the factors' relative prices change—a hypothesis difficult to confirm in the real world.

In view of these problems, we may pose the further question whether the marginalist apparatus that explains income distribution in terms of the relative scarcity of factors of production as determined by their respective supply and demand does really add something

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[10] Rather than considering 'capital' negligible, this 'factor of production' is hidden (camouflaged) by Bowles and its associates within a composite factor dubbed 'assisted labour'. In this way little scope would be left to the Cambridge (UK) capital theory criticism.

[11] A production function links inputs (say labour N and land L) to output (Y), as in the function $Y = F(N, L)$ where 'F' represents the given technology. If the amount of output is given the production function is representable as an isoquant, a curve convex to the origin representing the infinite combinations of N and L that generate the same amount of output. If one factor of production, say L, is given, the *derivative* of the production function represents the marginal product function of labour. In all these representations we are talking of infinite ranges of techniques known and readily available without costs to producers. Notably, if 'F' changes (because of technical progress), a new infinite range must promptly become known to producers. This is hard to digest.

substantial to the story as originally narrated by the archaeological sources based on the concept of social surplus.[12]

Indeed, the archaeological research by Bogaard *et al.* (2019) and Bowles and Fochesato (2024) refer to is mostly based on the concept of social surplus which one of the authors, Amy Bogaard (e.g. 2017: 50 and passim), has also employed in the past, and that is sporadically also used (in a classical sense) in the papers under consideration. Since the famous pages by David Ricardo in which he admitted technological unemployment, in the classical approach technical progress may change the relative employment of *resources* in production, for instance of labour and land, so as to make them relatively under or oversupplied, and this affects the social groups' relative bargaining power and income distribution. In fact, Bogaard *et al.* (2019: 1139, my italics) mention 'the *limited bargaining power* of these newly dependent classes in a labour abundant economy' to explain the new income distribution'. This is, however, more akin to the classical rather than to the neoclassical tradition.

All in all, the reference by Sam Bowles and his associates to material factors as the cause of social change is interesting, albeit not original, and leads to an indirect criticism of the influential work by Acemoğlu and Robinson (2012) attributing social stratification to the appearance of 'extractive' institutions, without much explanation of their origin. This development is now given a material origin. Nonetheless, the marginalist stylization of this origin sounds superfluous and in fact misleading, useful only to appease conventional economists used to thinking in terms of supply and demand functions, while what matters is the historical change, affected by technology, in the relative bargaining power of social groups regarding the extraction and distribution of the social surplus. [13]

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[12] More fundamentally, one may wonder if it makes sense to explain inequality by using marginalist distribution theory. In this theory each factor receives its marginal contribution to production, so it is difficult to speak of inequality. As explained in footnote 2, exploitation may be admitted whenever the marginal rules are violated, but Sam Bowles and his fellows do not exploit this possibility.

[14] It should be remarked that the mere possibility of plotting the demand curves of the factors of production depends on the ready availability, at any advance in the relevant technological knowledge, of an if not infinite, at least very large set of techniques each adoptable for a given relative factor price. Given this unrealistic assumption, and the factors' supply, a new 'natural', equilibrium income distribution is determined, at which, moreover, all factors are fully employed. In classical theory, where these demand and supply curves do not exist, technical change does not influence income distribution in such a mechanical way, but by

We may thus conclude that there is poor correspondence between the abstractness of the neoclassical supply and demand apparatus and the real world (generic abstractions in Marx's parlance). The neoclassical production functions are abstract relations (intellectual experiments) in capitalism, with even less poignancy in pre-capitalist economies. The opposite is true for the surplus approach. Besides its widespread, de facto employment in ancient studies, widely appreciated modern scholars have *explicitly* measured inequality in pre-capitalism based on surplus extraction (Milanović *et al.* 2011: 256). [14]

Notoriously Polanyi was also critical of the application of marginalism to ancient economies—even though unfortunately, he found it suitable to capitalism. He was critical as well of surplus theory. To a constructive reconsideration of this criticism, we now turn our attention.

Polanyi and surplus theory

Polanyi (1957) provided an acute methodological critique to those mechanical applications of the surplus scheme that neglect the historical and institutional mechanisms necessary to explain how potential surpluses are first mobilised and then exploited by an élite. For instance, while potential surpluses are a historical precondition of Childe's 'Urban Revolution' (Childe 1942, 1950), no automatism should be presupposed. As a follower of Polanyi put it, the concept of surplus 'is useful only where the conditions of a specific surplus are institutionally defined', since '[t]here are always and everywhere potential surpluses available', but what 'counts is the institutional means for bringing them to life' (Pearson 1957: 339). Similarly, anthropologist Morehart (2014) argued that studying surplus 'is incomplete without considering the historical and subjective [in a social sense] aspects of surplus as it is connected to differing and overlapping institutional spheres …'. In fact, as argued above, it does not make sense to talk of 'surplus' in general as a 'generic abstraction', but only as a 'determined abstraction'—using the terminology of Marx—fully immersed in the historical-

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mutating one element of the bargaining power of social classes. Labour unemployment is a possible outcome as in Ricardo's famous understanding for the Luddite movement.

[14] Branko Milanović was certainly acquainted with Sraffa's and Garegnani's retrieval of the classical approach (see Milanović 2024). Korchmina and Malinowski (2024) follows the same methodology to measure inequality and exploitation in Russian late serfdom. For the ancient populations themselves, used to material calculations and planning production and distribution, the concept of surplus must have been a familiar one (typically in the Palatial systems, see Liverani 1976).

institutional circumstances that transform potential into actual surpluses by organizing the surplus' extraction and distribution. In this sense, Polanyi (1957, 1977) gave in fact new life to the idea of the existence of a variety of institutional forms that explain the mobilization and extraction of a surplus. In this respect, Polanyi's contribution must be regarded as an enrichment of the surplus approach (Cesaratto and Di Bucchianico 2021a, 2021b; Cesaratto 2024a), much in line with the importance that both Sraffa and Garegnani assigned to historical and institutional analyses (cf. Ginzburg 2016). Fortunately, archaeological research has advanced a number of hypotheses regarding the mobilization of potential surpluses and the onset of social stratifications (Beck and Quinn 2023), precisely those hypotheses that 'marginalist materialism' reviewed above is currently trying to seize.

Surplus theory was, though, a secondary target for the Polanyian criticism. Around the 1960s a well-known fierce battle was fought between marginalist economic anthropologists ('formalist') and Polanyian scholars ('substantivists') (see e.g. Van De Mieroop 1999; Morley 2021). The dispute originated from Polanyi's criticism of the application to primitive societies of the marginalist notion of economizing, i.e. the rational allocative choice of scarce means to alternative ends to maximise individual utility, whereas Polanyi proposed alternative behavioural principles and values such as altruism and reciprocity. This Polanyian line of attack to the 'imperialist implications' of marginalism is, however, unconvincing. Some economic calculation existed also in primitive societies—although not of the kind described by the marginalist functions—while rational choice is a general presumption about human behaviour, in my view not necessarily identifiable with marginalist optimization choices, as North (1977) retorted to Polanyi. Moreover, Polanyi accepted the validity of marginalism for market economies (Ginzburg 2010: 308).

Polanyi was of course correct in arguing that important portions of social relations in pre-capitalist economies cannot be regarded as market relations. Nonetheless, the non-prevalence of market relations should not be confounded with an absence of economic relations, quite the opposite.

As noted above, well before Polanyi, Marx pointed out that personal/political relations and not markets markedly (albeit not exclusively) regulated economic relations in precapitalist economies (e.g. Marx 1867 [1954]: 86). Not unlike in capitalism, however, for Marx the extraction of a surplus is at the core of social relations that, therefore, did not operate in an economic vacuum. Institutional relations (formal and informal) have precisely the predominant role of regulating the extraction and distribution of the social surplus. In this regard, Marx thus ironically commented on the exclusive emphasis on institutional relations: 'This much, however, is clear, that the middle ages could not live on Catholicism, nor the ancient world on politics. On the contrary, it is the mode in which they gained a livelihood that explains why here politics, and there Catholicism, played the chief part. … Don Quixote long ago paid the penalty for wrongly imagining that knight errantry [an institution] was compatible with all economic forms of society' (1867 [1954]: 85; similar critiques were made by de Ste. Croix [1981] to Moses Finlay). It is the economic analysis of how the surplus is produced and distributed that gives definiteness to institutional analysis of personal relations, making sense of 'individuals imprisoned within a certain definition, as feudal lord and vassal, landlord and serf, etc., or as members of a caste etc. or as members of an estate etc.' (Marx 1857–1858 [1973]): 163–164)

Conclusions

The naturalness of the concept of surplus for students of ancient societies, but also the necessity of an analytical clarification of its meaning, emerges in passages like this: 'Under the influence of the "New Institutional Economics", recent scholarship has attributed growth to the creation of institutions that stimulated maximum surplus production' (van Wees 2022: 30). An exegesis of this passage, a fusion of two distinct theories, NIE and the classical approach, is not necessary here (while many other examples might be provided). Certainly, it can be interpreted à la Ogilvie (2007): institutions have the function of enabling the maximum possible extraction of surpluses from labour in the given historical-economic circumstances. This disturbing interpretation of institutions had been removed from the economic tradition until the retrieval of the classical tradition by Sraffa (1951) and Garegnani (1960 [2024]). That removal has not passed unnoticed in ancient studies. Eich (2022: 332), for instance, observes; 'When the revolutionary appeal of this line of thought made itself felt in academic circles, a whole range of concepts and idioms used by the classic writers of political economy (and also by Marx and his followers) tended to be avoided by established scholars henceforth'. (In a footnote Eich includes in those 'concepts and idioms' the 'vivid descriptions of class conflict in Smith', and Ricardo's open recognition of technological unemployment and, implicitly, of the reasons behind the Luddite uprising.).

While income distribution is at the core of the historical institutional set up of any society, and the surplus approach appears a versatile theory in this regard, classical theory has further useful implications on other economic fields concerned with the dynamics of past economic formations.

The classical approach to technical change, for instance, relies on the Smithian objective dynamics of the division of labour as driven by the 'size of markets', rather than by the subjective Schumpeterian theory of entrepreneurship (Rosenberg 1982; Cesaratto 1999). The Smithian demand-led theory of innovations has a Keynesian flavour. Indeed, Keynes' most innovative insights complete the classical surplus approach with a demand-led theory of output growth (Garegnani 1978–1979). In Smith the growth of international trade leads to further specialization, each country specialising in those productions where it had the highest *absolute* advantages. The theory was refined by Ricardo whose theory of *relative* advantages is not a trivial defence of free trade, as it is presented in textbooks, but casts doubt over the universal advantages of international laissez-faire. In this regard, classical theory is open to a reconsideration of the mercantilist tradition in international economics as revived, for instance, by the theoretician of the 'developmental state', the German economist Friedrick List (Cesaratto 2013). The role of money in eliciting aggregate demand and trade is also part of the classical-Keynesian and heterodox traditions (Cesaratto and Di Bucchianico 2020) — in this instance the mind is drawn towards the approaches of Crawford (1970) and Hopkins (1980).

These are just a few suggestions about future possible applications of the economic heterodox insights. It is my firm conviction that if the classical-Keynesian and more generally heterodox traditions in political economy become part of the economic training of new generations of students of pre-capitalist economic formation, this might give impetus to new, innovative interpretations of those societies and their dynamics. The benefit would of course be bidirectional, making economics more dependent on historical and institutional work, thus breaking interdisciplinary barriers that did not exist in the tradition of the classical economists.

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