The Political Economy of Marx’s Theory of the Falling Rate of Profit: Methodological Considerations

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“This is in every way the most important law of political economy, and the most essential for understanding the most difficult law from the historical standpoint. It is a law which, despite its simplicity, has never before been grasped and, even less consciously articulated” (Marx, 1973, p. 748).

Introduction
The law of the tendency for the rate of profit to fall (TRPF) remains to this day one of the most important and highly debated issues in all of economics. At issue for economists of all persuasions is the fundamental question of whether as capitalism grows, or accumulates, this very process of growth will undermine its conditions of existence and thereby engender periodic or secular crises.

Nowhere has this debate been more fiercely contested than among Marxist economists. The theoretical and political importance of this debate for Marxist economists has occasioned an often polemical style of argumentation. For example, John Roemer, an ardent critic of those who believe that capitalism has an inherent TRPF, writes that “… the dogmatism that has been associated with the theory of the ‘rising organic composition of capital’ has been one of the heaviest palls on the development of a creative Marxist project to study the laws of motion of modern capitalist society” (1981, p. 88). Strongly opposed to Roemer’s position concerning the TRPF, Pat Clawson writes in an equally contentious fashion of those who accept the validity of the Okishio theorem: “The Marxism of this school consists of little more than translating neo-classical dogmas into Marxist terminology” (1983, p. 109).

The objective of this paper is to disentangle, and then suggest a new way to rationally reconstruct the longstanding Marxist debate over the TRPF by examining the manner in which its various participants conceptualize the relationship between the social totality and its constituent parts. I argue that there have been two distinct Marxist theories of totality and methodology present in the debate over the TRPF.1 Each theory can be distinguished by whether it reduces the social totality to the summation of a set of preexisting parts, or whether the parts are understood simply to be an expression of the inner nature of the pregiven totality. The former approach is associated with those currently advocating a microfoundations or ‘analytical’ approach to Marxist social theory.2 The latter approach is associated with the broadly-defined Hegelian tradition within Marxist theory.3

A fundamental methodological concern of this paper is to suggest how distinct theories impart irreducibly different meanings and significance to the various individual concepts which constitute each theory respectively. This irreducibility occurs even though the individual concepts are often called by the same name. Thus, the key concepts in the debate over the TRPF such as economy, enterprise, and technical change, take on very different meanings and acquire a different significance depending on the particular Marxist theory in which they are deployed.

The lack of recognition of this important point is a major cause for why the debate over the TRPF among Marxist economists has been, and continues to be, waged so vigorously, and more often than not, polemically. Thus, the failure to reach a consensus on the issue of the TRPF cannot be attributed simply to the dogmatism of some recalcitrant theorists who refuse to accept more ‘modern’ approaches to social theory.

Before outlining in more detail my major arguments, I will briefly review some of the most influential Marxist and non-Marxist positions in the debate over the TRPF. This review is important as it will give a historical context to
the subsequent arguments. Another object of this review is to highlight the political importance of the various positions taken in the debate.

A brief caveat is in order before I begin to review the debate over the TRPF. Not surprisingly, one issue of central concern for almost all of the participants in the debate has been whether or not the rate of profit will fall with capital accumulation. Indeed, some commentators on this debate group people solely on the basis of whether the rate of profit tends to fall or not. That is not the approach that I am taking in this paper. My concern is, instead, to group people according to the distinct approaches to the social totality which they adopt. I do so in order to show how different Marxist theories affect the meanings and significance of the various concepts and issues in the debate. Thus, I am not making, or defending, any claim that the rate of profit does indeed fall. Nor am I making any claim that the rate of profit cannot fall as a result of technical change. My concern is with the methodological underpinnings of this debate, especially with regard to the nature of the social totality.

A Chronological Review of the Debate over the TRPF

Classical political economy was greatly concerned that as capitalism developed there would be a TRPF. It was feared that a stationary state of no growth would result if profits were to fall to a sufficiently low level. In fact, the potential fall in profits was of such central importance to Classical economists that Marx could write "... that it forms the mystery around whose solution the whole of political economy since Adam Smith revolves and the difference between the various schools since Adam Smith consists in different attempts made to solve it" (1981b, p. 318). Indeed, the two most influential Classical political economists, Adam Smith and David Ricardo, grounded their respective theories of falling profits on vastly different reasons.

For Smith, it was the sphere of circulation where the reason for a fall in profits was to be found. Smith believed that the increasing wealth of society would engender contradictions which would eventually result in lower profits. Increased wealth in society would bring about an increased competition for this wealth and eventually lower commodity prices as markets became saturated with competitors. In turn, the lower commodity prices would lead to lower profits.

"The increase of stock, which raises wages, tends to lower profit. When the stocks of many rich merchants are turned into the same trade, their mutual competition naturally tends to lower its profit; and when there is a like increase in stock in all the different trades carried on in the same society, the same competition must produce the same effect in them all" (1965, p. 95).

As society grew, the stock of capital employed would expand as far as the extent of the market would allow. Therefore, profit would be at its lowest level in the most advanced or developed society.

"In a country fully stocked in proportion to all the business it had to transact, as great a quantity of stock would be employed in every particular branch as the nature and extent of trade would admit. The competition, therefore, would everywhere be great, and consequently the ordinary profit as low as possible" (ibid, p. 95).

Thus, Smith saw a fall in profit as endemic to the growth, or accumulation, of the capital stock. Furthermore, he understood this fall in profit to be an expression of circulation conditions, that is, the result of capitalist competition.

In contrast to Smith, David Ricardo linked his theory of declining profits to the sphere of production and the decline in the productivity of agricultural labor which he foresaw. Ricardo was extremely critical of Smith's falling rate of profit theory based, as it was, on a supply and demand analysis of competition. According to Ricardo, Smith's theory could explain why the rate of profit tended to an average across markets, but it could not explain why the average would fall. Consequently, instead of basing his theory on the limit of the market, Ricardo sought to show that society's development would lead to a fall in profit as the result of two factors: the decreasing productivity of agricultural labor and the Malthusian population principle.

For Ricardo, profits were a residual from total output left after rent payments were made to landowners and subsistence wages were paid to workers. The amount of the rent payments was determined by the productivity of the marginal land under cultivation. As increasingly marginal land came under cultivation, rent payments would rise on the pre-marginal land, i.e., that land which had been previously under
debate over the TRPF, it should be pointed out that concern with the possibility of a declining rate of profit has not been limited to Classical or Marxist economists. Although rarely stated explicitly, neoclassical economics contains a theory of a declining rate of profit in its marginal productivity theory of income distribution. According to this theory, in equilibrium, all factors of production will receive a remuneration equal to the value of their marginal products. In particular, the value of the marginal product of capital will be equal to the profit rate. If it is further assumed, as it commonly is, that there are diminishing returns to capital, and that the capital-labor ratio rises over time, then the marginal product of capital must eventually fall and along with it the value of the marginal product of capital will fall. As the value of the marginal product of capital falls, the profit rate will fall as the economy adjusts to a new equilibrium.

The long-term, secular trend in the profit rate has also been the object of substantial empirical paper by neoclassical economists. William Nordhaus, for one, investigated in the Brookings Papers (1974) whether there was a secular decline in the profit share of national income in the post-WW II U.S. He concluded that the profit rate had fallen and attributed this fall to a rise in the capital intensity of production as investors shifted funds into industry responding to lower perceived risks of such investments.

As should now be evident, the issue of a falling rate of profit has been a major concern to many different schools of economics. Nowhere, however, has the issue of a TRPF been more intensely examined and debated than by Marxist economists. With the possible exception of the debate over Marx's 'transformation problem', the debate over the TRPF has filled more pages in the Marxist literature than any other. This debate, however, has not only occupied a large number of pages in the literature, it has also been, and remains to this day, one of the most polemical debates in Marxian economics.

One of the first critiques of Marx's theory of the TRPF appeared in a remarkable article by Ladislaus von Bortkiewicz in 1907. That article, "Value and Price in the Marxian System" (1952), was primarily devoted to a critique of Marx's theory of value in general, and his 'transformation problem', in particular. Almost as an aside, Bortkiewicz criticized Marx's theory of the TRPF. Most remarkably, he did so in a

cultivation. According to the Malthusian population principle, more and more land will be required to come under cultivation as population growth outstrips the available food production. Consequently, the productivity of agricultural labor will continually decline causing rents to landlords to rise as well as the value of the workers' subsistence wages to increase. As a result, the residual, profits, will be squeezed. Ricardo concluded that "The natural tendency of profits is then to fall; for in the progress of society and wealth, the additional quantity of food required is obtained by more and more labor" (1977, p. 71).

Marx was both a great admirer as well as critic of Ricardo. He was greatly impressed at Ricardo's understanding of the contradictory nature of capitalist growth and its effect on the rate of profit, but he was highly critical of Ricardo's explanation. By grounding his theory of a falling rate of profit in the declining productivity of agricultural labor, Marx claimed that Ricardo "... flees from economics to seek refuge in organic chemistry" (1973, p. 754). In direct opposition to Ricardo, Marx claimed that the rate of profit would fall not because labor becomes less productive but rather because it becomes more productive.

The key to Marx's claim that there was a TRPF as labor became more productive was the crucial distinction he made between constant and variable capital, a distinction which Ricardo did not make. Marx defined the rate of profit to be equal to $S/(C+V)$: where $S$ is surplus value, $C$ is constant capital, and $V$ is variable capital. The rate of profit can be rewritten as $e/(k+1)$, where $e$ is the rate of exploitation, $S/V$, and $k$ is the organic composition of capital, $C/V$. For Marx, capital accumulation implied an increase in the productivity of labor as accumulation took the form of mechanization as machines replaced labor in the production process. In other words, accumulation implied that there was a tendency for the organic composition of capital to rise, and therefore there was also a tendency for the rate of profit to fall.\footnote{Marx pointed out that the fall in the rate of profit was only a tendency which would be mitigated by all manner of countervailing factors.}

However, before turning to the Marxist
manner that anticipated by over 50 years both the result, as well as the mode of argument of the Okishio theorem.

Bortkiewicz’s main argument was that Marx confused value calculations with price calculations when he considered the criteria governing technical change. Marx, Bortkiewicz claimed, believed that capitalists adopted a new technique of production so as to raise the average product of labor which would therefore lower the unit values of the wage and capital goods. According to Bortkiewicz, however, a capitalist will only introduce a new technique of production if it raises its profit rate, or equivalently lowers its cost of production, both of which are denominated in terms of prices. Using a linear price of production model, Bortkiewicz demonstrated that once a technical change occurred and a new general rate of profit was established, this new rate of profit could not be lower than the pre-technical change rate of profit. Thus, technical change, or accumulation, could not logically lead to a TRPF, and Marx’s insight was incorrect.

Bortkiewicz anticipated the later development by Okishio in two important ways. First, he used a linear price of production model of the economy, as used by Okishio himself, and as is commonly used in Stassian or neo-Ricardian value theories. Second, he based the criterion for technical change completely on the individual choice of the capitalist. It would not be again until the 1970’s that these two types of theoretical strategies would be commonly deployed together in order to critique Marx’s theory of a TRPF.

Writing at approximately the same time as Bortkiewicz, M. Tugan-Baranowsky also rejected Marx’s argument for a TRPF. In particular, Tugan-Baranowsky rejected the TRPF as an acceptable basis for a theory of crisis. Tugan-Baranowsky was, along with Lenin and Struve, a member of the Legal Marxist school in Russia which was prominent around the turn of the century. The Legal Marxists thought that the correct theory of crisis was one based on the anarchy of capitalist competition. They believed that due to the lack of coordination between capitalists, disproportionalities in sales would periodically develop. They rejected both the underconsumption theories of crisis of the Legal Populists which held that capitalism produced too much surplus value, as well as rejecting those who held to a theory of crisis based on the TRPF and, instead, felt that capitalism would tend to produce too little surplus value.

Tugan-Baranowsky’s rejection of the TRPF as the basis of a theory of crisis foreshadowed more recent debates in Marxist crisis theory over the political issues and strategies of reform versus revolution. Implicitly, disproportionality theory implied that while capitalism was crisis prone it could be successfully managed and reproduced through state intervention and planning. For disproportionality theory, there was no inherent tendency for surplus value to disappear and hence no necessity for capitalism to collapse. This position was anathema for many, and for Henrick Grossman in particular, as it denied the historical imperative of socialism and therefore, as Grossman felt, the theoretical foundation for a revolutionary politics.

Writing in the late 1920’s, Grossman’s main object of attack was Rosa Luxemburg’s theory of imperialism.9 Luxemburg believed that capitalism was characterized by a tendency to underconsume, and therefore, to overproduce surplus value. The tendency for capitalism to overproduce surplus value would in turn create the problem of its realization. Luxemburg thought that capitalists would seek to open up new markets abroad in an effort to realize surplus value. Grossman objected that Luxemburg’s analysis misunderstood the primary contradiction of capitalism. Referring to Luxemburg, Grossman noted incredulously how she could claim that “Capitalism, whose very goal is the hunt after surplus value, suffers then from ‘too much’ surplus value!” (quoted in Jacoby, 1975, p. 31). Instead, Grossman maintained that crises were brought on by capitalism’s tendency to overaccumulate and the concomitant tendency for the rate of profit to fall.

While Grossman was not the first Marxist to write about Marx’s TRPF, he was the first not to either simply mention it in passing or to reject it. After Grossman, the theory of the TRPF became for Marxists as legitimate a theory of crisis as either underconsumption or disproportionality theory.

Paul Sweezy in The Theory of Capitalist Development, and Joan Robinson in An Essay on Marxian Economics, both originally published in 1942, rejected the validity of Marx’s law of the TRPF. Their critique, however, was not one which criticized the TRPF as a basis for crisis as was Tugan-Baranowsky’s. Rather, Sweezy and Robinson each felt that Marx’s theory was logically incorrect. The reasons for their reaction would frame the major issues of debate in the
Marxian literature over the next twenty-five years.

Briefly, their argument was two-fold. First, both agreed with Marx that accumulation would undoubtedly be characterized by increased mechanization, i.e., the technical composition of capital would rise. However, they saw no reason why the organic composition of capital, a value (labor-time) magnitude, would necessarily also rise. The reason for their doubt was that mechanization would increase the average product of labor and thereby cause the unit value of the commodity output (the reciprocal of the average product of labor) to fall. If the average product of labor rose in the capital goods industry, then the subsequent fall in the unit value of the capital goods could conceivably overwhelm any increase in the mass of the capital goods. Consequently, constant capital could fall rather than rise. There was no a priori reason, they insisted, why the counteracting factor of the cheapening of constant capital in value terms could not overwhelm any rise in the technical composition of capital. Therefore, there was no reason why the organic composition of capital could not fall with accumulation and consequently the rate of profit rise rather than fall.

Second, assuming a rise in the average product of labor also occurred in the industry producing wage goods, the unit value of the wage goods would also fall. Assuming further a constant real wage, as did Marx, there would be a fall in variable capital. The fall in the variable capital in turn creates the production of relative surplus value and as a result the rate of exploitation would rise. The rise in the rate of exploitation could be theoretically sufficient to offset any putative increase in the organic composition of capital. As both these counteracting tendencies could potentially swamp a rising technical composition of capital, there could be no necessary tendency for the rate of profit to fall according to Sweezy and Robinson.

There were many responses to Sweezy’s and Robinson’s objections to Marx’s TRPF but perhaps the two most influential ones were made by Roman Rosdolsky and Ronald Meek. Rosdolsky in an article in *Kyklos* in 1956 and Meek in *Science and Society* in 1960 each responded in a similar fashion to Sweezy and Robinson. They objected to the possible fall in the organic composition of capital on empirical grounds, and to the possible rise in the rate of exploitation on logical grounds.

Against the potential devaluation of constant capital and the related fall in the organic composition of capital, Rosdolsky argued that the empirical evidence overwhelmingly demonstrated that the mass of capital goods had increased to such an extent that any devaluation of the capital goods could not possibly counteract the rise in the technical composition of capital. Similarly, Meek recognized the theoretical possibility of a falling organic composition of capital. He showed through a series of numerical examples in which he examined the effects of an increase in the average product of labor on the organic composition of capital, the rate of exploitation, and the value rate of profit, that only in a very few, and for him unlikely, circumstances would an increase in the average product of labor lower the organic composition of capital so much as to raise the rate of profit.

Sweezy’s and Robinson’s objection that the rate of exploitation might rise sufficiently to offset the rise in the organic composition of capital was based on a logical error, according to Rosdolsky and Meek. They claimed that due to the absolute limit of the length of the workday (24 hours) the production of surplus value has an impassable limit. Thus, while the organic composition of capital could theoretically rise indefinitely, the increase in the amount of surplus value produced would eventually come up against certain impassable limits. Therefore, the value rate of profit must eventually fall.

In 1958 Joseph Gillman published his book *The Falling Rate of Profit* whose primary purpose was to test empirically Marx’s law of the TRPF. Gillman found that until 1917, roughly what he understood to be the era of competitive capitalism, the rate of profit did indeed fall as the organic composition of capital rose. After 1917, however, he found that the organic composition of capital remained relatively constant while simultaneously the rate of exploitation rose. As a result, the rate of profit actually rose during this period. Gillman insisted that this result was due to the advent of monopoly capital and the increasing difficulty of the realization of surplus value in the post-1917 period. These phenomena brought about a tremendous increase in unproductive expenditures such as advertising, state expenditures, etc. Gillman argued that the law of the TRPF needed to be reformulated in order to account for the changed empirical reality of the increased unproductive expenditures.
Consequently, he suggested that the formula, (S-U)/(C+V), where U is defined to be unproductive expenditures, be defined as the rate of profit. He then recalculated this newly defined rate of profit over the period 1917-1939 and found that the rate of profit had indeed fallen over this period, thus verifying, for him, Marx’s prediction of a falling rate of profit.

The force of Gillman’s empirical work and his claim that monopoly and unproductive expenditures caused the rate of profit to fall spawned almost immediately a vigorous debate in the journal Science and Society over the relationship between capital accumulation and the TRPF in an economy dominated by monopoly capital. It is interesting to note that Gillman emphasized the importance of monopoly and realization problems for capitalism over eight years before Baran and Sweezy’s highly influential book Monopoly Capital (1975). Gillman and Baran and Sweezy arrived at opposite conclusions (for Gillman there was a TRPF, for Baran and Sweezy there was a tendency for the surplus to rise and no tendency for a TRPF), yet there was no mention of Gillman’s work in Monopoly Capital.

Nobuo Okishio published in 1961 his highly influential article “Technical Change and the Rate of Profit” in the Kobe University Economic Review. There would be, however, a 15 year hiatus before what is now known as the Okishio theorem would occupy center stage in Marx’s debate over the TRPF. Following Rortkiewicz, Okishio criticized Marx’s theory of the TRPF on two counts. First, according to Okishio, Marx did not use the correct definition of the rate of profit. Marx defined the rate of profit as, S/(C+V), (aggregate surplus value divided by aggregate constant and aggregate variable capital), while he should have used the general rate of profit consistent with what are now known as Sraffian or neo-Ricardian linear price of production models.

Second, Okishio claimed that Marx misunderstood the nature of capitalist competition. According to Okishio, Marx had argued that capitalists would introduce a new technique of production if it raised the average productivity of labor. Okishio insisted, however, that capitalists are not only concerned with productivity per se, but instead are concerned with lowering their unit cost of production. Okishio showed in a circulating capital model, assuming a fixed real wage, that a viable technical change (i.e., one that is cost-reducing for the innovating capitalist) would never lead to a fall in the general rate of profit.

For some, this result is the coup de grace on any claim that capitalism has an inherent tendency for the rate of profit to fall. For instance, Philippe van Parijs wrote in an important review of the debate over the TRPF that the Okishio theorem “...is so devastating that it deprives all arguments (pro and contra)...of their relevance” (1980, p. 9). For others, however, the Okishio theorem is part of the debilitating attraction that neoclassical economics has had on an ever increasing number of Marxist economists. Anwar Shaikh and John Weeks have been two of the most vehement critics of the Okishio theorem. Both argue that the proponents of the Okishio theorem have adopted the neoclassical assumption of perfect competition. They insist that if this ‘non-Marxian’ assumption were to be dropped the Okishio theorem would not be valid. The focus of their critique, as well as that of others, has been against either the viability assumption regulating the choice of technique, or against the assumption of profit maximization, or against both. These critiques propose alternative viability conditions which are claimed to be more consistent with the nature of capitalist competition.

This is more or less where the Marxian debate over the TRPF stands today. The vast majority of the articles published take a position in, or around, the debate over the Okishio theorem. It is fair to say, I believe, that it has become the central issue of concern, displacing the more traditional issues of debate which occupied Sweezy, Robinson, Meek, Rosdolsky and others for so many years. One reason for this displacement I argue is that there are in fact two different Marxist theories at work in, what I call, the ‘traditional’ debate over the TRPF, and in the Okishio debate respectively. These two different theories can be identified by their respective approaches to conceiving of the nature of the social totality which I suggestively label, the Hegelian and Cartesian totalities. My argument is that the traditional debate over the TRPF has taken place on the terrain of the Hegelian totality, while the Okishio debate has, and is, taking place on the terrain of the Cartesian totality. Thus, the prominence which the Okishio debate enjoys today can in large part be attributed to the rejection of the Hegelian totality by Marxist economists in favor of the Cartesian totality.
That the debate over the TRPF has failed to reach a resolution or even to decrease in intensity over the 90 years since Engels published volume III of *Capital* (1981) is testament, in part, to the important theoretical issues with which this debate has been concerned. As was briefly outlined above, this debate has at various times been concerned with such key theoretical issues as the crisis tendencies of capitalism, the logical validity of value theory, the effect of monopoly and unproductive expenditures on the accumulation process, and the nature of technical change and capitalist competition. The many twists and turns of the various theoretical positions advanced in the debate attest powerfully, if nothing else, to the open-endedness and contradictory nature of all theoretical endeavor.

However important these theoretical issues have been, and continue to be, no explanation of this longstanding debate would be complete that did not recognize its profound political importance for the participants in the debate. Very simply, the political issue which is at stake for them is whether capitalism is capable of reform or, whether a revolutionary transformation is needed to alleviate its oppressions.

John Weeks has forcefully made this point. For him, “What is at stake is whether capitalism is by its very nature stable and capable of sustained dynamism, or whether the accumulation of capital is self-limiting” (1982, p. 62). Whether capitalism is self-limiting or not is an issue of utmost political importance for Weeks. He writes that “... the debate over the tendency for the rate of profit to fall does correspond to the debate over revolutionary strategy ... involved here is the debate over the possibility of a peaceful road to socialist transformation” (ibid, p. 62). David Yaffe echoes this sentiment when he states that “If the capitalist mode of production can ensure, with or without government intervention, continual expansion and full employment, the most important objective argument in support of revolutionary socialist theory breaks down” (1973, p. 187).

How is this link between theory and political practice made? For some theorists, such as Grossman, Weeks, Shaikh, and Yaffe, to deny that capitalism has an inherent tendency for the rate of profit to fall is to deny that there are objective revolutionary situations. If a falling rate of profit, and hence crises are not permanent, built-in features of capitalism’s laws of motion, then there is no objective necessity for the transition to socialism, it is argued. Crises are then understood to be caused by disproportionalities, underconsumption, and/or increasing wages. All such crises can be corrected by an enlightened state adopting the appropriate mix of fiscal and monetary policies. As a result, Marxist proponents of disproportionality, underconsumption, or profit-squeeze theories of crisis are very often labeled as left-Keynesians or revisionists by their opponents.

In reaction to this position it is sometimes argued that to accept that capitalism has immanent tendencies for a falling rate of profit, and therefore breakdown, is to adopt a mechanistic and economistic political perspective. It is argued that such a position denies the effectivity of conscious political organization. It is obviously highly problematic to make any necessary connection between a particular theory and a consequent political strategy. Nevertheless, these connections are often made in the debate over the TRPF, and made concerning the most important political questions for the theorists involved in the debate.

**Epistemology and Theories of Social Totality**

There is yet another reason, besides these important theoretical and political ones, why the debate over the TRPF has failed to reach resolution and remains to this day the site of so much polemical writing. As was briefly alluded to above, there are two distinct Marxian theories present in this debate. As a result, the key theoretical terms of profit, enterprise, economy, and technical change take on irreducibly different meanings and significance depending on which Marxian theory deploys them. Not only do these important concepts obtain different meanings and significance as they are deployed in and through the different theoretical approaches, but the major issues of debate in one approach become non-issues, or literally ‘nonsensical’ ones, in the other. This important point about the presence and incommensurability of fundamentally different theoretical frameworks in the Marxian debate over the TRPF has never before been explicitly articulated. As a consequence, the failure to see the irreducibility of these different theories is, in part, a cause for the debate’s continued irresolution and polemical nature.

My claim that different theoretical constructs
impart an irreducibly different meaning and significance to the concepts which constitute them depends on a general approach to the philosophy of science and epistemology that has become increasingly influential in recent years. This approach is associated with the work of, among others, Thomas Kuhn, Richard Rorty, Michel Foucault, Nelson Goodman, and Donald McCloskey in the non-Marxist tradition, and Louis Althusser, Barry Hindess and Paul Hirst, and Stephen Resnick and Richard Wolff in the Marxist tradition.

There are many differences among and between these various theorists, but a common thread running through all their work, a thread which is important for this paper, is that they all reject the traditional empiricist and rationalist correspondence theories of epistemology.

Rationalist and empiricist epistemologies are based on the belief that theoretical discourse and material reality exist as separate and distinct ontological realms. According to these correspondence epistemologies there exists an ontological gap between the theoretical realm and the material realm.

Theoretical discourse is, then, to be spoken or written about a separate and disjoint material reality according to these epistemologies. Theory can only reflect or disclose the independently constituted reality; it does not participate in its constitution. Epistemology’s job is to validate the ‘truth’ content of each theory by examining the correspondence of its theoretical statements with the preexisting material reality. It follows from this perspective that some theories are ‘better’ or ‘more correct’ than others insofar as they correspond more closely to the separate and distinct material reality. As theories ‘improve’ they mirror nature or the social world ever more closely, to borrow a phrase from Rorty.

In contrast, the epistemological position that I adopt here is premised on the idea that there is no ontological gap between theory and material reality. Theoretical discourse is not about a separately and distinctly constituted material reality. Instead, theory and material reality are assumed to mutually constitute one another. In the language of Althusser, and Resnick and Wolff, theory and material reality overdetermine one another: neither exists separately and distinctly from the other. According to this view, there is no unique correspondence between theory and reality. Theoretical discourse changes material reality as the material reality changes theoretical discourse.

Therefore, there is no unique or correct way in which a theory can either be verified or falsified. Each theory literally constructs its own truth, and criteria for the validity of that truth. As theories become more developed and complicated, the theory itself changes and along with it the material reality. This implies that as a theory is elaborated the meaning and significance of the previous concepts in the theory change. As all theories are conditioned in part by the material reality, and in part by other theories, this implies that theoretical discourse will be constantly changing, and changing in a contradictory manner, as it responds to the myriad pushes and pulls of the material and theoretical aspects of the world.

This process of the elaboration of concepts has occurred, and continues to occur, in the debate over the TRPF. There are in the debate, I have suggested, two distinct Marxist theoretical approaches through which the concept of a social totality is constructed. As a result, each approach has produced different and incomparable understandings of the relationship between technical change, or accumulation, and the rate of profit. Some issues of debate in one approach are non-issues or literally nonsensical ones in the other approach. For instance, the relationship between the value categories such as the organic composition of capital and the rate of exploitation, of central concern in the traditional debate over the TRPF, is a non-issue in the Okishio debate as those participating in the Okishio debate operate with a Sraffian value system which does not employ the traditional Marxist value categories, and therefore make no sense in the Okishio debate. Similarly, the issue of how a capitalist’s choice of technique is to be understood, a major area of contention in the Okishio debate, is of no concern in the traditional debate because, there, accumulation is understood to be the inner law of motion governing capitalism, regardless of what individual capitalists ‘choose’.

What are the two distinct theoretical approaches present in the debate over the TRPF? As mentioned above, each theory can be identified by the particular way in which it conceptualizes the relationship between a totality and its parts. On the one hand, I identify the Hegelian totality as that approach to understanding the social totality which reduces its parts to an expression of the inner nature, or essence, of the totality. The notion of the Hegelian totality whose parts express the inner
essence of society was first introduced by Louis Althusser in his attempt to distinguish the Hegelian approach to totality from the Marxist approach.\textsuperscript{17}

The Cartesian totality, on the other hand, can be identified as that approach to totality which reduces the totality to the summation of its parts. In this case, the social totality can be interpreted metaphorically to resemble a machine whose parts can be examined and understood independently from all the other parts, and from the totality itself.\textsuperscript{18}

Each approach to totality, the Hegelian and the Cartesian, is present in the debate over the TRPF. The Hegelian totality is the theoretical terrain on which the traditional debate over the TRPF, has been contested. The Cartesian totality sets the theoretical terrain on which the debate over the Okishio theorem has occurred. Insofar as the traditional and Okishio debates have been contested on the basis of their distinct approaches to Marxist theory, there is a fundamental incompatibility between them. Neither approach is the 'correct' one for understanding the relationship between a totality and its parts, nor for understanding the relationship between technical change (accumulation) and the rate of profit. Each approach produces, however, its distinct relative truth, or understanding, about the social totality in general, and technical change and the rate of profit in particular. As a result, the major issues of contention in one debate, based as they are on one particular theoretical approach, may appear incomprehensible or as non-issues in the other approach.\textsuperscript{19} This, I argue, is precisely what has happened in the debate over the TRPF. The failure by the participants concerned to recognize the presence of these two distinct theories, and their fundamental incompatibility, has contributed to all manner of theoretical frustrations as well as the periodic polemical outbursts that have so characterized this debate.

The existence of this incompatibility is a result of the process of successive theoretical elaborations of the general conceptualization of the relationship between a totality and its parts. Theories are contradictory and therefore constantly changing as they respond to the changing material reality as well as to changes in other theoretical discourses. As theories change by incorporating new conditions of existence in their discursive space, they distance themselves further and further from other theories with which they once shared a certain degree of commensurability.

This process of elaboration of new conditions of existence and the subsequent distinguishing of theories from one another, can be seen in the manner in which the Hegelian and Cartesian totalities reduce whole to part, or vice versa. The Hegelian and Cartesian totalities both share a concern with the relationship between whole and parts but they differ over which is to receive causal priority. The new conditions of existence, i.e., the direction of causal reduction (part to whole, or whole to part), already creates irreducible differences between these two theories. In particular, the form of reduction in the Hegelian totality gives rise to an expressive causality, while the opposite form of reduction in the Cartesian approach gives rise to a mechanistic, linear causality. Thus, the way in which each theory understands the laws of motion and the dynamic behavior of the parts of any particular theoretical object is irreducibly different. The Hegelian approach understands the theoretical object to be the result of the laws of motion of the totality governed by its inner essence. The purpose of its theoretical discourse then is to discover this inner essence and explain how various laws of motion are logically derived from it. The Cartesian approach understands the theoretical object to be the result of the interaction of the self-constituted parts of the totality. The purpose then of its theoretical discourse is to understand the logic (rationality) of the parts and then trace out the patterns that emerge (the totality) from their interaction.

A further elaboration of these theories is made in the debate over the TRPF by identifying the part with the capitalist enterprise and the totality with the economy. The object of discourse, i.e., the effect of technical change on the rate of profit, is then analysed respectively in and through the Hegelian totality (the traditional debate over the TRPF) and the Cartesian totality (the Okishio debate). The result is that different and irreducible discursive spaces are constructed through which the two debates take place. For the traditional debate, the economy is understood as the capitalist mode of production and the enterprise is usually referred to as 'capital' whose role it is to act out the inner law of the capitalist mode of production, accumulation. For the Okishio debate, the economy is the equilibrium configuration which emerges as each enterprise acts as a rational individual capitalist maximizing its profit. The result of this further elaboration is that the issues
of debate become radically and irreducibly different between each discursive space. For example, the traditional debate is concerned primarily with discovering the logical contradictions contained in the accumulation process. The debate over the Okishio theorem, however, is in large part concerned with the effect of different assumptions about capitalist rationality on the relationship between technical change and the rate of profit.

Each debate is cogent and fruitful in its distinct discursive space, but once the participants in the debate unself-consciously cross over from one space to the other their theoretical analysis and proclamations become nonsensical, or non-issues, or both. For example, after extensively reviewing the traditional debate over the TRPF, Philippe van Parijs introduces and summarily claims that the Okishio theorem has written the obituary for the traditional debate. Van Parijs, however, makes no recognition of the changed theoretical terrain on which his claims are based. Suddenly, his analysis is in terms of rationalist capitalist choice without any explicit reference to the differences between that approach and the approach that informed the first half of his essay. He ends his essay by exhorting Marxists to abandon their previous beliefs about the TRPF which they held for “extrascientific” reasons and to “... give way to ‘scientific’ considerations - and stomach the truth” (1980, p. 12-13). The trouble with this polemical advice is, of course, that as there are a myriad of scientific discourses in the Marxist and non-Marxist tradition, which one does he mean?

Conclusion

I have argued in this paper that it is fundamentally important to recognize the role different methodologies have played in the Marxian debate over the TRPF. I claimed that the longstanding debate over the TRPF is not simply one long, homogeneous debate, but rather that the debate has contained two, broadly defined approaches to Marxian theory. These approaches can be identified respectively by their Hegelian and Cartesian approaches to totality. I have further argued that different theories impart irreducibly different meanings and significance to their major concepts. Therefore, the concepts of economy, enterprise, and technical change (accumulation), acquire and play very different roles depending on whether they are deployed in the traditional or Okishio debates over the TRPF.

Attention to the different methodological approaches at work in the debate over Marx’s TRPF should help to resolve many longstanding theoretical issues. Similarly, such methodological attention should shed light on the political issues present in this debate as well. Like so many issues in economics today, underlying substantive theoretical and policy debates rest on confusions or misrecognition of the central importance different methodological approaches play.

Notes

1. The argument of this paper is developed in more detail in Cullenberg (1991).
2. For a good selection of theorists advocating this approach to Marxian theory see Roemer (1986). Also see Elster (1985), Carling (1986), and Przeworski (1985).
3. This tradition would include such theorists as the early Lukacs, Kautsky, Hilferding, Bernstein and Stalin among others. See Martin Jay (Introduction, 1984) and Alex Callinicos (Chapter One, 1976) for good surveys of Hegelian Marxism.
4. For an extensive discussion of the tendency for the rate of profit to fall in Classical economics see Tucker (1960).
5. The distinction between the mass of profit and the rate of profit was not always clearly made by Classical economists. Marx was one of the few who clearly argued that the rate of profit could fall while the mass of profits rose. When referring here to the pre-Marxian, Classical theorists the rate and mass of profit will be used interchangeably.
6. The fullest discussion by Marx of the tendency for the rate of profit to fall can be found in Chapters 13-15 of volume III of Capital.
7. Marx discusses the counteracting tendencies to a falling rate of profit in Chapter 14 of volume III of Capital.
8. See M.C. Howard (Chapter 3, 1980) for a clear discussion of the neoclassical theory of income distribution.
10. See the articles by Dobb (1930), Mattick (1959), Pesenti (1959), and Robinson (1959).
12. For instance, see Pat Claxton (1983).
17. See Althusser (Part Three, 1982).
18. See Levin and Lewontin (Conclusion, 1985).
19. In the traditional debate the central issue of debate concerns the logical relationship between the technical composition of capital, the organic composition of capital, the value composition of capital and the rate of surplus value. However, in the Okishio debate these concerns are of no importance and instead the debate focuses on alternative notions of rationality and competition.
References