“Keynes and Marx: some points of contact”[1]

Andy Denis (a.m.p.denis@city.ac.uk)

City University London

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Abstract

Marx analyses capitalism as a contradictory entity in which the effect of alienated human activity is to establish production as an end in itself instead of a means to the end of consumption. Evidence is offered that Keynes adopts a similar stance. Both adopt a labour theory of value, and both Marx and Keynes have a vision of capitalism as historically limited and as pointing beyond itself. Focusing on the production side of the capitalist system, Marx deduces a tendency of the rate of profit to fall from capital’s continual expulsion of productive labour. Keynes, focusing on the realisation side of the system, deduces the diminishing marginal efficiency of capital from the accumulation of capital, leading to an ever-declining ability of capitalists to exploit the scarcity value of capital. The paper argues that these are two sides of the same coin.

[1] This paper draws on my MA dissertation on Marx and Keynes, written in 1988 at Middlesex Polytechnic. Parts draw on Denis (2002). As this is an early draft, please do not cite. Comments would be most welcome: email to a.denis@city.ac.uk.

1 Introduction

Keynes and Marx approach their investigation of the economy and, specifically, of economic crisis, from two different angles. Marx approaches the issue via an analysis of the inner nature of capital, and his focus of attention is the production of value and surplus value. Keynes starts from the analysis of the capitalist economy as a totality, and concentrates his research on the barriers to production inherent in the sphere of realisation and exchange of products: his is a *monetary* theory of *production*. This difference of approach, however, does not necessarily imply any fundamental difference regarding the nature of the economy they were studying.

The motivation for writing this lies in the contributions of a number of writers who contend that Marx and Keynes are utterly opposed and share no common ground whatever. Two salient examples of this tendency are Paul Mattick's (1969) *Marx and Keynes. The limits of the mixed economy*, and Geoff Pilling's (1986) *The Crisis of Keynesian Economics. A Marxist view*. A more recent example is Nick Potts (2013) "Keynesian Economics: In Search of Unnatural Stability". In my view these accounts are profoundly wrong and mislead researchers influenced by both Marx and Keynes as to the significance of the contributions of both.

For Marx, capitalism is inherently contradictory, and this contradictoriness is necessarily expressed in crises and unemployment. Further, the cause of this state of affairs is the fact that alienated production, as an end in itself, strives to become independent of humanity, but that, since humanity is the measure of production, by doing so it undermines its own existence. The purpose of this paper is to indicate in Keynes's work a series of hints and allusions to a broader, but unelaborated analytical framework, within which Keynes evidently conceived his work as being set, and which displays points of contact with Marx's vision.

The purpose of the paper is to point out a number of points of contact between the approaches of Marx and Keynes; it is not at all intended to suggest that Keynes was a Marxian economist, or that Marx anticipated the work of Keynes.

2 The historical context

For Keynes, the historical significance of capitalism is that it forms the period of transition between two great historical eras, those of scarcity and of abundance. The first great era, or "economic order" (Keynes, 1972: 304) in Keynes's scheme takes in prehistoric, ancient and medieval times: "the era of scarcity … was … the normal economic state of the world up to (say) the fifteenth or sixteenth century" (Keynes, 1972: 304). Production in this period is overwhelmingly production for the sake of consumption, indeed subsistence, purposes: "The economic problem, the struggle for subsistence, always has been hitherto the primary problem of the human race – not only of the human race, but of the whole of the biological kingdom from the beginning of life in its most primitive forms" (Keynes, 1972: 326-7). Prior to the modern period capital cannot, in general, accumulate, as uncertainty keeps the marginal efficiency of capital below the rate of interest (Keynes, 1973a: 351).

Scarcity, however, is not the permanent condition of humanity: in the quite near future lies "our destination of economic bliss" (Keynes, 1972: 331), "economic paradise" (1972: 268), "the age of leisure and abundance" (Keynes, 1972: 328). "[T]he *economic problem* may be solved, or at least be within sight of solution, within a hundred years. This means that the economic problem is not – if

we look into the future – *the permanent problem of the human race*" (Keynes, 1972: 326)[2]. The essence of the era of abundance is that "needs are satisfied in the sense that we prefer to devote our further energies to non-economic purposes" (Keynes, 1972: 326). Thus production here, too, is for the sake of consumption in the broadest sense: "for the first time since his creation man will be faced with his real, his permanent problem – how to use his freedom from pressing economic cares … to live wisely and agreeably and well" (Keynes, 1972: 328).

In the Preface to the *Essays in Persuasion* (Keynes, 1931: xviii), a collection of essays spanning a dozen years, this approaching liberation from economic care is described as Keynes's "central thesis throughout": "the day is not far off when the economic problem will take the back seat where it belongs, and … the arena of the heart and head will be occupied … by our real problems – the problems of life and human relations, of creation and behaviour and religion" (Keynes, 1931: xviii). The notion of a forthcoming end to scarcity still plays a central, and indeed an even more urgent, role in the *General Theory*. The age of abundance now appears as the "quasi-stationary community" (Keynes, 1973a: 220), and is to be attained, not in our grandchildren's time, but "within a single generation" (Keynes, 1973a: 220), "say within twenty-five years or less" in Britain or the United States (Keynes, 1973a: 324).

The third "economic order" in Keynes's scheme is the modern period, the age of capitalism: "The modern age opened … with the accumulation of capital which began in the sixteenth century" (Keynes, 1972: 323). This period is the period of transition from the era of scarcity to that of abundance. As such it is not an end in itself but a means to economic ends lying beyond itself, namely the achievement of the "economic paradise". Hence our judgement of capitalism must refer, not to how pleasant or otherwise it may be, but to its efficacy in achieving those ends:

> Many people, who are really objecting to capitalism as a way of life, argue as though they were objecting to it on the ground of its efficiency in attaining its own objects … For my part I think that capitalism, wisely managed, can probably be made more efficient for attaining economic ends than any alternative system yet in sight, but that in itself it is in many ways extremely objectionable. (Keynes, 1972: 294)

The key to capitalism's efficacy is the accumulation of capital: the rate of capital accumulation is the rate of our approach to the economic paradise. To denote the motives to this accumulation of capital, Keynes spoke of "compound interest" (Keynes, 1972: 324) and "purposiveness" (Keynes, 1972: 329). As far as the former term is concerned, Marx agreed that "[t]he process of accumulation of capital may be conceived as an accumulation of compound interest in the sense that the portion of profit which is re-converted into capital … may be called interest" (Marx, 1972a: 398).

By "purposiveness", Keynes means saving, ostensibly for future consumption, but actually for the sake of accumulating claims on future production; saving, not in order to enjoy the same consumption later, but in order to secure a stream of unearned income.

> The system worked, throughout Europe, with an extraordinary success and facilitated the growth of wealth on an unprecedented scale. To save and to invest became at once the duty and the delight of a large class. The savings were seldom drawn on and, accumulating

[2] All emphases in passages cited in this paper replicate that in the original text.

> at compound interest, made possible the material triumphs which we now all take for granted. The morals, the politics, the literature, and the religion of the age joined in a grand conspiracy for the promotion of saving. (Keynes, 1972: 62)

In the nineteenth century, Keynes says, "this epoch culminated gloriously in the victories of laissez-faire and historic Liberalism" (Keynes, 1972: 304).

While recognising the historical necessity and legitimacy of the capitalist epoch, and appreciating the benefits of its "material triumphs", Keynes deprecated the subversion of morals it entailed, the "grand conspiracy" just referred to: "we have exalted some of the most distasteful of human qualities into a position of the highest virtues" (Keynes, 1972: 329). Keynes is protesting here against the fact that capitalism requires the transformation of the economy from production for the sake of consumption to production for the sake of profit, for the sake of the accumulation of wealth. Saving for the sake of future consumption is permissible in Keynes's view, while saving in order to enjoy unearned income, in order "to exploit the scarcity value of capital" (Keynes, 1973a: 376) is morally reprehensible. That mankind has had to depend on this sort of egoistic materialism in order to raise itself from scarcity to abundance, he believes, has had widespread deleterious consequences:

> the moral problem of our age is concerned with the love of money, with the habitual appeal to the money motive in nine-tenths of the activities of life, with the universal striving after individual economic security as the prime object of endeavour, with the social approbation of money as the measure of constructive success, and with the social appeal to the hoarding instinct as the foundation of the necessary provision for the family and for the future. (Keynes, 1972: 268-9)

Modern capitalism, Keynes says, is "egotistic atomism, and "absolutely irreligious, without internal union, without much public spirit, often … a mere congeries of possessors and pursuers" (Keynes, 1972: 267).

But there is another aspect to the question of Keynes's historical vision of capitalism. For having a historical conception of something does not mean merely seeing it as a member of a chronological series, but identifying its inner contradiction, that which expresses both its arising and its passing away. For Marx, the central contradiction of capitalism is rooted in the fact that production is not simply a means to the end of consumption, but has become production for its own sake, production for the sake of the accumulation of wealth, not production for need, but production for profit. Capitalism is contradictory precisely because its very existence presupposes this inversion – an inversion, however, which is fallacious and cannot be consistently maintained. Capitalism, the ultimately unsuccessful attempt to make production an end instead of a means, founders on the rock of consumption: production which denies consumption denies itself. Economic crisis, according to Marx, is the convulsive reassertion of the underlying unity of production and consumption.

Keynes also has a conception of capitalism, not only as historical, coming after and before other economic formations, but also as historically limited in this latter sense of recognising internal contradictoriness. The whole point of Keynes's break with the classics was his view that they wrongly supposed the aim of production to be the acquisition of articles of consumption (use-

values) rather than money, or wealth in general (exchange-value). On precisely this point Keynes cites Marx in a 1933 draft chapter of the *General Theory*:

> Karl Marx … pointed out that the nature of production in the actual world is not, as economists seem often to suppose, a case of C-M-C', ie of exchanging commodity for money in order to obtain another commodity. That may be the standpoint of the private consumer. But it is not the attitude of *business*, which is a case of M-C-M', ie of parting with money for commodity in order to obtain more money. (Keynes, 1979: 81)

In other words, the standpoint of business is that production is carried out for its own sake, not as means to an end; that the purpose of accumulation is, not consumption, but more accumulation. This standpoint, however, is fundamentally faulty, for "[c]onsumption – to repeat the obvious – is the sole end and object of all economic activity" (Keynes, 1973a: 104); "capital is not a self-subsistent entity existing apart from consumption" (Keynes, 1973a: 106); "the expectation of consumption is the only *raison d'être* of employment" (Keynes, 1973a: 211).

In the Concluding Notes to the *General Theory*, Keynes discusses "the cumulative oppressive power of the capitalist to exploit the scarcity-value of capital" (Keynes, 1973a: 376); that is, the power of the capitalist to acquire, on the basis of the scarcity of capital, a yield which was not produced by capital, but by labour, the sole factor of production.

This reflects an understanding allied to Marx's notion of the "fetishism" of capital. For Marx, the nature of the system of relationships between people, of which society is composed, is such as to impose upon the non-owners of means of production the *compulsion* to labour in the service of the owners of means of production. The purpose to which this compulsory labour is put is the accumulation of the means of production, and the preservation of the relations of compulsion attached to them. Hence the means of production, represented in the flesh by their owners, the capitalists, acquire a life of their own and subject the society of their human creators to the discipline of their own laws instead of *vice versa*. Keynes shares Marx's understanding that capitalists extract their yield by virtue, not of the physical productivity of capital assets, but of the social relations attached to them. Thus there are circumstances, such as the abundance of capital in the economic paradise to come, in which that yield could decline "without it [the asset] having become less productive … in the physical sense" (Keynes, 1973a: 213). The capital asset, in other words, has made just as great a contribution to human wealth as previously, has assisted to the same extent in the production of use-values, by constituting the environment within which labour produces output. But the capitalists are no longer, or are to a lesser extent, in a position to appropriate a fraction of that output in the form of profit.

3 Keynes's labour theory of value

Turning, now, to Keynes's views regarding the inner nature of capitalism, the first point to note is that Keynes adopts a labour theory of value:

> It is much preferable to speak of capital as having a yield … than as being *productive* … everything is *produced* by *labour*, aided by … technique, by natural resources … and by the results of past labour embodied in assets … It is preferable to regard labour … as the sole

> factor of production, operating in a given environment of technique, natural resources, capital equipment and effective demand. (Keynes, 1973a: 213-4)

What can we glean from this passage? Firstly, it explicitly identifies labour as the foundation of value – I say 'foundation' for it becomes clear immediately that, like Marx, Keynes by no means identifies price with the quantity of labour embodied in the commodity – but, secondly, Keynes implicitly adopts a position here on the nature of surplus value.

To take the latter point first. Everything is produced by labour, and the yield on capital consists of a part of the money value of the products of labour, which accrues not to the labourers but to the owners of capital owing to "the cumulative oppressive power of the capitalists to exploit the scarcity value of capital" (Keynes, 1973a: 376). Yield must therefore consist of the product of unpaid labour, surplus labour; it is therefore equivalent, although Keynes does not say this, to surplus value in the Marxian sense.

On the first point, Keynes, in the passage cited, acknowledges labour as the foundation of value, but he does not proceed from that to identify price as directly equal to the quantity of labour embodied in the commodity. Firstly, we should note, he is not speaking of concrete labour, the labour actually performed, but abstract labour, labour which has been made homogeneous: "quantities of employment … can be made [strictly homogeneous] … by taking an hour's employment of ordinary labour as our unit and weighting an hour's employment of special labour in proportion to remuneration" (Keynes, 1973a: 41). Hence the value of an asset depends, not on the quantity of actual labour performed in its manufacture, but on that of homogeneous, "ordinary" labour – or "simple average labour", as Marx terms it (Marx, 1977: 51) – embodied in it.

We should also note that even this quantity of homogeneous labour does not directly determine the exchange-value of the product. The argument in the *General Theory* (Keynes, 1973a: 213-7) is that since only present labour, and not past labour "embodied in assets", produces value (Keynes, 1973a: 213), more "roundabout" processes, since they have a higher proportion of assets to labour, will have a lower yield per value unit of capital equipment. This proportion of assets to labour is precisely what Marx calls the organic composition of capital. Keynes expresses it as the proportion "between the amount of labour employed in making machines and the amount which will be employed in using them" (Keynes, 1973a: 214), and as "the quantity of labour embodied in roundabout processes" used in conjunction with "a given labour force" (Keynes, 1973a: 214). Hence the significance, in the *General Theory*, of the term "roundaboutness", due to Böhm-Bawerk and much used by Austrian economists: Keynes interprets it as referring to the value relation of past to present labour, the organic composition of capital. The greater the value of past labour, embodied in assets, relative to present labour, the more "roundabout" is the process and the higher the organic composition.

Keynes immediately links this ratio between present and past labour with another: "The ultimate quantity of value … relatively to the quantity of labour employed" (Keynes, 1973a: 214). "The quantity of labour employed" Keynes defines in the previous sentence as "the amount of labour employed in making machines and the amount which will be employed in using them". For Marx, this is the value of the total capital, constant plus variable. "The ultimate quantity of value" is that of the product, or output, and must be equal to the labour cost of producing it, the replacement cost of

the assets used up, and the yield to the owners of the capital assets – in Marxian terms, variable capital, constant capital consumed, and surplus value (*v*+*c*+*s*).

The normal expression in Marxian economics for the rate of profit, is surplus value over constant plus variable capital (*s*/(*c*+*v*)). The ratio between the "ultimate quantity of value" and "the quantity of labour employed" is the ratio between *c*+*v*+*s* and *c*+*v*. Clearly, from the Marxian standpoint, this ratio is another expression for the rate of profit, and will behave in exactly the same way as that rate, declining in the long run – if indeed there is a tendency of the rate of profit to fall – not towards zero, but unity.

Keynes argues that "The ultimate quantity of *value* will not increase indefinitely, relative to the quantity of labour employed, as the processes adopted become more roundabout" (Keynes, 1973a: 214). "With a given labour force there is a definite limit to the quantity of labour embodied in roundabout processes which can be used to advantage … even if physical efficiency is still increasing" (Keynes, 1973a: 214). For an individual process, or industry, considered by itself, continued capital accumulation will be retarded, even where physical efficiency is still increasing, by the fall in the rate of profit in that industry which increasing roundaboutness would entail. In other words, the criterion of profitability constitutes a barrier to the accumulation of capital: continued accumulation of capital in any branch of production is prematurely retarded by the requirement that the assets should render their owners a yield. As current labour is replaced by machinery, by past labour embodied in assets, a lower yield would be expected, as only present labour produces anything. This can only be countered by withdrawal of capital from that industry.

To explain this, we must explore Marx's notion of prices of production.

In Marx's theory, the products of processes involving a higher organic composition of capital would, if sold at their values, yield a lower than average rate of profit, as only labour is productive of value, but an increasing organic composition means that labour is being expelled from the industry. The rate of profit is (tendentially) equalised for every process by the withdrawal of capital from such high organic composition processes, that is, by the expedient of allowing supply of the product of that process to fall relatively to demand until the point is reached where the price is high enough above its labour value to yield the average rate of profit. This price Marx calls the price of production; it is equal to the cost of production plus a proportion of it equal to the average rate of profit.

This is exactly the procedure Keynes adopts to explain "why various kinds of services and facilities are expensive relatively to the quantity of labour involved" (Keynes, 1973a: 215), why, that is, the price of a good may deviate persistently from its labour value. Keynes's answer is that such goods may be produced under conditions of an adverse organic composition of capital, that is, proportion of past to present labour, and hence must be kept relatively scarce. "Not all labour", Keynes writes, "is accomplished in equally agreeable attendant circumstances; and conditions of equilibrium require that articles produced in less agreeable attendant circumstances must be kept sufficiently scarce to command a higher price" (Keynes, 1973a: 215) – where, by "agreeable", he means "characterised by smelliness, risk or the lapse of time". But this "lapse of time" is exactly what he has been discussing under the rubric of roundaboutness. Hence the "higher price", which Keynes says is required for goods produced by more roundabout methods, is the exact equivalent of Marx's price of production.

4 The law of the tendency of the rate of profit to fall in Marx and Keynes

a The falling rate of profit

Marx regarded the law of the tendency of the rate of profit to fall as "in every respect the most important law of modern political economy" (Marx, 1973a: 748).

Why should there be a tendency for the rate of profit to fall? There is an account of this law in Pilling (1986) which is very good as far as it goes, but is incomplete in one crucial respect. It is otherwise a good summary and worth quoting at length:

> "Marx divides the total social capital into three broad categories: (1) constant capital denoted by the letter c, equivalent to expenditure on machinery, raw materials and heat, light and power … (2) variable capital (v), the expenditure by capital on the purchase of labour power … (3) surplus value (s), the increment in value accruing to the owners of capital. The rate of profit is given by surplus value over total capital: s/c+v. Now as capital accumulates, there is a tendency for the constant capital to grow more rapidly than the variable portion of capital: this is the expression in value terms of the improvements in technology associated with capitalism throughout its history. The relatively rapid increase in constant capital as compared with the variable element of capital Marx refers to as the tendency for the organic composition of capital (c/v) to rise. Although an increase in the organic composition of capital will normally produce an increase in the rate of surplus value (s/v) … there are definite objective limits to such an increase, not least amongst them the actual physical limit to available working time. But unless s/v does rise with sufficient rapidity to compensate for the increasing organic composition of capital (c/v), then the tendency for the rate of profit to fall will assert itself in an actual fall. (Pilling, 1986: 79)

In other words, if c/v (organic composition of capital) rises faster than s/v (rate of surplus value), then the rate of profit will fall, and vice versa. The problem with this is that, posed in this way, there is no reason why c/v *should* rise faster than s/v. The reason s/v cannot rise fast enough to offset c/v is related to the method employed by industrial capitalism to raise the productivity of labour: the introduction of machinery (Marx, 1977: 365-71, 383-4). Now it may seem at first that a machine, though it displaces workers in the industry where it is employed, merely transfers that labour to the industry making the machines. But it is always the case that the labour employed in making, and maintaining, a machine is less than that displaced by it; otherwise there would be no point in the substitution, from the capitalist's point of view (Marx, 1972b: 441). Every improvement in technology, therefore, now means: firstly, that the quantity of *circulating* constant capital, particularly raw materials, converted into commodities per person hour, is increased. This is reflected, firstly, in similar increases in both the rate of surplus value and the organic composition of capital. The rate of surplus value increases because labour has been made more efficient, reducing the necessary part of the working day; and the organic composition has been increased because more raw materials are now transformed into output by each worker. Secondly, however, that there is a net increase in the proportion between *fixed* constant capital and variable capital. In other words, the increase of the organic composition of capital consists of (1) an increase in the ratio of *circulating* constant capital (raw materials, power, etc) to variable capital, which is on average balanced by an offsetting increase in the rate of surplus value, and (2) an increase in the ratio of *fixed* constant capital (machinery) to variable capital, which is not so balanced. Every improvement

in technique based on replacing workers by machines therefore results in *two* increases in composition, only one of which is offset (on average) by an equal increase in exploitation. A tendency for the rate of profit to fall is therefore inevitably associated with industrial capitalism, in Marx's view, because composition (c/v) must rise faster than exploitation (s/v).

b The declining marginal efficiency of capital

Keynes begins his discussion of the marginal efficiency of capital (MEC) with the statement that "When a man buys an investment or capital asset, he purchases the right to the … yield of the investment" (Keynes, 1973a: 135). Taken in the context of the remarks already made above, this can only mean that the investor purchases the right to exploit labour by means of ownership of the asset, the right to use it to extract surplus value from the labourers.

Keynes expresses the return or yield as a ratio to the value of the capital asset; he is only ever interested in this ratio, the productivity or 'efficiency' of capital, at the margin. The resulting concept, the MEC, he defines as follows: "the increment of value due to the employment of one more value unit of capital" (Keynes, 1973a: 138). This, in Marxian terms, is the ratio of surplus value to constant capital (s/c in Marx's notation) for the marginal unit of capital. Now if the yield of the marginal unit of capital must be the yield of every unit of capital in equilibrium then Keynes's MEC corresponds to Marx's average or general rate of profit. The two are not quite the same thing. Marx's rate of profit would be designated as s/(c+v), while Keynes's marginal efficiency of capital would be s/c. But the point here is that as capital accumulates, c/v (composition) rises, and hence s/(c+v) (profitability) approaches asymptotically to s/c (marginal efficiency). Changes in marginal efficiency, s/c, would have identical causes and consequences to those in the rate of profit, s/(c+v).

Keynes sets out the basis for his conception of the declining MEC early in Chapter 11 of the *General Theory*: "the marginal efficiency of [any given] type of capital will diminish as the investment in it is increased" (Keynes, 1973a: 136). This is "partly because the prospective yield will fall as that type of capital is increased, and partly because … pressure on the facilities for producing that type of capital will cause its supply price to increase". We can aggregate from the individual kind of capital asset to total capital:

> for each type of capital we can build up a schedule, showing by how much investment in it will have to increase … in order that its marginal efficiency should fall to any given figure. We can then aggregate these schedules for all the different types of capital, so as to provide a schedule relating the rate of aggregate investment to the corresponding marginal efficiency of capital in general which that rate of investment will establish … the rate of investment will be pushed to the point on the investment demand-schedule where the marginal efficiency of capital in general is equal to the market rate of interest. (Keynes, 1973a: 136-7)

It stands to reason, therefore, that capital accumulation will tend to bring about a decline in the MEC. The "quasi-stationary" state results when the MEC has been brought down to zero. Assuming that state action brings about a state of full-employment,

> I should guess that a properly run community … ought to be able to bring down the marginal efficiency of capital in equilibrium approximately to zero within a single generation; so that

> we should attain the conditions of a quasi-stationary community … [I suppose] it to be comparatively easy to make capital goods so abundant that the marginal efficiency of capital is zero. (Keynes, 1973a: 220-1)

This would fulfil "our aim of depriving capital of its scarcity-value within one or two generations" (Keynes, 1973a: 377).

The passage in which Keynes claims that we can aggregate the schedules of the marginal efficiencies of individual kinds of capital to form a schedule of the marginal efficiency of capital in general is for him uncharacteristic in the willingness it displays to aggregate – without stopping to consider whether what is true of the part is necessarily, therefore, true of the whole. A particular issue concerns technical progress in the form of mechanisation which expels labour from the production process. The manner in which Keynes expresses himself has led to misunderstanding. Many have been led to believe that Keynes was excluding technical change, and consequently, that technical change may offset the tendency of the MEC to decline (Chick, 1983: 345). Hicks argued in a review of the *General Theory* that

> if the number of kinds of capital goods was fixed, then it would be very reasonable to suppose that the yields from each kind of good would diminish as the number of goods of that kind increased. But if the number of kinds is not fixed, then it seems very possible that the invention of new kinds may be stimulated by the increase in productive power; and this might put off the decline almost indefinitely (Hicks, 1936: 252).

There was a brief correspondence on this between Keynes and Hicks (Keynes, 1973c: 72-3). Keynes denied being "conscious of having assumed that invention is nil". There was also a correspondence between Hawtrey and Keynes during 1935-36 about the same issue. Again, this was concluded by Keynes saying that "at the level of abstraction in which I am writing" no different treatment is required, whether one assumed away invention (capital widening) or assumed inventions to take place (capital deepening) (Keynes, 1973b: 629).

The significance of the issue is as follows. If Keynes is neglecting technical change, if he is assuming capital widening, then the accumulation of capital is a mere increase in the scale of capitalist operations without any revolutionising of the process of production; this extensive accumulation, as Marx would call it, is a simple increase in the number or size of enterprises (or both), with the additional capital operating on the basis of the same technique, the same organic composition, as the original capital. If, however, Keynes is including inventions in his theory, then he is talking about the opposite, capital deepening, or intensive accumulation. This applies, not to size or number of enterprises, but to the degree of capitalisation of enterprises, the extent to which labour is replaced by fixed constant capital.

Looking at the micro side, the kinds of capital assets, we must be talking about capital widening, as Hicks makes clear in the passage above. Why does the MEC of the asset fall? Because the supply of the goods produced with its aid expands relatively to supply, reducing prices. It is true that by hiring factors, additional revenues are created and hence additional demand, but that demand is for the most part not for the product of *this* industry. Capital deepening would be tantamount to the creation of a new asset, the yield from which can be expected to be high, until the expanded production of output by its means begins to pull down prices.

When we turn to the MEC of capital assets in general, however, this argument cannot be used. Capital widening at the level of the economy as a whole requires unemployed factors, or it would not be possible to expand production using the same techniques, the same ratio of labour to capital assets. And production would add as much to demand as to supply, so there would be no reason for the MEC to decline. Capital deepening, however, would reduce costs per unit of output by replacing labour by machinery – consequently reducing the demand created by that productive activity relative to the supply that it created, causing prices to fall, leading to a fall in the MEC.

It seems, therefore, that the declining MEC for individual assets and for capital as a whole are driven by different factors – a declining MEC for a particular kind of capital asset must be due to capital widening, while a declining MEC in general must be due to capital deepening – and one cannot establish the macro by aggregating the micro in the manner that Keynes suggests. As soon as you start to aggregate, you violate the *ceteris paribus* conditions on which the MEC schedules for the individual assets were constructed in the first place.

This correction brings Keynes's theoretical vision all the closer to that of Marx, who argued that

> the necessary tendency of capital to raise [the *productive force*] to the utmost in order to increase relative *surplus time* … thereby decreases *necessary labour time*, hence the worker's exchange capacity … To the same degree as the mass of products grow, so grows the difficulty of realising the labour time contained in them – because the demands made on consumption rise (Marx, 1973: 422; see also Marx, 1969: 492, and Marx, 1972b: 335).

These two versions of the tendency of the rate of profit to fall are complementary – neither is more right than the other. The rate of profit falls because machines replace workers; on the one side, the lost value-creating power of the expelled labour reduces the ability of the owner of each unit of capital to use its possession to extract surplus value; on the other the lost purchasing power of the expelled workers brings down the demand price for output and hence the profitability of capital. Unit output as a whole exchanges at its value; loss of value-creating power reduces its value, loss of purchasing power its price. They are two aspects of the same process. In both cases the role of machinery is vital: it is machinery which displaces workers and hence prevents (a) their *labour*, leading to the fall in the rate of profit, and (b) their *consumption*, leading to a fall in the marginal efficiency of capital. Marx bases himself on the fact that only human production, not machinery, can create value; Keynes bases himself on the fact that only human consumption, not capital equipment, can confirm the value so created by consuming it. In this sense

> consumption … is the sole end and object of all economic activity …. New capital investment can only take place … if future expenditure and consumption is expected to increase. Each time we secure today's equilibrium by increased investment we are aggravating the difficulty of securing equilibrium tomorrow … capital is not a self-subsistent entity existing apart from consumption. (Keynes, 1973a: 104-6)

In connection with the present discussion, it is important to recall that, for Marx, value is set by demand as much as supply, for it is not the labour-time which has gone into the product which constitutes its value, but the *socially necessary* labour-time. If the labour-time expended on a product, or on output as a whole, is more than the socially-necessary quantity of labour, then each hour's labour will only count as some fraction of an hour of socially necessary labour, less than one

hour in the same proportion as the socially necessary labour time is less than the total labour time expended. The value of a product is not the average labour-time which has gone into producing it, except in the situation where there is an equilibrium in the sense that there is no tendency to increase or decrease the production of the individual product or of total output.

Marx made the point like this:

> Every individual article, or every definite quantity of a commodity, may, indeed, contain no more than the socially necessary labour time required for its production, and from this point of view the market value of this entire commodity represents only necessary labour, but if this commodity has been produced in excess of social needs, then so much of the social labour-time is squandered and the mass of the commodity comes to represent a much smaller quantity of social labour in the market than is actually incorporated in it … For this reason these commodities must be sold below their market-value. (Marx, 1972a: 187)

And this is in fact what happens: every round of production (including its share of technical progress) results in a reduction of demand, per unit of capital, such that that demand becomes incapable of justifying the existing level of output: prices fall below "market-values" (by which Marx, counterintuitively, means the quantity of necessary labour impounded in the commodity) to their real, underlying social values, incorporating a smaller quantity of profit. On the one hand it might seem that the reduction in demand will only be the same as the degree of cheapening, so it will make no difference, but really it *is* a cheapening, and a fall in demand, *relative to* the amount of capital employed, that is, the situation is one where capital has become more abundant, more overproduced, and the marginal efficiency of capital or the rate of profit therefore falls.

The contributions of Marx and Keynes, their theories of the production and realisation processes respectively, should be understood as a unity: "the relations of distribution are only the relations of production seen from a different aspect" (Marx, 1972b: 56). Yet there is a persistent tendency to see them as something separate, and the same barrier to the expansion of capital, appearing differently in one sphere from its appearance in the other, is taken to be a different, additional barrier. This is quite contrary to a conception of Marxian economics which sees the essence of capitalist crises in the tendency of the rate of profit to fall manifesting itself perforce in a crisis of realisation: "Overproduction takes place in connection with realisation, not otherwise" (Marx, 1973: 424).

5 The overproduction of capital

Capital is overproduced when accumulation has proceeded so far that it can proceed no further. It is in a sense not a matter of the abundance of capital but of its composition: Capital only accepted as productive that consumption which was necessary from its own point of view; in trying to cut itself off completely from human consumption, in trying to reduce it to nothing, it has at the same time cut itself off from human value-creating power – labour-power. $s/(c+v)$ tends to zero when v is infinitesimally small compared with c, even when s/v becomes very large. Seen from the Keynesian point of view: Keynes is concerned about 'over-investment' in fixed capital. Keynes believes that only labour creates value, so it is not surprising that he believes that accumulation of fixed capital relative to the labour force should bring down the yield on that capital. But his attention is almost exclusively on the demand-side of the problem.

The question of overaccumulation is explicitly present in Keynes in the guise, for example, of 'over-investment', but it is also present to a much greater extent in the form of its inverse, 'scarcity': "the only reason why an asset offers a prospect of yielding during its life services having an aggregate value greater than its initial supply price is because it is *scarce*" (Keynes, 1973a: 213). Keynes foresaw a time with "capital-goods so abundant that the marginal efficiency of capital is zero" (Keynes, 1973a: 221). This must mean that the increased supply of capital-goods is not merely absolute, but relative to demand. In other words the increased supply which accompanies capital accumulation is not balanced by an equal growth in demand, because the latter is relatively eroded by capital deepening. Capital is not able to extract unpaid labour by virtue of its scarcity. The point is that capital is only able to *realise* that unpaid labour by virtue of its own scarcity. As constant capital becomes more abundant (relative to working population), that is, as what Marxists call the organic composition of capital rises, the quantity of demand (ie productive consumption, necessary consumption by productive labourers) per unit of constant capital declines. The lower relative demand continually reduces prices to the new, lower values (Marx, 1972a: 187). The increasing abundance of constant capital is expressed in a falling level of demand per unit capital, and this in turn is expressed in a falling yield, hence falling marginal efficiency of capital.

When Marxian economists speak of capital as 'productive', they mean productive in its own terms, productive for capital, productive in that it is able to extract value from labourers and accumulate it. But it is only productive in this sense because it includes variable capital, living labour. Keynes, by contrast, by the term 'capital' generally understands only constant capital, and in this context is absolutely right to regard (constant) capital as entirely unproductive of value however productive of use-values it may be.

Marx was very clear that the abundance of capital was a question of realisation, of abundance relative to demand:

> [In] every capitalist's illusion … it is forgotten that, as Malthus says, 'the very existence of profit on any commodity pre-supposes a *demand exterior to that of the labourer who produced it*', and hence the *demand of the labourer himself can never be an adequate demand* … if the demand *exterior to the demand of the labourer himself* disappears or shrinks up, then the collapse occurs … effective … demand is adequate and sufficient as long as the producers exchange among themselves. Its inadequacy shows itself as soon as the final product encounters its limit in direct and final consumption. (Marx, 1973: 420-1)
>
> During the crisis itself … precisely at such times … there is a superabundance of productive capital … in relation to the paralysed consumption … The ultimate reason for all real crises always remains the poverty and restricted consumption of the masses. (Marx, 1972a: 483-4)
>
> The conditions … of [realisation] … are only limited … by the proportional relation of the various branches of production and the consumer power of society … based on antagonistic relations of distribution, which reduce the consumption of the bulk of society to a minimum varying within more or less narrow limits … The more productiveness develops, the more it finds itself at variance with the narrow basis on which the conditions of consumption rest … a rift must continually ensue between the limited dimensions of consumption under capitalism and a production which forever tends to exceed this immanent barrier. (Marx, 1972a: 244-6)

In summary, the spheres of production and realisation are not entities external to each other, the contradictions of one sphere being additional to those of the other, but aspects of a unity, the contradictions of one expressing or underlying those of the other.

Conclusion

This paper has argued that Marx and Keynes approach the analysis of capitalist economies from distinct standpoints, by starting with the investigation of the production of value and surplus value, in the case of Marx, and of its realisation, in the case of Keynes. But that implies complementarity, evidenced in a number of points of contact. The first point of contact identified in the paper is that both writers have a vision of capitalism as a historically limited mode of production, one which by means of the accumulation of capital, takes humanity from a period of scarcity to one of abundance. Both, moreover, regard capitalism as internally contradictory, attempting to render capital independent of consumption, so that the accumulation of capital is pursued for its own sake, and not for the human purpose of expanded consumption. In connection with, and underpinning these more general attitudes to capital, both writers adopt a labour theory of value and both affirm a tendency for the rate of profit of capital to fall. The conclusion reached, therefore, is that the thesis that Marx and Keynes are utterly opposed, expounded for example in Pilling (1986), Mattick (1969), and Potts (2013), is incorrect and misleading.

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