

## Reflections on the economics of socialism

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### Abstract

Socialist economic management should be reconceptualized. Economic planning conceived as the *ex ante* allocation of everything that is to be produced in any given production cycle does not capture how any organization, let alone a whole economy, works. Planning should involve preparing in advance to respond flexibly to a range of possible eventualities. The way corporations, such as Walmart and Amazon, manage their supply chains points towards how non-commodity production and non-market allocation could work efficiently, while responding flexibly to the consumers of a socialist economy. Openness, sharing of information, and transparency about the use of labor-time in the economy (we should take Marx's discussion of "labour certificates" seriously) are critical to overcoming the fragmentation of decision-making that is a key feature and a key weakness of a capitalist economy. A system of socialist *goal-directed economic coordination* could outperform capitalism in the provision of goods and services, while enabling economic decision-making to be decentralized and political power dispersed throughout society, so as to make a reality of the "withering away of the state".

**Keywords:** socialism; communism; Karl Marx; economic planning; subsidiarity; goal-directed economic coordination

### Introduction

In a world facing multiple crises – stagnant economies; falling living standards; insecure, dehumanizing work; consequently unstable domestic politics and the rise of the far-right; dangerous geopolitical tensions, breaking already into hot war; an impending climate and biodiversity catastrophe – there are tentative signs of a revival of interest in socialism. However, movements of hope around the likes of Bernie Sanders in the United States, Jeremy Corbyn in Britain, Syriza in Greece, and Podemos in Spain have proven to be short-lived. And they took the fight to neoliberalism rather than capitalism. The need to build an entirely new society and abandon a capitalist world system that serves us and the planet ill, has yet to gain popular acceptance.

This article is written with the objective of opening up a discussion about how a new society, and its economic relations, might work. My central concern is that the idea of central economic planning, as it is generally conceived – and as it was implemented in the last century – is not obviously consistent with the vision of engaged citizens making decisions about their lives, their communities, and their workplaces.

I propose reconceiving how the economic decision-making process in a socialist society might work, based on coordinating economic activity, rather than detailed planning by a central planning agency that issues top-down instructions, and the principle of subsidiarity – taking decisions at the lowest possible level that is consistent with the nature of those decisions.

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I do not tackle the “economic calculation debate” directly – this largely academic tussle dominated theoretical discussion about socialism for decades. However, my reconceptualization of the tasks of the planners in a socialist economy changes the terms of that debate because I leave the economic planners with a lot less *calculating* to do.

Alec Nove in *The Economics of Feasible Socialism*, published in 1983,<sup>1</sup> identified a centralising logic to the Marxist project of breaking with commodity production as well as capitalism. Indeed, Lenin spoke about turning all citizens into the employees of “one huge syndicate” and transforming the economy into “a single office and a single factory” (Lenin, 1980: 475 and 478–479).

For Nove, who was an academic expert in the economics of the Soviet Union, the paradox in that country was that (1983: 111):

The power of the state and the party is both too big and too small. It is so big as to prevent the emergence of autonomous and spontaneous activity, or free associations and organisations; it fragments and isolates. But it is itself fragmented, and has the greatest difficulty in ensuring co-ordination of its own activities... The system model assumes omniscience and omnipotence, and many of its problems arise because neither exists.

As an alternative to the “command economics” of the Soviet Union, Nove proposed a form of “market socialism”. In Nove’s model (1983: 197–230), most production was to be conducted by state-run firms, worker-run cooperatives, or small-scale independent producers, but, with the exception of the “natural monopolies”, they were to compete against each other to supply product markets – albeit under the watchful eye of a state with the instruments of regulation and indicative planning to hand.

Although Nove’s enterprises were owned either by society, local communities, or their workers (and, therefore, this was an economy without capitalists), the driving economic motivation remained maximising the surplus of income over expenditure within autonomous and competing economic units, with the benefit accruing to the enterprise. In other words, his economic model was a system of production for profit.

In the 1980s and 1990s, various models of “market socialism” emerged, some of which went much further than Nove’s in terms of retaining features of capitalism, such as share-holdings and capital markets.

Such proposals were a measure of the failure of confidence by socialists in the possibility of a society based on an economy producing for need and motivated by a cooperative ethos. The victories stacked up by the neoliberal attacks on the public sector, welfare, and workers’ rights – and the associated shrinking of labor movements and parties of the left – were in part responsible. Undoubtedly, the collapse of the Soviet Union and its economic system – even for those who decried that society’s lack of democracy, and its political and economic bureaucratization – also played its part, as history was deemed by most commentators to have disproven the possibility of an alternative to capitalism.

Some of the new socialist literature that has been published in the last decade, since the 2008–2009 economic meltdown burst some of the more extravagant claims about a new era of crisis-free capitalist growth, does posit the possibility of superseding capitalism. However, the most radical examples are predicated on a quick transition to a wholly automated economy that eliminates the need for work and, without material or environmental constraints, can produce as many material goods as anyone could conceivably desire.<sup>2</sup> These works see the tendencies towards higher levels of productivity that are the hallmark of capitalism pushing exponentially over the course of just a few more decades towards an absolute goal of unlimited production.<sup>3</sup>

These vistas are inspired more by science fiction than by what will be realistically achievable in the next few decades – it is likely to be a while until all our energy is beamed down from solar panels in earth orbit, we are mining asteroids to meet our mineral needs,

manufacturing has transferred to space, and synthetic meat production has taken off. In the meantime, in this century, humanity faces the twin emergencies of ending the enormous global differences in levels of economic development and the associated impoverishment of billions, while halting the global warming and environmental destruction caused by our species' economic activities up until this point.

And neither the market socialists, nor those I am tempted to characterize as sci-fi-socialists, tackle the key theoretical challenges facing those of us who envisage a democratic, cooperative, egalitarian future. Those challenges are primarily around how we organize the economy and society to escape the damaging problems associated with competitive markets (including the global development and climate crises), while empowering citizens and communities. We have to answer Nove's charge that only markets can deliver economic relations that are not subject to binding, although often ineffective, instructions from the center.<sup>4</sup>

In this article I attempt to sketch out some answers by engaging with Nove's critique of the Marxist vision of socialism, some of the Marxists who responded 30 or 40 years ago to Nove,<sup>5</sup> and some more recent works.<sup>6</sup>

## Socialism

Any discussion of socialism (or whatever other word or terms we apply to a post-capitalist society that seeks to liberate human potential) is complicated by confusion around what the concept of socialism means.

I argued in Lenin's Misreading of Marx's "Critique of the Gotha Programme" (Rogers, 2018) that Lenin writing in 1917 about the state in his influential pamphlet *The State and Revolution* (Lenin, 1980), published the next year, had applied an over-schematic interpretation to Marx's thinking. It was in this work that Lenin coined the usage of the words *socialism* and *communism* to refer to different phases of the post-capitalist society.

This would have made no sense to Marx who in the Critique of the Gotha Programme (henceforth the Critique) refers to both phases as "communist society". In fact, in different writings through his life Marx used socialism and communism interchangeably to refer to the new mode of production.<sup>7</sup> Nor does Marx indicate that there are two *distinct* phases of the future society. Note that what Lenin calls "communism", for Marx, is "a higher", not "the highest" (or even "the second") phase. In *Capital*, discussing "an association of free men, working with the means of production held in common", Marx says (1990: 171–172, my emphasis), "The way this division [of consumer goods] is made will vary with *the particular kind of social organisation of production and the corresponding level of social development attained by the producers.*"

This is a society that will evolve through multiple phases as it encounters problems and contradictions it must struggle to resolve. The "social organisation of production and corresponding level of social development" will change and go on changing. Lenin's schema and his terminological choices over-simplify and flatten Marx's conceptualization.

Lenin compounds his fundamentally undialectical reading of Marx by asserting that a state persists during socialism (Marx's "first phase of communist society"). There is no basis for this assumption in Marx's writing. In the Critique, Marx observes that what remains of the state will take the form of "the revolutionary dictatorship of the proletariat" during the "political transition period" that will accompany the "revolutionary transformation" of capitalism into communism.

According to Marx all phases of "communist society" (including the first) are a "cooperative society based on the common ownership of the means of production". All phases of this society are classless: "no one can give anything except his labour, and ... nothing can pass to the ownership of individuals, except individual means of consumption." In other

words, the fundamental division in class society between those who do the work and those who live off the surplus produced by the workers is ended. Since everyone is a worker, there is neither a class of employers nor a working class.

In conceptual terms, there can be, therefore, no class-based institutions such as the state – nor, for that matter, class-based political parties.

Lenin bases his defense of the continuing existence of a state in his version of socialism (the first phase of communist society) on Marx's discussion of the distribution of "labor certificates". The quantity of consumer goods that citizens can withdraw from the communal supply of those goods is based on how much work they have contributed to society. Lenin supposes that the state can only "wither away" (Engels' characterization of the process) when the need for any social discipline or compulsion has vanished. Since labor certificates imply a constraint on the individual members of that society, i.e., who can consume how much, he reasons that a state must be necessary to administer the certificates.

It is fanciful to suppose that a time will come when human society operates without rules of conduct and ways of enforcing them. At no point in human history have they been absent. Contemporary hunter-gather societies that are extremely egalitarian and organized along communist principles (and are probably analogous to the way our species organized its social life over a couple of hundred thousand years) have a wide range of techniques for disciplining members of their society who offend expected norms of conduct – including expulsion from the group, which in the past would have been essentially a death sentence.

Lenin thus introduced a current of utopianism into Marxist theory. First, in the sense that he made programmatic stipulations about how the future society would evolve well into the future (beyond the point at which a communist party, as a party of a then non-existent working class, would even exist), offending the Marxist principle that it is for the citizens of that society to confront and resolve the problems it will face, i.e., Lenin interpreted Marx as being akin to a "utopian socialist". But also, in the sense that Lenin was summoning up a vision of society which simply could not exist, i.e., the colloquial understanding of "utopian".

Bertell Ollman, in a paper (1977) referenced by Nove (1983: 10) so as to discredit Marx, illustrates where Lenin's utopianism conceptually leads. According to Ollman, it is a greater leap from socialism to communism than from capitalism to socialism.

He opines that the state can wither away as society approaches communism (after passing through the stage of "socialism", which retains a state) once there are no rules and no forms of coercion or discipline. A legislature will not be necessary because people are agreed on all subjects that could possibly come before a parliament and all really major decisions have already been taken during the transition to "full communism"; there is no need for courts (or any function that equates to them) because crime does not exist; although some degree of administration and coordination remains necessary, there are no laws because social norms are accepted by all. Elections may take place (Ollman does not explain what decision-making bodies might require representatives in a society which requires no decisions to be made) but are "probably uncontested".

The vision of the future that Ollman ascribes to Marx<sup>8</sup> is of a society with no internal dynamic and no impulse to change. There is nothing about the society which needs to be discussed, no serious choices to be made, by either individuals or society, and therefore no potential for making mistakes which have to be rectified. Like heaven, it is unchanging, without conflict, and effectively outside of time.

Nor is there any suggestion in the Critique that "distribution according to need" equals the right of individuals to "take freely" from the stock of consumer goods (as Lenin says and Ollman concurs).

The Critique gives several clear examples of what a non-needs-based distribution would be: stronger workers and workers willing to put in more hours will receive more



consumer goods than those workers who are not able to work with the same intensity or unwilling to work as long hours; and workers with children will get no more than workers who have only themselves to support. The only conclusion we are entitled to draw from Marx's reference to distribution according to need is that it would not take account of the amount or intensity of work that citizens contribute and would take account of family size.<sup>9</sup>

In fact, since in the Critique Marx discusses the need for a communist/socialist society to make decisions about the division of the social product between investment in new production, administration, provision of public services and goods for individual consumption, we can assume that Marx was not thinking in terms of an economy that can produce as much of anything it wants, whatever the "level of social development". This is a society (in all its phases) that must discuss and debate choices and priorities.<sup>10</sup>

For the purposes of this article, I assume the continuing need to inform consumers of the total quantity of products to which they are entitled via a method such as labor certificates, whether these are distributed on the basis of need, work contribution, or some combination of the two. If the right to consumption were not linked to the obligation to work (for those who can), they might be described better as "consumption" certificates. Distribution according to need must always play a role in a socialist society: Marx grants in the Critique that citizens who cannot work will have access to consumer goods; and something equivalent to the child benefit that the British state has paid to the parents of children since the 1970s will surely continue.

These would not perform the same function as money. As Paul Cockshott and Allin Cottrell (1993: 29) explain, Marx says here and elsewhere the following about labor certificates (or "labor tokens"): they do not circulate. They are directly exchanged against consumer goods and then destroyed. They are non-transferable, since they can only be used by the person who has performed the labor. And they have a limited life-span. They need to be redeemed within a certain period, after which they cannot be used. Labor certificates therefore cannot serve as a store of value, a way to acquire means of production, nor to employ other human beings.

For not only is the post-capitalist society that Marx discusses in the *Critique* classless and stateless, it has moved beyond what Marx elsewhere calls "commodity production". This is the significance of Marx's observation that "the producers do not exchange their products; just as little does the labour employed on the products appear here as the value of these products, as a material quality possessed by them, since now, in contrast to capitalist society, individual labour no longer exists in an indirect fashion but directly as a component part of total labour."

The work people do under capitalism and in producing for any competitive market is *indirectly* social because the prices of goods do not *directly* reflect the labor that has gone into producing them. A complicated process of *transformation* is required to turn labor via values into prices. That process leaves us none the wiser about who has contributed what to the sum total of society's goods and services (of course researchers can conduct surveys that attempt to uncover what is going on). A commodity-producing society draws a particularly opaque veil over the nature of economic relationships, such as the exploitation of workers by employers.

Certainly, no one knows what plans production units have for the future (again, unless researchers conduct extra-economic surveys). As Marx wrote to his friend Ludwig Kugelmann in 1868 (Marx, 1936: 74): "The point of bourgeois society consists precisely in this, that *a priori* there is no conscious social regulation of production."

Not all forms of commodity production are capitalist – commodity production predates capitalism and not all contemporary producers making goods to sell on a market are employed by a capitalist. But only capitalism generalizes commodity production, so that most of the things that are made in society, and most of the services that are provided, are

commodities (rather than use-values for the direct consumption of the producers), and only capitalism deprives the majority of producers of the means of production, forcing them to sell their ability to work (their labor-power) in order to survive.

It is possible, therefore, to conceive of a society, as Alec Nove does, in which the means of production are restored to workers (organized in workers' cooperatives, for instance), but that continues to produce commodities, i.e., enterprises (whether owned by their workers or by the state) sell the products of their work on competitive markets.

However, a society based on such an economy would not be socialist. The retention of competitive markets and profit-driven motivations would inevitably promote competitive, selfish, acquisitive, individualistic behaviors that would undermine the principles of cooperation that socialists seek to foster.

And an economy not subject to conscious, democratic, social regulation would continue to exhibit the “laws of motion” that Marx’s great critique of political economy, *Capital* (Marx, 1990, 1992, 1981), explores: the rise of social inequality as some enterprises prosper (not necessarily for reasons of hard work and efficiency) at the expense of others; a tendency to suppress the income going to the workers in the interests of competing more successfully; a tendency for economic decisions to be based on short-term considerations; profit maximization leading to gross distortions in the production of use-values (the British housing market being a prime example); the wasteful allocation of resources to unproductive activity, such as advertising and the financial sector; the emergence of an economic cycle of boom and bust; the possibility of unemployment, inflation, etc.;<sup>11</sup> the concentration and centralization of economic units and the consequent monopoly behavior.

And it is difficult to envisage a competitive economy resolving the linked and rapidly escalating environmental crises.

Marx pithily sums up the problems associated with a competitive economic system (Marx, 1990: 667):

The capitalist mode of production, while it enforces economy in each individual business, also begets, by its anarchic system of competition, the most outrageous squandering of labour-power and of the social means of production, not to mention the creation of a vast number of functions at present indispensable, but in themselves superfluous.

Above all, a system of market “socialism” would tend towards the restoration of capitalism. Workers’ cooperatives would have an incentive to employ wage labor, rather than expand the number of worker owners,<sup>12</sup> unless checked by bureaucratic rules, which they would doubtless try to circumvent.

### **A false dichotomy**

How are production, distribution, and allocation to be organized in a socialist economy? Remember, I am using the word socialism to refer to the classless and stateless post-capitalist society of the future in all its phases of development. If we reject any variant of market socialism – autonomous, surplus-maximizing units of production competing with each other for sale in markets – what do we propose to put in the place of commodity production-based solutions?

Marx describes a socialist society in these terms (Marx, 1990: 171, my emphasis): “an association of free men, working with the means of production held in common, and expending their many different forms of labour-power *in full self-awareness as one single social labour force.*”

A little later Marx comments (Marx, 1990: 173): “The veil is not removed from the countenance of the social life-process, i.e. the process of material production, until it becomes production by freely associated men, and stands under their conscious and planned control.”

So the “self-awareness” of the socialist community is put into practice via a plan. Marx, in many contexts, repeats the need for a “plan” or a “single plan” so as to manage “material production” in the post-capitalist society.

What is the nature of a plan? Alec Nove makes a sharp distinction between what he calls the *ex ante* allocation involved in an economic plan (deciding what to produce and for whom in advance of production) and the *ex post* allocation of production for a market (who buys what and what remains unsold is determined after production).

Nove acknowledges that plenty of allocation in a capitalist economy is agreed in advance of production: contracts between companies for the components of major engineering works; shipyards building a vessel for a client; a tailor measuring, cutting, and stitching a bespoke suit for a customer. However, he affirms that most production is for unknown, anonymous customers who purchase products in a market-driven environment.

Nove’s principal critique of a socialist planned economy is that perfect foresight about the needs of the population is impossible and that, in the absence of competitively set prices, there is no mechanism for *ex post* verification of whether a plan for production and allocation of products has met the needs of customers (either production units or individuals).

Nove describes Soviet planning techniques in which long-term five-year plans containing high-level targets were translated into operational plans (usually covering a year). The operational plans issued a complex, interlocking multiplicity of instructions on production, distribution, and allocation to Soviet enterprises.

Those enterprises would receive targets on what to produce accompanied by detailed instructions on the amount of labor they were to use, where they were to obtain their inputs, and where their products were to be transferred (Nove, 1983: 75). Changes in targets and supply instructions could be made part way through the year, but there would often not be an equivalent reallocation of labor or finances allowing the amended instructions to be implemented.

A consequence of the nature of Soviet economic plans was that the supplier, as an effective monopolist, was placed in a strong position in relation to their “customers” (Nove, 1983: 70). Enterprises could legally refuse to accept products that they thought were sub-standard or otherwise failed to meet their needs, but the instructions in the plan gave no option for an alternative supplier. The general culture was one of “take it or leave it”.

In practice, Soviet enterprises established “horizontal” links between each other unseen by the central planning authorities. These inter-enterprise links were facilitated by a network of personal relationships and private agents who would put enterprises in touch for a fee.

Ernest Mandel<sup>13</sup> responded (1986) to Nove’s critique of socialist planning. Mandel enumerates the many different kinds of planning that are possible (in addition to the socialist planning of which Mandel is an advocate): planning has been based on “routine, custom, tradition, magic, religion, ignorance” in many different societies across history and in many different institutions in the modern world.

But Mandel accepts Nove’s *ex ante* versus *ex post* distinction as the defining difference between the plan and the market (1986: 8):

[T]here are only two basic ways of adapting current output to needs. Either these needs are taken as given at the outset, as assessed *ex ante* by whatever is the dominant social body, and output is organized to satisfy them. Or else they are deemed to be unknown or at any rate uncertain, and the market is supposed to reveal them *ex post* through the expenditures of “effective demand”.

And (now phrasing the distinction in terms of *a priori* versus *a posteriori*): all forms of planning (Mandel, 1986: 7) “involve direct *a priori* allocation of resources (including labour) through the deliberate choice of some social body. At the opposite pole is resource allocation

through objective market laws that *a posteriori* counteract or correct previously fragmented decisions taken by private bodies, separately or autonomously from each other.”

Mandel proposes the mechanism of consumer referendums for determining in advance the products that individual consumers will require (Mandel, 1986: 28): “a consumer having the right to receive six pairs of footwear a year, would cross six samples in a sheet containing a hundred or two hundred options.”

Mandel claims that “[c]ompared with the market mechanism, the great advantage of such a system would be the far greater consumer influence on the product mix and the suppression of over-production – the balancing out of consumer preference and actual production occurring *before* production and not *after* sales, with a buffer stock of social reserves additionally produced.”

There are a number of aspects of Mandel’s proposal that should give us pause for thought. Many of us have become used to ordering all kinds of products online and perhaps waiting a few days for them to be delivered. That provides suppliers with a degree of forewarning. One can imagine in a socialist society large, “expensive” items – cars, fridges, ovens – being ordered a few weeks, even months in advance. That would allow production to be flexed to meet demand.

But does Mandel seriously believe that each citizen should be told in advance how many shoes they can have over the next year? What happens if they need an extra pair, or decide they need fewer?

And citizens are to decide what they are going to consume up to a year ahead? Presumably, the same regulations would apply to most products. How long will be the questionnaire that each citizen is required to complete about their consumption pattern for the next year? How much time will it take to complete? What happens if they change their mind about a choice? What bureaucratic hurdles might they have to negotiate to secure a different pair of shoes?

Does anyone seriously think that most citizens would regard such a procedure as an advance over the utility of the market mechanism? Would this not instantly create political opposition to our new society?

Michael Albert and Robin Hahnel in their model of “participatory economics” propose a similar mechanism, involving “consumer councils” for identifying consumer requirements in advance of production (Albert & Hahnel, 2002: 10; Albert, 2022: 113–170).

I think we are pushing at the outer boundaries of the *ex ante* conception of planning and are finding it inadequate for our purposes. In fact, the *ex ante* versus *ex post* paradigm is next to useless as a theoretical framework for discussing socialist planning. We should not accept Nove’s terms of debate.

First, the allocation of resources *within* production is always *ex ante*. The process of human labor requires all production decisions to be made in advance of their implementation.

Marx explains correctly the nature of human labor in any form of society and in any context within that society (Marx, 1990: 284): “A spider conducts operations which resemble those of the weaver, and a bee would put many a human architect to shame by the construction of its honeycomb cells. But what distinguishes the worst architect from the best of bees is that the architect builds the cell in his mind before he constructs it in wax. At the end of every labour process, a result emerges which had already been conceived by the worker at the beginning, hence already existed ideally.”

This definition of human labor applies to both the individual worker laboring on their own behalf and the “collective worker” within a workshop or factory that operates a highly specialized division of labor, in which the individual worker may care little what the final output will be. Those who manage large-scale labor processes will have a very precise idea of the role of each individual worker and the desired output of production.



Second, no organization can afford to be inflexible in the face of change. The plan that allows for no *ex post* verification is set up to fail. Take the army. Nove asserts that the supposedly conflicting *ex ante* versus *ex post* allocative principles that he has identified do align perfectly in the case of the army (Nove, 1983: 41): “There is in fact only one way of ensuring that *ex ante* and *ex post* coincide: to let the producers determine consumption. That is, the citizens will wear the shoes which it is decided they should wear, all menus will be *table d’hôte* and the customer assigned to specific restaurants. Such a model would be analogous to the army: when I was a corporal I wore the issue boots and uniform clothing, and ate whatever was provided in the mess-hall.”

Again, Mandel concurs (although, needless to say, neither Nove nor Mandel are proposing the army as a model for a socialist society): “Worst of all, you can have planning directed by generals: for every army is based on a *a priori* allocation of resources.”

It is true that military personnel enjoy very limited consumer choice. That makes the tasks involved in military planning easier than they would otherwise be, but it is hardly the case that military planners are absolved from all *ex post* verification. The purpose of armies is to prepare for and fight wars. What is war other than a state of permanent emergency? In war those in charge of the army do not know from one day to the next (even hour by hour) how many living soldiers they are responsible for, where those soldiers are going to be, in which direction they will travel next, or what proportion of their equipment will remain intact. If any organization needs to develop the capability to respond flexibly to contingent events, it is the army.

In fact, the *ex ante* versus *ex post* dichotomy does not capture the organizational principles underlying any emergency service. The fire brigade, for instance, must develop the capability to respond as and when a fire breaks out. Those in charge plan the service precisely so that it can react effectively when needed. The efficacy of those plans will be subject to *ex post* assessment, and organizational and resource changes made as necessary.

The army and the fire service are examples of organizations untouched by the competitive market (assuming neoliberals have not imposed an artificial internal market) for whom any attempt to apply the *ex ante* versus *ex post* distinction to explain how they work collapses.

Rather than drawing an artificial conceptual distinction between planning as exclusively *ex ante* allocation and allowing market advocates to claim unchallenged that only they cater for *ex post* verification, I propose that a better definition of the objective of socialist economic (and other organizational) planning should be preparing in advance to respond flexibly to a range of possible eventualities.<sup>14</sup>

### Goal-directed economic coordination

In any economy that is going to work satisfactorily for the human beings that comprise it, most of the participants in that economy should have the option of indicating what they want to consume at a point relatively close to the time of consumption. That might be a production unit submitting an order for supplies, which, if production is to continue seamlessly, need to arrive within a week. It might be you or I sitting down to a meal in a restaurant, expecting the first course to arrive within 15 minutes of us making a selection from the menu. I might even make the somewhat reckless decision two hours before going out for the meal to choose a new pair of shoes, of a style I will decide upon once I reach my chosen shoe outlet. On another evening, I might turn up at a greengrocer to pick up the ingredients for a stir-fry I have decided on the spur of the moment to cook. I am going to be disappointed if nothing is available.

This is the kind of flexible consumer service we have come to expect from a contemporary capitalist economy. Is it unreasonable to expect a cooperatively organized socialist

economy to at the very least match that degree of flexibility? It is the logic of Marx's discussion of labor certificates in the *Critique and Capital* (for *Capital*, see Marx, 1990: 188–189; 1992: 434).

I have rejected Mandel's attachment (taking the distinction from Nove) to conceptualizing the difference between a socialist and capitalist economy in terms of *ex ante* and *ex post* allocation. But Mandel takes the correct Marxist approach in identifying the basis for a socialist economics in the productive resources, organizational capability, and technique developed within the most advanced sectors of capitalism.

Mandel points out that in normal times consumption patterns over the medium term usually remain relatively stable. In any single production cycle – outside of a disruptive crisis – demand in broad aggregate terms can be predicted successfully. This is because over the whole population the random consumption choices of single individuals are balanced by the counteracting decisions of other consumers.

The same principle applies to planning by health services. Who is going to fall sick is unknown, but the frequency with which some people in the population as a whole will succumb to different illnesses is predictable within broad parameters – especially, if health trends over time are analyzed. Of course, when an extreme event like a pandemic occurs, the most carefully laid plans will be disrupted.

This principle of overall consistency across large demographics makes it possible for all kinds of organizations, including capitalist corporations, to plan provision in advance and adjust for specific outcomes as they emerge – it is also the basis of market research and opinion polling.

That is how an industry such as electricity production and supply, regardless of whether it is in public or private hands, is able to ensure supply despite large fluctuations in demand over the course of each day (much more electricity is required in early evening than the middle of the night), each week (in Britain there is usually a peak in demand at around Sunday lunchtime), and each year (with higher demand in the winter rather than the summer and peak demand during major festivals). Electricity producers and suppliers do not need to know how many electrical goods each household will purchase, how long they will be plugged in for, or exactly what is going to be produced by manufacturing enterprises in order to plan the provision of electricity. They do need to know what has happened in the past (to understand patterns of usage), to have a mind to the likely growth of the economy, and to be informed about major new urban and industrial developments (so they can ensure adequate local supply). With this information, new electricity production facilities can be built, and supply networks expanded to meet anticipated demand.

There is no reason why all industries and individual production units cannot operate on a similar basis in a cooperative, socialist economy. The central planning authorities will not succeed in devising a single plan that lists everything that is to be produced in the economy over, say, the next year, maps the complex web of economic relationships that facilitate production, consumption, and supply and, on the basis of the plan, issue detailed instruction to each industry and production unit. No such plan, in a dynamic economy (even assuming it was feasible to create it), could possibly represent the real-time needs of the society.

The role of the central planning authorities is to set within broad parameters the levels of demand each industry will be expected to meet over a given timescale.

Electricity differs from many industries in that it produces what Nove calls a homogeneous output – all customers receive the same product (although not in the same quantities). The supply of fresh water is similar. Other industries might produce a limited range of standard outputs. But most produce a wide variety of products of different sizes, styles, and qualities. In the case of these industries and the production units that make them up, the level of stocks of each product (and the sizes and styles in which it is available) needs to be monitored and production adjusted in real time to match demand.

The shoe industry that Mandel takes as his example, for instance, does not need each potential consumer in a population of tens or hundreds of millions to state their precise requirements for the coming year. The industry will begin the year by producing shoes in the varieties expected to meet previous patterns of demand, adjusted with any information they have gathered on anticipated changes to demand – it would be appropriate to use market research techniques to uncover these. As actual demand for different products become clearer, production units will adjust what they produce. Mandel's consumers can choose to spend their labor certificates on as many shoes as they wish of whatever style they select at the point of consumption. Each selection of a product will contribute to information the producer can use to increase or reduce the output of each line of a product.

In this way, consumption choices are monitored *ex post* and production units respond to that feedback by adjusting their *ex ante* plans for how much to produce in the next immediate period. Products that are not selected for consumption by citizens are either produced in smaller quantities or, if demand is exceptionally low, discontinued altogether. Designers within the shoe industry would propose new styles or entirely new types of footwear. These could be produced in trial batch runs and production ramped up if consumers prove to like them.

This is exactly how large corporations operate within contemporary capitalism. As Mandel points out, the growth in the size of corporations and the growing integration of the capitalist economy expands the space within which non-market decisions are made and shrinks the space where the market mediates decisions.<sup>15</sup> Planning and conscious coordination makes up an increasing proportion of economic decisions.

Large retail operations, such as those developed by Walmart, incorporate sophisticated logistical organization. The extended essay by Phillips and Rozworski on the potential for socialist planning describes the technique of “continuous replenishment” underpinned along the supply chain by relationships based on “trust, openness and cooperation” (Phillips & Rozworski, 2019: 36). The manufacture and stocking of products is *pulled* by the consumer rather than *pushed* by the company.

Amazon maintains a similarly flexible, but mainly online, operation as it expands to occupy the whole retail “space”. Books, for instance, can be printed on demand. There is no longer a need to decide in advance how large a print run ought to be.

Elsewhere “lean manufacturing” and “just-in-time production” employ a similar approach. Flexing manufacturing and supply chains in response to consumer demand is facilitated by the ubiquity of universal product bar codes, computerization, and the internet. But monitoring stock levels and communicating that information to suppliers has always been feasible. Indeed the “Kanban” system developed by Toyota is based on the system implemented in factories producing spitfires during the Second World War.

In a socialist economy the principles of trust, openness, and cooperation that Walmart demands of its supply chain could be generalized across the whole economy to achieve more efficient use of resources, greater flexibility, and enhanced responsiveness to consumers (both producers and individuals).

Open information about what all economic units have produced and their plans for the future would overcome the fragmentation of decision-making that is the key feature of a capitalist economy and, in terms of economic efficiency, one of its greatest weaknesses. This would allow decision-makers at all levels of the economy to be much clearer about the impact they will have as they develop their plans. The purpose of central economic planning in a socialist society should be reconceived as the coordination of economic activity, rather than top-down “command” instructions to all economic units.

There are fundamental differences between the purpose of economic activity in a socialist society and its purpose in a capitalist society. The driving economic dynamic in capitalism is the maximization of surplus value (divided between profit, rent, and interest)

in order to accumulate yet more capital (Marx, 1990: 742): “Accumulate, accumulate! That is Moses and the profits! ... Accumulation for the sake of accumulation, production for the sake of production.”

Of course, the class struggle and political considerations in capitalist societies constrain that dynamic. The political representatives of capital will claim that raising living standards and expanding social welfare is their objective – although this only became part of the politicians’ rhetorical toolkit in the 20th century. But all of that is secondary to the requirement of individual capitalist enterprises (whatever their size and scope) to survive by competing successfully, returning larger profits than their competitors, and reinvesting the bulk of those profits to expand their business.

Through long periods of the history of capitalism, capitalist enterprises have been able to operate successfully while suppressing wage levels and demanding cuts to whatever welfare systems the politicians might have put in place. When the process of accumulation breaks down, a slump, possibly followed by a long period of stagnation, is the result (as much of the capitalist world has experienced since the crisis of 2008–09).<sup>16</sup>

For a socialist society the only purpose of economic activity is to provide for the needs of the citizens of that society – whether those needs are consumed collectively (e.g., health and education) or individually (e.g., shoes). Production will only be expanded or redirected if it allows society to better meet the needs of citizens. A socialist society would prioritize considerations such as the quantity of work citizens wish to carry out, the nature of that work and how it is to be organized to make it as enjoyable and fulfilling as possible, and the impact of production and consumption on nature and the environment.

There is no economic imperative in a socialist society to produce just to keep workers busy or keep production plants ticking over, let alone increase the surplus of production over consumption and maximize the proportion of that social surplus that is reinvested for the sake of future production (which in terms of economic categories is what the dynamic to accumulation in capitalism looks like when it is successfully achieved).

So socialist economic coordination would need to be directed to the aim of achieving socially determined goals. These would drive economic decision-making, rather than the impersonal laws of motion of capitalism.

A prerequisite for any kind of economic planning and coordination, whether capitalist or socialist, is a method for calculating the relative costs of the different inputs and outputs into production. Planners, producers, and consumers need to choose between multiple options with information about the amount of work that will be involved in implementing each option (or completing each “purchase”) so that a fully informed decision can be reached.

In economic relations based on commodity production, prices are determined by the supply and demand and the willingness of producers to produce and consumers to consume at any given price. It was the contention of Marx (and the classical economists) that the value of commodities is determined ultimately by the quantity of labor (measured in terms of time) expended in producing them, although, as we have seen, prices only *indirectly* represent the labor involved in producing them.

Socialism also needs to organize the distribution of society’s work – including that contributed in the past into producing means of production and the inputs into current production. The contribution of social labor here is no longer hidden but openly measured (Marx, 1990: 171–172):

[Labour-time’s] apportionment in accordance with a definite social plan maintains the correct proportion between the different functions of labour and the various needs of the associations... The social relations of the individual producers, both towards their labour and the products of their labour, are here transparent in their simplicity...



Nove is disparaging about the possibility of keeping track of the amount of work involved in producing products. Paul Cockshott and Allin Cottrell propose using computer technology to transform the potential for socialist economic planning (1993: 52): “We need a computerized information system that gives production engineers unbiased estimates of the labour time costs of different technologies.” They argue (1993: 53–58) that a combination of input–output tables, computer calculation, and an approach of “successive approximation” (rather than “Gaussian elimination”) makes the calculation of the amount of labor involved in producing all the goods in the economy soluble in minutes.

Linking personal computers together using teletext (their book was written before Tim Berners-Lee completed his design of the world wide web) to create “a huge distributed supercomputer” would allow revised labor values to be broadcast every 20 minutes (Cockshott & Cottrell, 1993: 59). That would be much faster (even if updated less frequently than every 20 minutes) and much more accurate (labor is now *directly* social) than the information that the capitalist market provides through price indicators.<sup>17</sup>

This method of rapid calculation of the use of labor in the economy would meet Marx’s requirement of transparent simplicity in economic relations and transform the function of “social book-keeping” (Marx, 1992: 212):

Book-keeping, however, as the supervision and ideal recapitulation of the process, becomes ever more necessary the more the process takes place on a social scale and loses its purely individual character; it is thus more necessary in capitalist production than in the fragmented production of handicraftmen and peasants, more necessary in communal production than in capitalist. The costs of book-keeping are however reduced with the concentration of production and in proportion to its increasing transformation into social book-keeping.

## Subsidiarity

In the Communist Manifesto, Marx and Engels make a prediction early in their careers – using the synonym “political power” – of the disappearance of the state (1848, my emphasis): “When, in the course of development, class distinctions have disappeared, and *all production has been concentrated in the hands of a vast association of the whole nation*, the public power will lose its political character.” They add, by way of explanation, “Political power, properly so called, is merely the organized power of one class for oppressing another.” The objective of the working-class revolution, as envisaged by Marx and Engels, is to “[sweep] away the conditions for the existence of class antagonisms and of classes generally, and ... thereby ... [abolish] its own supremacy as a class.”

I opened this article by suggesting that highly centralized economic decision-making is at odds with the objective of engaging citizens in the decisions which affect their lives. We do not want to replace the alienation associated with the tyranny of the capitalist workplace and the atomization of the anonymous market with a politics that is, to all effects and purposes, just as unaccountable, alienating, and atomizing. The most important political decisions that a socialist society will make will be about how to produce and distribute that society’s economic output – since, ultimately, that determines everything else.

Without a devolution of political power and the decision-making processes in a socialist society, it is difficult to see how we can talk meaningfully about the “withering away of the state”. If such a process is to have meaning beyond the tautology that no class-based power can be exercised in a classless society, it must mean the disappearance of institutions that stand separate from society and exercise any kind of authoritarian, unaccountable rule over the lives of citizens.

Indeed, when discussing the Paris Commune, Marx wrote approvingly of the political structures it proposed to establish on a national basis (1871, my emphasis):

In a rough sketch of national organization, which the Commune had no time to develop, it states clearly that the Commune was to be the political form of even the smallest country hamlet, and that in the rural districts the standing army was to be replaced by a national militia, with an extremely short term of service. The rural communities of every district were to administer their common affairs by an assembly of delegates in the central town, and these district assemblies were again to send deputies to the National Delegation in Paris, each delegate to be at any time revocable and bound by the *mandat impératif* (formal instructions) of his constituents. *The few but important functions which would still remain for a central government* were not to be suppressed, as has been intentionally misstated, but were to be discharged by Communal and thereafter responsible agents.

Now, the Paris Commune did not create socialism (it carried through only a handful of economic and social measures) and it certainly did not abolish the state, but it did by existing shatter the old Napoleonic state and empower the working people in the districts of Paris, as well as creating city-wide political structures that were subjected to radically accountable popular control. It was, in Marx's words (1871), "the political form at last discovered under which to work out the economical emancipation of labour." In the Commune's vision for its national organization, had it won an unlikely victory, Marx is describing the application of the principle of subsidiarity – that the higher political levels should perform only those functions that cannot be performed at a lower political level. This is the method of political and social organization by which anything resembling a state can be dismantled.

We can say legitimately that in a socialist society "all production has been concentrated in the hands of a vast association of the whole nation" (and, most likely, in an even vaster association of the whole globe), in the sense, that the means of production and all productive resources are held in common by society.

But I reject the conclusion reached by many socialists in the last century that, consequently, all decisions about production must be centralized at the national or global level. Certainly, some decisions will need to be made at these levels and those decisions will be *important* ones, but we should endeavor to make them as *few* as possible.

Perhaps, we are ready to begin answering Marx's question in the Critique (1875) about "what social functions will remain in existence there that are analogous to present state functions" in a socialist society.

In what follows, I do not set out a comprehensive model for a socialist economy. I merely develop in brief some very broad-brush ideas about the implications of the kind of goal-directed economic coordination (as a definition of economic planning) combined with subsidiarity that I am proposing.

The role of center (be it at global, continental, or national level and accountable to whatever democratic political structures a socialist society establishes) could include the following.

- (1) Accounting for the use of labor-time in the economy, so as to ensure the economic transparency that Marx envisages. As part of this function, the center would adjust the labor-time "pricing" of goods – including primary and intermediate products used in production – to reflect changes in the allocation of labor-time (and productivity of production units) in the economy. "Prices" in a socialist economy would directly reflect the amount of work (including inputs produced in previous production cycles) that had gone into making goods and delivering services.
- (2) Drawing up high-level strategic economic plans that incorporate socially agreed goals: mapping the division between investment in expanded or redirected production and current consumption; ensuring balanced economic development in geographical and sectoral terms; identifying priorities in the provision of public services; promoting social objectives, for instance, around the nature of work and working hours; and,

especially, devising plans to deliver objectives that are not captured directly in measures of the allocation of social labor-time, such as the protection of the environment and biodiversity (what mainstream economists call “externalities”).

In the immediate future, these plans would include: urgent steps to end the global economic underdevelopment bequeathed by capitalism; and measures, such as a cap on carbon emissions and the amount of resources used in each sector, that would allow us to begin to heal the damage inflicted on the environment.

- (3) Monitoring economic activity to spot difficulties in the delivery of the economy’s strategic plans, with the intention of proposing remedial action. The center would also be responsible for making sure that industries were delivering on agreements to meet the sectoral demand for which they were responsible. This centralized function would involve identifying shortages, potential choke points in production, and waste in the use of productive resources and inputs, and then negotiating solutions to these problems.
- (4) Possibly setting income levels (i.e., the rules for distributing labor certificates) throughout the society. A prime social goal ought to be promoting a more egalitarian and increasingly needs-based income distribution.

Decentralization is integral to the concept of economic planning as goal-directed economic coordination. At a fundamental level, this involves consumers being free to decide what they consume and from whom they obtain what they consume. Citizens could consume what they want within the limits imposed by the distribution of labor/consumption certificates. Production units could obtain their supplies from distribution centers that would maintain stocks of intermediate goods. Or they could negotiate agreements with other production units to obtain customized inputs.

Producers, at the level of whole industries, would be tasked with flexibly meeting whatever demand transpires – either from other producers or individual consumers – rather than being instructed by the center to produce specific outputs, in specific quantities, for specific customers.

It may be that sectoral or industry-level councils (made up of representatives of various interests) would take on the coordination role and allocate resources (workers and materials) from one line of production to another in response to ongoing changes in the structure of consumption. Production units would be managed democratically by their workers. The center, working alongside the councils, would coordinate between sectors.<sup>18</sup>

There would be no direction of labor in a socialist society, but it would be necessary to highlight in which sectors additional workers were needed and negotiate solutions.

But in addition to decentralization of responsibility to sectors and industries, it would be important to cater for as much geographical devolution as was practical. Only if as much decision-making as possible is embedded in local communities, will political power be genuinely dispersed, and citizens have a direct say in the decisions which impact on them.

Regions, cities, and localities could be allocated resources and labor-time budgets that allow them to provide a range of social and public services, making their own decisions about which to prioritize – much as local authorities do now, with respect to social care, education, and some aspects of health provision. As far as economic planning and coordination is concerned, locally provided public services can be seen as collective consumers. Their demand for building materials, supplies, energy, and so on will “pull” the production of the goods and services they require. Although since the plans they make will be published and agreed mostly well in advance, it will be possible to anticipate what many of those requirements will be.

But the services under the control of local people will extend well beyond the traditional public services of our day. There are a whole range of economic activities that are likely to be controlled by the communities who need them. Take cafes, restaurants, pubs, or

bars. I expect the socialist citizens of the future to socialize by eating and drinking out at least as much as we do today. The same goes for cinemas, theaters, and so on. In the absence of money and commodity production, there will not be a private sector to provide these services for “profit”, but neither does it seem practical or desirable to rely on a central administration to plan this type of provision in the detail that would be necessary.

Since it is likely that people will take an interest in the amenities and services available in their local community, they can probably be relied upon to participate in planning what they are. There is no reason why resources cannot be provided to facilitate this provision. Again, eating, drinking, and entertainment establishments will clearly operate as a form of collective consumption which socialist economic coordination can easily cater for. There is surely no need to record every restaurant, pub, and theater in a central plan in order to provide effective delivery of the kind of social goals a socialist society would develop.

In fact, why cannot local communities at neighborhood, city, or regional level agree to set up production units to supply goods and services predominantly for local consumption? Food processing of various types, or brewing beer (close to my heart), are the kind of economic activities that spring to mind as obviously suited to local provision. They could supply specialist products with a local twist. And they might create innovative products which in time could win a wider audience and eventually be replicated in other localities.

If the bulk of production in a particular industry were conducted locally, then the quantity of production coordinated by the higher level sectoral, or industry councils would be curtailed. It may be that the control and management of industries of all sorts could be devolved to local areas with predominantly a coordinating role for the sectoral councils. Why should the range of products available to socialist citizens, and the degree of local and regional variation, not be wider than what is supplied by the giant capitalist production and retail corporations now?

Allowing for local decision-making, initiative, and innovation answers the accusation of the proponents of the Austrian School in the economic calculation debate, such as Friedrich Hayek, about the lack of a “discovery” process in a socialist economy. The Austrians argue that only private entrepreneurs can reveal subjective, tacit knowledge.<sup>19</sup> I see no reason why empowered local communities and participatory political and economic structures would not do better at identifying and meeting the needs of citizens.

This brief sketch of the possibilities that could emerge in a decentralized, but coordinated socialist economy inevitably raises a host of questions.

It would be necessary to make sure production units and services (at all levels of the economy) were clear about their objectives. Badly conceived targets are worse than no targets at all – the literature on the Soviet economy is full of examples of bizarre misallocations of resources.

A great deal of thought would have to go into how pricing based on labor-time would work. Who would decide what pricing to apply to local provision of production and services? Would this be a role for the center? Or could responsibility for this be devolved – within certain rules and parameters?

Cockshott and Cottrell propose lowering the prices of goods that experience less than expected demand and raising the prices of goods in higher demand, so as to clear less desirable goods and avoid shortages of those goods everyone wants (in just the way a competitive market does). They suggest this would provide signals to the central planners to increase or reduce production as appropriate (Cockshott & Cottrell, 1993: 118–126).

As the central planners in Cockshott and Cottrell’s model are well aware of where demand is either tight or slack (since they would adjust the prices), the signaling purpose of the new prices strikes me as redundant. I am anticipating an economy responsive enough to changes in demand to be able to prevent serious shortages or oversupply without requiring demand to be manipulated by changes in price.



Some production units would be more productive than others – often simply because of the technology to which they have access, although also possibly because they work harder. Would labor-time pricing of each type of good be based on average productivity? Would the less productive units then be recorded as returning a notional “loss” and the more productive a “profit”?

It would not be appropriate to reward the workers in more productive workshops, factories, or service provision units simply on the basis of their good fortune in having secured early investment in the latest technology. Nor are we seeking via decentralization of economic decision-making to encourage a form of socialist “competition” in the economy – even if the labor certificates with which the lucky workers were rewarded did not enable them to accumulate “wealth” in the capitalist sense.

The objective ought to be to spread best practice, and the best technologies, as widely as possible. Indications of differences in productivity should be dealt with by negotiating the changes that are necessary to bring less productive units up to the level of the higher. If production units or whole industries persist in failing to meet objectives, procedures would have to be put in place to reorganize the units or industries.

### **Life’s prime want**

My working assumption is that releasing workers from the threat of unemployment and penury that is used to discipline workforces under capitalism, while involving workers in the design and management of their workplaces, will enable a much more cooperative and participatory ethos to take hold.

Work needs to be reconfigured so that it is fulfilling and enjoyable and something people want to participate in. Maximizing productivity would take second place to this objective. The “balanced job complexes” proposed by Michael Albert and Robin Hahnel (see, for instance, Albert, 2022: 46–68), in which the various functions to be performed in workplaces, from management to cleaning the toilets, are shared by every worker, is a reasonable starting point.

Contemporary socialist discussion of work (at least by those I teasingly call sci-fi-socialists) is often predicated on the objective of eliminating work (or reducing the number of hours required to a bare minimum) through automation. I doubt many of these writers envisage abolishing their own jobs as academics, journalists, or commentators – or reducing them to a couple of hours a week.

Marx’s discussion of the “realm of freedom” and the “realm of necessity”, I think, has served as a block to thinking seriously about work and what might motivate workers in a socialist society (Marx, 1981: 958–959): “[T]he realm of freedom actually begins only where labor which is determined by necessity and mundane considerations ceases; thus in the very nature of things it lies beyond the sphere of actual material production.” And later: “Beyond [the realm of necessity] begins that development of human energy which is an end in itself, the true realm of freedom, which, however, can blossom forth only with this realm of necessity as its basis. The shortening of the working-day is its basic prerequisite.”

There is no “realm of freedom” which does not involve work that contributes to society. Overcoming “the enslaving subordination of the individual to the division of labour” and “the antithesis between mental and physical labour” and making work “life’s prime want” (Marx, 1875) is incompatible with viewing work as “a mundane consideration” that we should try to minimize.

At the simplest level, after fulfilling their socially obligated work commitments, individuals would not be banned from undertaking whatever productive work they wished on behalf of their neighbors and fellow citizens – whether that is decorating homes, cooking meals, creating art works, setting up a radio station. If the local community or neighborhood

wanted to record these labor transactions, via a system equivalent to a local exchange trading system (LETS), that would be their choice.

And whatever the future brings in the realm of production, we should resist removing human labor from fields such as education, health, and social care, where the priority is serving and caring for each other. When I transfer to an old people's home, I do not want a robot bringing me my meals and providing me with company. The overriding socialist goal should be creating environments, at work and in the community, in which equal, non-exploitative, non-commodified, life-enhancing relationships between people can flourish.

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## Notes

<sup>1</sup>A revised edition was published in 1991 as *The Economics of Feasible Socialism Revisited*. I refer throughout to the original 1983 edition.

<sup>2</sup>See Mason (2015) and Bastani (2020) among many others. Jeremy Rifkin (2014), who is not a socialist, has some claim to being the intellectual father of this school.

<sup>3</sup>Jeremy Rifkin (2014) drew on the observation that the cost of distributing electronic goods tends to zero. This is true: once any product has been created (be it a book, a film or a recorded seminar) there are virtually no extra costs involved in distributing one copy of it or several billion copies over the internet. Rifkin draws the conclusion that the production of material goods is tending in the same direction. Mason (2015) and Bastani (2020) draw heavily on this logic.

<sup>4</sup>"The only alternative to vertical subordination is horizontal links. But horizontal links, that is, between producers, and between them and consumers (either directly or via wholesaling agencies), equal production for exchange which (again!) is some species of market." (Nove, 1983: 180).

<sup>5</sup>Ernest Mandel's model of articulated workers' self-management (1986), Pat Devine's model of negotiated coordination (1988), and Paul Cockshott and Allin Cottrell's model of central planning, making extensive use of computers (1993). I also reference the model of participatory economics (parecon) developed by Michael Albert and Robin Hahnel (Albert & Hahnel, 2002; Albert, 2022).

<sup>6</sup>The *sci-fi socialists* already referenced and Leigh Phillips and Michal Rozworski (2019).

<sup>7</sup>In this paper I use the word *socialism* to refer to the new mode of production. In other writings, I have been happy to use the word *communism*.

<sup>8</sup>Ollman also anticipates (1977) that in communism: private property has been replaced by social ownership in personal as well as public effects; the community stores are complete with everything a communist person could possibly want; the "extraordinary people" of this society exercise masterly control over all the forces and objects of nature; language will "submit to the perfect control of individuals" and one language will replace the thousands now in existence; all divisions and differences between humans will disappear, including physical racial differences.

<sup>9</sup>Edoardo Bellando (2020: 26–30) charts the origins of the phrase "From each according to his ability, to each according to their needs!" in the writings of many socialists in the early and mid-nineteenth century.

<sup>10</sup>Ernest Mandel makes a subtler argument than the sci-fi socialists: the needs of any single human being are finite, and the "marginal elasticity" of demand for any particular category of product once a sufficiently high level of supply is achieved tends towards zero or becomes negative (Mandel, 1986: 13).

<sup>11</sup>As Nove describes in the case of Yugoslav workers' self-management (1983: 133–141).

<sup>12</sup>Since expanding the number of workers, in order to increase production, who share in the enterprise's profit, will in most cases reduce the amount of shared profit going to each of the existing workers – see Nove, 1983: 138 for a discussion, in the context of Yugoslav self-management.

<sup>13</sup>Ernest Mandel, the leading theorist of a Trotskyist group and author of many widely read works, including the introductions to the Penguin editions of the three volumes of Marx's *Capital*, debated directly with Nove in the pages of *New Left Review* (Mandel, 1986; Nove, 1987; Mandel, 1988).

<sup>14</sup>Marx on making preparations for the unforeseen (1875): "communist society" needs to set aside "reserve or insurance funds to provide against accidents, dislocations caused by natural calamities etc."

<sup>15</sup>Firms which have sought to engineer internal markets have generally come a cropper – see the experience of Sears, Roebuck & Co. as recounted by Phillips & Rozworski (2019: 39).

<sup>16</sup>Under-consumptionist explanations of capitalist crises are an attempt to impose the logic of production for need on an economic system for which profit is the only motivation.

<sup>17</sup> Nove reports that prices in the Soviet Union were revised at long intervals of more than a decade (1983: 102).

<sup>18</sup> Pat Devine (1988) proposes a decentralized, but complex, system of negotiated coordination. I think his multiple councils and coordination bodies, staffed with the representatives of many different interests, would need to be simplified to cater for clear lines of decision-making.

<sup>19</sup> See Fikret Adaman and Pat Devine (1997) on the distinction between the positions of the neoclassicalists and the Austrians in the economic calculation debate, and the way that the various socialist protagonists tend to fall into one or other of these two schools.

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