

The Whiggish Foundations of Marxian and Sraffian Economics

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Introduction

Whig historians construct a story of linear progress. This paper first reviews salient criticisms of this approach to the historiography of ideas, focusing especially on its suppression of cross-theoretical "incommensurabilities" and how Whig historiography sanctions practices that hinder the development of ideas.

This discussion is then brought to bear upon the modern controversy over Marx's value theory. The paper argues that Samuelson's self-consciously Whiggish critique of Marx in 1971 set, and continues to set, the ground of debate. It also argues that the alleged inconsistencies in Marx's theory are produced by Whiggish (mis-)interpretation. Marx is read as if he were a modern static equilibrium theorist, which distorts his arguments and produces "internal" inconsistency.

Finally, the paper argues that the refutations of the proofs of inconsistency undercut Marxist and Sraffian economists' claims to be improving upon Marx's original theory. Rather than linear progress having occurred through correction of error, the original theory and the revisions of it are simply different, and the former re-emerges as a viable alternative to the latter.

Whiggism vs. Pluralism

Whiggishness and pluralism are antithetical. One can be against both Whig history and pluralistic practice (as Thomas Kuhn seems to have been, up to a point), but one cannot be in favor of both.

Whig historians “produce a story which is the ratification if not the glorification of the present” (Butterfield 1965: v). In other words, Whig history (1) is written from the perspective of those who currently hold power, and (2) assumes that the present is necessarily better than the past, that progress has taken place. The combination of these two factors makes Whig history profoundly anti-pluralistic. It can and often does serve as a justification for silencing dissidents on the ground that they are opponents of and obstacles to progress. It serves this justificatory function especially when the progress that supposedly has been made is progress toward clearly desirable ends such as knowledge and truth, the weeding out of error and internal inconsistency.

Yet it is well known that knowledge does not always move forward. Freeman (2004) points out, for instance, that the Copernican Revolution constituted a *return* to the heliocentric hypothesis of Aristarchus of Samos that had been abandoned nearly two millenia before, and he explores the implications of this fact for the controversy over Marx’s value theory. Feyerabend (1988: 35) noted that reclamation of earlier ideas is a common phenomenon in science, and offered an explanation for why it occurs: “Theories are abandoned and superseded . . . long before they have had an opportunity to show their virtues.” Facts such as these eliminate the main justification for anti-pluralistic practices.

Effacing Incommensurability: The Most Effective Whiggish Strategy

What is more pertinent to the question of internal inconsistency is the very common case in which knowledge moves neither forward nor backward but sideways, as it were. Instead of a later theorist providing better or worse solutions than an earlier theorist to the same set of problems, the problems themselves have changed. In this case, it cannot be said that progress in solving the problems has been made, because “the” problems do not exist; there are two different sets of problems. But since Whig historians wish to extol the progressive character of the later theorist, they have to efface these differences. In doing so, they distort what the earlier theorist wrote, thereby creating inconsistencies where there were none—and this is construed as further evidence that what has subsequently occurred is progress! The more similar the two sets of problems are, the easier it is to cover over their differences.

In addition to being dishonest, this strategy is anti-pluralistic. By turning the earlier theorist into a flawed precursor of the later one, it effectively eliminates the distinctive character of her own thought.

In a recent discussion of Thomas Kuhn’s (1970) concept of “incommensurability,” Sharrock and Read (2002: 144–145, emphases in original) characterize the strategy as follows: “The predecessor is made to look . . . rather *like oneself*. [This particular . . .] Whiggish strateg[y] . . . is the most effective if it can be pulled off, for it then becomes impossible to read predecessors as themselves. They read rather as if they’ve been trying to be you all along, *as if they’ve read you*, but ill-understood you.”

Philip Mirowski (1988: 171), the noted institutionalist historian of economic thought, has noted that this strategy is a frequent device of neoclassical historians of economic thought, used

to “demonstrat[e] that all that is valuable in economics has led up to the current orthodoxy.” Frequently, their writings on Smith, Ricardo, and others

consist of a marshaling of quotes, which are dragooned to justify the casting of some economic relationships in a specific functional form, which are then used to arrive at one of the two alternative conclusions[, . . the second of which is that] the esteemed late economist in question had tripped himself up in self-contradiction, due to his unfortunate weaknesses in the area of mathematical expertise. [Mirowski 1988: 171]¹

Mirowski (1988: 172) goes on to ask, “What is wrong with this harmless bit of storytelling? After all, the classical economists are dead and in their graves.” His answer—“Perceptions of progress do matter and are worth fighting over”—unfortunately leaves something to be desired.

I do not think that such storytelling is harmless. It erodes respect for honesty and accuracy, debasing intellectual discourse. And some of us might wish to visit the graves of the dead—in other words, to reclaim their ideas—but, at least in Marx’s case, false proofs of internal

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A minor difference in the way relationships are expressed mathematically— the “specific functional form”—can drastically affect the conclusions. For instance, the only mathematical difference between the temporal single-system interpretation of Marx’s value theory (TSSI) and some other interpretations is that the TSSI attaches time subscripts to variables (input and output prices are thus written as p_t and p_{t+1} , not p and p), but this leads to many diametrically opposite conclusions.

inconsistency have made this much more difficult. In a well-known, and generally very sympathetic essay on Marx published in *The New Yorker* a decade ago, John Cassidy (1997: 252) wrote that Marx's value theory "was riven with internal inconsistencies and is rarely studied these days." That he connects these two things is no accident. Finally, by tending to justify exclusionary practices, the Whiggish story of linear progress is detrimental to intellectual development. Regression occurs when the only ideas that have the opportunity to be developed are wrong. Pluralistic practices act as a safeguard against this.

The Whiggish Ground of Debate over Marx's Value Theory

The controversy over Marx's value theory has been conducted on this Whiggish ground for more than three decades. The work of Paul Samuelson (1971), a Nobel laureate and perhaps the pre-eminent economist of his generation, ushered in the modern phase of the controversy in the early 1970s, and everything written about it subsequently has been implicitly or explicitly a response to his work. Samuelson was a conscious and proud Whig historian. Defending the methodology of his critique of Marx, he wrote:

[I]n the realm of cumulative knowledge, I believe there is a place for what might be called Whig History of Science. In it we pay past scholars the compliment of judging how their works contributed (algebraic) value-added to the collective house of knowledge. . . . I have thought it valuable to . . . appraise [Marx's] arguments on the transformation problem in the way a journal referee would treat any serious contributor. [Samuelson 1974: 76]

Samuelson is suggesting, no doubt correctly, that journal referees would recommend that Marx's work on the "transformation problem" never see the light of day. He is also suggesting that they would be right to do so. The justification for this anti-pluralistic position is the Whiggish premise that economic knowledge has been "cumulative"—in other words, that it has progressed in an unambiguous way, culminating in Samuelson and his school. Thus, what counts as a contribution to knowledge is what counts from the perspective of this school and in light of the particular problems it addresses.

But as noted above, the Whiggish strategy of viewing past thinkers from the perspective of the currently dominant ones effaces the incommensurabilities between them. Mirowski's description of how neoclassicist historians of economic thought find the classical economists wanting by casting their ideas in the form of one or another mathematical model is also a perfect description of the strategy used to "prove" Marx's self-contradictions.² As Mirowski shows throughout the same essay, this strategy was pervaded Morishima's (1973) widely discussed and influential critique of Marx.

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In Marx's case, the characterization of the issues and alleged errors as mathematical ones has additional advantages. His critics, especially Marxist and radical critics, are able to portray their critiques as purely scientific, not ideologically or politically motivated. Moreover, Marx is read by a great many people who lack the mathematics needed to understand the critiques. They end up taking the experts' conclusions on faith, or walking away from issues they perceive as technical and trifling, which likewise allows the experts' views to go unchallenged.

By effacing the incommensurabilities, as I noted above, Whig historians distort the works of earlier theorists wrote. Although Whig historians attribute the inconsistencies to the original works, they are in fact introduced in the very process of doing Whig history. This is exactly what has occurred throughout the controversy over Marx's value theory. *Some problems he addressed are very similar to those of neo-classicism, Sraffianism, and modern Marxian economics, with one key difference: Marx did not pose the problems in terms of the properties of static equilibrium states, and he therefore had no need to value inputs and outputs simultaneously.* But this difference has been repeatedly ignored. His theory is *transformed* into a theory of static equilibrium states, and thus into a simultaneist theory, causing a host of internal inconsistencies to appear. (This is the *real* transformation problem.)

The Master's Tools

It is instructive to examine precisely how Samuelson's work—which, I repeat, has set the ground of discussion over Marx's value theory throughout the last 35 years—self-consciously set about understanding and evaluating Marx's work in light of static equilibrium theory, even though he was aware that this move was not faithful to Marx's intent. As a Whig historian, Samuelson was untroubled by this.

Until the 1970s, the relationship between values and prices in Marx's theory did not engage the interest, much less the passions, of more than a handful of "transformation problem" buffs. By the early 1970s, however, civil rights and antiwar struggles had given rise to the New Left, and many Ph.D. students and junior professors of economics had become radicalized. An attempt to create an alternative, a specifically "radical economics," was underway. Some of the

young radical economists were beginning to study *Capital* seriously and to conduct research based upon it. The global economic crisis that erupted shortly thereafter further weakened confidence in the existing order of things. As Desai (1988: 316) and Howard and King (1992: 268) have noted, it was owing to this atmosphere that Samuelson's (1971) critique of Marx's solution touched off a new and heated debate.

Samuelson was given a National Science Foundation grant and thirty-three pages in the most widely-read journal of economics in order to state his case. Such funding and promotion of a discussion of Marxian theory was unique within economics, and remains so. Since Samuelson was a neoclassicist theoretically and a liberal (in the American sense) politically, it is not surprising that he vigorously championed Bortkiewicz's (1952, 1984) critique and "correction" of Marx. What was, or at least should have been, surprising was that Samuelson's purpose was *not* to steer his readers away from Marx's theory that profit arises from exploitation. (Nor was his primary purpose to expose the fact that the dual-system models obtained their aggregate equalities in a spurious fashion, though his discussion of that fact was the main thing that angered his critics.)

Ultimately, Samuelson's purpose was instead "to demonstrate that anyone who believes in the relevance [of Marx's theory of profit . . .] will do better to jettison as unnecessary and obfuscating to his *own* theory the letter of Volume I's analysis of inter-industry values" (Samuelson 1971: 414–15, emphasis in original). To formulate their own theory rigorously, Marx's followers need to adopt "*the tools of bourgeois economics (i.e., of simple general equilibrium pricing)*" (Samuelson 1971: 405, emphasis added).

Why did Samuelson care whether a theory he rejected was formulated rigorously? Why did he not critique it directly? And why was he advising the young radical economists to

strengthen their critique of mainstream profit theory by employing the tools of general equilibrium pricing (i.e., simultaneous valuation)?

I suspect that Samuelson may have understood something that Audre Lorde (1984: 112), the African-American lesbian poet, wrote about some years later in a different context: “the master’s tools will never dismantle the master’s house. They may allow us temporarily to beat him at his own game, but they will never enable us to bring about genuine change.” Samuelson may have understood, in other words, that simultaneous valuation is incompatible with Marx’s critique of political economy. Given Samuelson’s exceptional abilities as a mathematical economist, this is not unlikely. He may thus have suspected that the tools of equilibrium theory would help reshape the views and research of young radical economists who adopted them. The disintegration of the Marxian school during the last thirty years suggests that its adoption of these tools has indeed had a profound effect.

Another striking feature of Samuelson’s paper is that his reference to “the tools of bourgeois economics (*i.e.*, of simple general equilibrium pricing)” was not a reference to neoclassical tools alone. As he later explained, “My vantage-point in the discussion was *not* neoclassical. It was Sraffian!” (Samuelson 1973: 64, emphasis in original). That a leading neoclassicist should suddenly become a Sraffian, however temporarily, is remarkable enough. What makes it even more surprising is the fact that Sraffa’s followers had engaged in a major theoretical battle against Samuelson and his followers only a few years earlier (see Harcourt 1969), and Samuelson had been obliged to concede a crucial point in print (Levhari and Samuelson 1966). Yet he was now donning a Sraffian hat.

Indeed, Samuelson often seemed to be consciously publicizing and promoting Sraffa’s work, which was not widely known at the time, in his 1971 critique of Marx. He cited Sraffa,

always favorably, in eleven separate places. In the third paragraph of the paper, Samuelson (1971: 400) referred to “this age of Leontief and Sraffa,” thereby putting a relatively unknown leftist critic of mainstream economics on the same pedestal as Wassily Leontief, who would be awarded the Nobel Prize in economics two years later. This reference gave rise to another paper, published shortly thereafter in the same journal, entitled “This Age of Leontief . . . and Who?” (Levine 1974).

Why did Samuelson decide to adopt a Sraffian vantage-point? Why did he praise Sraffa’s work to the point of presenting him as equal in status to Leontief? Perhaps Samuelson simply wanted to suggest that if even the model of a leftist like Sraffa implies that Marx’s theory is flawed, this surely must be so. Yet perhaps he suspected that he would not get very far with the young radical economists if he recommended that they adopt specifically neoclassical tools, but that they might find the Sraffian version of general equilibrium theory more palatable, a halfway house between Marx and orthodoxy, so to speak. If this was Samuelson’s strategy, it seems to have succeeded.

Distorting Effects of Simultaneous Valuation

Yet exactly why and how does static equilibrium theory, in the form of simultaneous valuation, distort Marx’s theory and thereby create spurious “internal” inconsistencies? How can a seemingly innocuous tool of analysis wreak such havoc?

The answer is simple. *Simultaneous valuation is absolutely incompatible with the principle upon which Marx’s value theory is founded, the principle that value is determined by labor-time.* To see this, consider a favorite expository device of simultaneist theorists, especially

Sraffians—the “corn model.” Corn (called “grain” in the U.S.) is produced using only corn of the same kind, planted as seed, plus the labor of farmworkers. Simultaneist theorists impose the constraint that a bushel of seed corn planted at the start of the year is worth exactly as much as a bushel of corn harvested at the end. If the value of a bushel of seed corn is \$5, then the value of a bushel of corn output must also be \$5, no matter how much or how little the farmworkers have had to labor in order to produce it. They may have had to toil a thousand hours, or only ten hours—or not at all! It makes no difference; the per-unit value of the corn output cannot rise above nor fall below the per-unit value of the seed corn. There is therefore no meaningful sense in which the corn’s value depends upon the amount of labor needed to produce it.

Since the very concept of value is frequently dismissed as “metaphysical,” opponents of metaphysics might benefit from a rephrasing of the point: simultaneous valuation in effect prevents changes in productivity from affecting the price, or value, of corn. Contrast this to the real world. When productivity rises—when the same amount of labor yields more output—commodities’ prices tend to fall. This is essentially what Marx meant by saying that value is determined by labor-time. But we don’t need a Marx to tell us this; every farmer knows that he can get a higher price for a bushel of his corn after a bad harvest than after a good one.

Simultaneism, on the contrary, implies that a bushel of corn output cannot be worth more than a bushel of seed corn after a bad harvest, nor less than a bushel of seed corn after a good one.

Of course, no one actually believes that real-world prices or values remain constant over time. Nevertheless, when they “correct” Marx or try to prove him guilty of internal inconsistency, simultaneist theorists do stipulate that the prices of inputs cannot differ from the prices of the outputs that emerge later. If Marx’s theoretical conclusions contradict the conclusions that they obtain by valuing everything simultaneously, they regard this as the fault of

his theory rather than of their own interpretations, in violation of accepted interpretive practice (see Kliman 2007, Chapter 4).

Another perspective on the matter can be obtained by examining the specific nature of the differences between Marx's conclusions and the conclusions derived from simultaneous valuation. The latter conclusions are necessarily "physicalist"; instead of prices, profits, and rates of profit depending upon the production of value and surplus value, "physical quantities" (or, more precisely, technology and real wages) become their sole proximate determinants.

This, too, can be explained very simply. The aggregate value (or price) of a particular type of item is its per-unit value (or price) times the physical quantity of the item. There are thus two things that cause the aggregate value to change, changes in the physical quantity of the item *and* changes in its per-unit value. *But simultaneous valuation eliminates the change in the per-unit value that occurs during the production period. Hence, there is only one remaining cause of changes in the item's aggregate value—changes in its physical quantity.*

Assume, for example, that ten bushels of corn are invested (to plant as seed and pay farmworkers) at the start of the year, while twelve bushels are harvested at year's end. If the value (or price) of corn is \$6/bushel at the start of the year but only \$5/bushel at the end, then the capital value invested is $\$6 \times 10 = \60 and the total value of output is $\$5 \times 12 = \60 . Although the physical quantity of corn increases by 20%, there is no increase in the corn's aggregate value, because the drop in its per-unit value has offset the physical increase. Yet proponents of simultaneism, valuing the corn invested and the corn harvested at the same price—for example, \$5/bushel—declare that the capital value invested is only $\$5 \times 10 = \50 . They therefore find that aggregate value increases from \$50 to \$60. This is an increase of 20%, precisely the percentage

by which physical output exceeds physical input. The economy has grown in value terms only because, and to the extent that, it has grown in physical terms.

Further Implications of Simultaneous Valuation

The transformation of “Marx’s” value theory into a simultaneist and physicalist theory, by means of the Whiggish strategy of reading Marx as “rather like oneself,” is responsible for almost all of the alleged internal inconsistencies in the theory. More precisely, non-simultaneous (or temporal) valuation is *necessary*, and temporal valuation combined with a single-system interpretation of Marx’s value theory is *sufficient*, to eliminate all of the apparent inconsistencies. In Kliman (2007), I have brought together and documented the following conclusions (among others), arrived at as a result of the work of numerous researchers during a quarter-century of investigation and debate:

1. As discussed above, the “physical quantities approach” (physicalism) is necessarily incompatible with Marx’s theory that value is determined by labor-time. Simultaneous valuation necessarily leads to physicalist conclusions. Hence, a host of internal inconsistencies in Marx’s theory arise when he is construed as a simultaneist.
2. The Okishio (1961) theorem does not disprove Marx’s law of the tendential fall in the rate of profit (LTFRP). Its conclusions hold true only when input and output prices are assumed *a priori* to be equal.

3. The LTFRP becomes logically valid once the *a priori* assumption that input and output prices are equal is jettisoned. If faster productivity growth tends to lower prices, the (temporally determined) rate of profit:
 - (a) can fall under conditions in which the Okishio theorem says that it must rise;
 - (b) *necessarily* tends to fall in relation to the theorem's simultaneist-physicalist rate of profit;
and
 - (c) can fall forever even if the simultaneist-physicalist rate of profit rises forever.
4. All results in point 3 hold true whether or not the faster productivity growth actually causes prices to fall. It only needs to lower the rate of inflation.
5. Bortkiewicz (1952) did not prove that Marx's account of the value-price transformation is internally contradictory; (simple) reproduction can occur when input and output prices differ. Hence, there was no logical need to correct Marx's account; the so-called "correct solutions" are actually alternatives to his.
6. When Marx is interpreted as a single-system theorist, all three of the aggregate value-price equalities obtained in his account of the transformation are preserved.
7. However, when Marx is interpreted as a *simultaneous* single-system theorist, the rate of profit is physically determined, contrary to what he concluded. Hence, the logical validity of his account of the transformation is fully confirmed only when he is also interpreted as a temporalist.

8. The “Fundamental Marxian Theorem” does not prove that surplus labor is either necessary or sufficient for the existence of profit. On all simultaneist interpretations, Marx’s theory implies that there can be profit without surplus labor, and vice-versa.
9. When Marx is read as a temporal single-system theorist, his theory implies that (real) profit exists when, but only when, surplus labor has been performed.

In the same book, I argue that direct textual evidence also suggests that Marx was a temporalist. A great deal of evidence clearly favors this interpretation. The evidence that supposedly disconfirms it admits of a plausible and, in some cases, a more plausible, temporalist reading. And I argue that direct textual evidence suggests that Marx was a single-system theorist. A good deal of evidence clearly favors this interpretation. Evidence adduced on behalf of the dual-system interpretation is equally compatible with the single-system interpretation.

Conclusion: The Dustbin of Whig History

Critics of the temporal single-system interpretation of Marx’s value theory have frequently accused its advocates of dogmatism, orthodoxy, fundamentalism, and the like. These accusations are based mostly on the Whiggish story of linear progress. (Their other basis is the confusion, between claims that Marx’s theory is logically valid and claims that it is true.) In a critique of what he calls “New Orthodox Marxism,” for example, Laibman invokes the “proofs” of Marx’s errors and he claims that the “20th-century Marxists” have corrected the errors. Thus, he contends, “there is only one path leading from the 19th century to the 21st, and that one lies

through the 20th” (Laibman 2004: 16). Those who wish to reclaim Marx’s value theory in its original form are therefore dogmatically clinging to the past.

If the proofs of error to which Laibman appeals were valid, his anti-pluralistic position would have some merit. As Hodgson (2001: 35) has recently noted, there is a huge difference between “contradictory ideas in the academy and . . . inconsistent ideas within our own heads.” Pluralism is no warrant for *internal* inconsistency.

Yet if the proofs to which Laibman appeals are invalid, as I believe has been shown decisively in Kliman (2007)—and especially if the charges of error and inconsistency are not even plausible, as I believe my book has also shown decisively—then his chain of reasoning collapses. If Marx has not been shown to be wrong, there is no need to correct him. Thus the so-called corrections are in fact simply alternative theories and models. This does not mean that Marx was necessarily *right* about everything, or even anything. What it does mean is that his original theory—when read in a manner that eliminates the appearance of inconsistency—is back in the running alongside alternative theories, including the “corrected” versions of his theory.

Hence, the shoe of dogmatism is now on the other foot. What is now dogmatic and orthodox is Laibman’s insistence that there is “only one path” forward. Moreover, practices that hinder research rooted in Marx’s value theory, including failure to acknowledge that refutations of the proofs of inconsistency have renewed the theory’s viability, are acts of unacceptable censorship and suppression. All advocates of pluralism have a responsibility to speak out against such acts. Until conclusive proof of Marx’s errors and inconsistencies is provided, this is how matters stand.

The myth of internal inconsistency has caused Marx’s value theory and much of the rest of *Capital* to be relegated too hastily to the dustbin of Whig history. Whether his theory turns out

in the end to be right or wrong, fruitful or fruitless, at the moment it is worthy of renewed consideration. Let history decide—non-Whig history.

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