Andrew Kliman

Determination of Value in Marx and in Bortkiewiczian Theory

1. Bortkiewicz's Critique of Marx

Among academic economists, discussion of Marx's *Capital* has always been dominated by allegations that internal inconsistencies and errors vitiate his value theory. The critique made by Bortkiewicz (1952, 1984) in 1906–07, directed at Marx's account of the transformation of values into production prices (*Capital* III, Chap. 9), has been the most influential one by far. After purporting to prove that Marx's account was self–contradictory, Bortkiewicz set out to solve the „transformation problem" in an internally consistent manner.

Marxist economists as well as non–Marxists have accepted his alleged proof nearly universally. The correctness of Bortkiewicz's solution, or of some variant of it, is likewise conventional wisdom. Yet his influence, and the implications of his solution, extend far beyond the „transformation problem." Generalizations of this solution have become the fundamental models of the economy employed by mainstream Marxist economics. They use these models to derive theoretical conclusions concerning a wide variety of matters, not only the relation of values to production prices. Moreover, I will argue, Bortkiewicz's construction is by no means a simple correction of a specific error contained in an unpublished manuscript, a mere matter of *calculation*. It is rather a quite general model of value and price *determination* that differs radically from Marx's concept of their determination.

In Bortkiewicz's work, determination is simultaneous or „mutual." I will argue at length that Marx's concept of value determination, on the other hand, is temporal or „successivist." Thus, what have been taken to be internal inconsistencies in Marx's value theory are instead simply signs of the theory's incompatibility with simultaneous valuation. Attempts to derive his theoretical results on the basis of simultaneous valuation have failed, but these results do follow when valuation is conceived in temporal terms (see Freeman and Carchedi, eds., 1996; Kliman and McGlone 1999).

It is worth noting first that, even with respect to the „transformation problem," Bortkiewicz's model does not *correct* Marx in the sense of affirming his results by more acceptable means. It rather implies that competition does indeed alter the aggregate profit rate and value of output (total price diverges from total value). These conclusions, diametrically opposed to Marx's own, seem to invalidate the principle that value is determined by labor–time.

As Bortkiewicz himself recognized, his model also invalidates several other of *Capital's* theoretical conclusions. The issue of foremost importance is Marx's law of the tendential fall in the profit rate. He considered it the most important law in political economy and grounded a theory of economic crisis in it. In direct contradiction to this law, the Bortkiewiczian model and its generalizations (e.g., Okishio 1961) imply that the profit rate tends to rise, not fall, as a consequence of productivity increases resulting from mechanization.

Several other implications of the Bortkiewiczian model also impugn the theory that value is determined by labor–time: (a) relative prices and the profit rate are determined independently of value magnitudes, rendering value production „redundant" (see Steedman 1977); (b) the general profit rate is determined independently of production conditions in luxury industries (as Ricardo held and Marx denied); (c) commodities can have positive prices but negative values, and vice–versa; and (d) aggregate profit can be negative although aggregate surplus–value is positive, and vice–versa.[1] Clearly, very little of the quantitative dimension of Marx's value theory is left intact.

Of course, if Bortkiewicz's proof of Marx's error were valid, and his alternative construction were a necessary corrective, matters would end there. Marx would simply be wrong, with respect both to the transformation and to the host of other issues. Yet the attempted proof has been refuted.

In Bortkiewicz's interpretation of Marx's account of the transformation, inputs (means of production and subsistence) are bought at their values, but the same commodities, as outputs, are sold at production prices differing from values. He attempted to prove that this would lead to a spurious breakdown of the economy, because reproduction cannot occur on the same scale if input and output prices differ. The sum of money advanced at the start of this period to purchase a raw material, for instance, will not be enough, at the end of the period, to buy an equivalent amount for use in the next period, if in the meantime its price has increased.

This argument, however, fails to substantiate Bortkiewicz's conclusion. It has been demonstrated that, if next period's input purchases are financed out of the sales revenue received at the end of this period, rather than by means of

[1] Kliman (1999) shows that this is true even when each industry produces only a single product.