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The importance of HUMBUG in the Cambridge - Cambridge controversies in capital theory

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I

I am delighted and honoured to contribute an essay to the Special Issue of the *Global and Local Economic Review* in honour of Anwar Shaikh's contributions, and especially to honour 40 years on from the publication of his wonderful HUMBUG article, "Laws of production and laws of algebra: the Humbug production function" in the February 1974 issue of *The Review of Economics and Statistics*.

Anwar and I have been friends since the publication of my 1969 *Journal of Economic Literature* survey article, "Some Cambridge controversies in the theory of capital". Legend has it that, as a graduate student at Columbia (the 1974 article originated in his Ph.D dissertation, "theories of value and theories of distribution" (1973)), Anwar had a dog-eared copy of the survey in his back pocket as the repository for an oft read back up to his remarkable doctoral dissertation on issues in the controversies. We met when I visited the New School. Once he very kindly had me stay in his New York apartment, squeezing me in beside the Pakistani radicals seeking refuge from police persecution back home, who were his long-staying guests. As a fine Marxist scholar *and* activist, *Praxis* was Anwar's middle name.

I have since read with admiration many of his outstanding contributions in which he combines great technical skills with deep understanding of the conceptual bases and history of our subject, presenting his findings with the clarity and passion that only those who are on top of all aspects of their subject are capable of.

II

In this note I concentrate on his 1974 *Review of Economics and Statistics* paper, Bob Solow's ill-tempered and mistaken response to it, Solow (1974), and Anwar's development of the original ideas and his response to Solow's criticism in Humbug II, Anwar's chapter in Ed Nell's 1980 volume, *Growth, Profits and Property. Essays in the Revival of Political Economy*[1]. What optimists we all were then!

Let me first note the disparity in the lengths of the gestation periods between the submission and acceptance of Anwar's and Bob's papers:

June 1, 1972 – March 28, 1973 (Anwar); March 23, 1973 – March 28, 1973 (Bob).

Moreover, I understand that Solow insisted that his "comment" be published alongside Anwar's article, in itself a sensible suggestion, but that Anwar not be allowed to respond. I regard this as uncharacteristically poor treatment of a young scholar by a well-established one. Indeed, it is way off the regression line of Solow's well-known and rightly admired encouragement of young scholars.[2]

III

Apart from the technical elegance and ingenuity of Anwar's analysis, he was one of the first participants in the controversies to put the technical analysis within their proper conceptual setting. Both Amit Bhaduri (1969) and Anwar made explicit that a fundamental issue at stake was the 'vision' of the processes at work in capitalism, of how accumulation and profits arose and were related. Anwar implied immediately (and explicitly in Humbug II)

[1] As well as the Humbug papers, I especially admired his writings on Ricardo justified, the 93 percent labour theory of value vindicated (1998), his paper on the transformation problem (1997) and his systemic analysis of the motion of capitalism through transforming the Keynesian national accounts into their Marxian counterparts (1994).

[2] I know of this from personal experience. When I was preparing my 1969 survey article, Bob sent me copious comments on the working papers I circulated on the way to the final draft.

that scarcity and choice in an exchange system transferred to the sphere of production underlie both the theory and empirics of Solow's response and the practice, then and now, of the mainstream generally. J.B. Clark's theory of distribution and Irving Fisher's consumer queen drive the action through her aim to maximise her lifetime expected utility, with all other actors in the economy being but the agents to allow her to achieve this. Whereas Amit and Anwar (and Maurice Dobb, Michal Kalecki and Joan Robinson) have the alternative vision of the classical political economists and Marx, of ruthless swash-buckling capitalists (all three sub-classes) producing and accumulating, with all the other actors dancing to their tune.[3]

IV

That increases over time in output per person and per hour at the level of the firm, the industry and the economy are the outcome of both "more" and "better" capital per person are technical facts of life which economists of all persuasion accept. Neoclassical economists further argue that the effects of "deepening" and "bettering" are separable, at least in principle (this is, after all, the conceptual basis of Solow's 1956 and 1957 articles). In contrast, Post-Keynesians, for example, Nicky Kaldor and Joan Robinson, ultimately came to argue that they were not, that the factors associated with accumulation bringing about the rise in output per person through embodiment were indissolubly mixed, see, for example, Kaldor (1959), Joan Robinson (1971). It is how the above underlying technical structure is married to the processes of accumulation and distribution that creates the impassable cleavage between the two sides.[4]

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[3] It is a nice irony that in his ninth decade the late Paul Samuelson had come to a similar view point. In an Address to the Bank of Italy on October 2, 1997, in which he compared the different experiences of present-day American and European economies, he said: "I lay stress on two main factors … One. In America we now operate … the Ruthless Economy. Two. In America we now have a Cowed Labor force … two features interrelated … [yet] somewhat distinguishable." Especially is this so as Anwar shows that the neoclassical claims only go through if the pure labour theory of value with regard to values and prices goes through, see Shaikh (1974), 115.

[4] Duncan Foley and Tom Michl (1999) have provided an appealing classical model to illuminate the empirical findings on which the mainstream erect their analyses and findings.

V

Solow (1957) set out an ingenious way in which to precipitate out the deepening function from the overall relationship between output per person and capital per person which contained both it and the impact of technical progress in the neoclassical version of Harrod's natural rate of growth, Harrod (1939). Solow covered himself by writing that if it were assumed that the time series data used were viewed *as if* they had come from a production function in which, under competitive conditions, factor prices were equal to their respective marginal products and which was subject to the impact of neutral technical progress which raised the whole function over time, he had devised a simple way to fit statistically a function to the points so precipitated out.[5] As we know it was a Cobb-Douglas.

Anwar's criticism was to show that the function that was fitted was an algebraic identity – a law of algebra – in which regardless of how the values of the various variables were created – what processes were responsible for them – GNI would always be identically equal to the share of wages plus the share of profits. Solow's methods and results could neither refute nor confirm that a Cobb-Douglas production function was the originator of what was observed in the data.

Anwar's procedure was to show how a time series spelling out HUMBUG gave the same result – a very good fit of a Cobb-Douglas – as did Solow's adjusted data. Solow's answer, which preceded his description of his methodology quoted in footnote 5 above, was that "Mr Shaikh's article [so much for a Ph.D from Columbia when viewed from MIT] [was] based on misconception pure and simple." (121).

[5] "The factor-share device of my 1957 article is in no sense a *test* of aggregate production functions or marginal productivity …. It merely shows how one goes about interpreting given time series if one starts by *assuming* that they were generated from a production function and that the competitive marginal - product relations apply" Solow (1974), 121, emphasis in original.

VI

Anwar joined and was joined by economists from both camps, as it were. Franklin Fisher (1971), for example, carried out a huge simulation exercise in which he showed that if factor shares in the GNI were constant over 'time', a Cobb-Douglas function fitted well even though the conditions for aggregation from individual firms' Cobb-Douglas functions to the economy as a whole were ridiculously restrictive and demanding. The fit occurred because the shares were constant, not because a Cobb-Douglas was producing the observed statistics. Henry Phelps Brown (1957) (whom Anwar delightfully refers to as P. Brown) had already discussed the short-comings of the Cobb-Douglas associated with Paul Douglas's seminal work but his setting out of the critique was rather obscure and was neglected in the literature as a result. Herb Simon also made the same critique but again did not have an immediate impact, see Simon and Levy (1963). The person who has stuck most tenaciously to the task of propagating and developing Anwar's insights is John McCombie, more recently in the company of Jesus Felipe see, for example, Felipe and McCombie (2013). (Felipe has also collaborated with Fisher.)

Despite all this continued and damning criticism, the mainstream goes merrily on its way, using Cobb-Douglas or its sophisticated cousins, for example, CES, in both modern macroeconomic analysis and in endogenous growth theory, a procedure that is as intellectually dishonest as the continuing use of partial equilibrium supply and demand analysis after Sraffa (1926) (we are all guilty here).

Anwar (1980), 93, points out that Solow tries to have his cake and eat it too." Having … said that his method … [led] him to conclude that even the Humbug economy is neoclassical, [he] next asserts the very opposite … he runs a [linear] regression … on the Humbug data [that] gives a very poor fit [and] a negative coefficient for his *k*. [Anwar argues] that linearity is … a convenient assumption whose applicability must be … *justified*, not … assumed." (emphasis in original).

VII

I spent a week at the Economics Department of Tufts University in 1975 through Tom Cooley's good graces. I gave a seminar on the capital theory controversies (it was based on a paper which was the sequel to my 1972 book; it was later published in *OEP* (1976)). Paul Samuelson and Bob Solow were in the front row.[6] I had to tone down what I had said in other places where I included some cracks about the two MIT inseparables (the cracks were reinstated in the published version, I am not completely lacking in integrity).

After I had given the paper Bob quizzed me as to why I was so agin marginal productivity approaches. He asked: suppose you were a business person and were thinking of employing an extra person? Would you not do so if you expected the extra revenue so gained to exceed the extra wage paid? I said I supposed I would but, being rather non-plussed,[7] I failed to add that this did not logically imply that similar processes happened systemically so that Cobb-Douglas applied, that a systemic theory of distribution did not have to match or reflect the processes at work at the level of the individual firm.

VIII

The best illustration of my passed-over answer comes from Kalecki's remarkable 1936 review article of *The General Theory*, at that time untranslated from Polish.[8] In it, Kalecki starts with a profit-maximising, cost-minimising firm, the production technique of which could well be Cobb-Douglas, situated in either a purely (freely) competitive or an imperfectly competitive market. He nets out raw material costs and splits the value added

[6] They had come to Tufts the week before, having mistaken the date the seminar would be on, appropriately, April 1.
[7] It was a toss up whether Bob's question or Paul correcting page proofs while I spoke was the more non-plussing.
[8] The first full translation was published in the December 1982 issue of *Australian Economic Papers*, see Targetti and Kinda Hass (1982).

implied by the net revenue and net cost curves into wage payments and surplus (=profits); he aggregates the values added of all firms in the economy to the economy as a whole and shows how wage-earners spending what they earn and profit-receivers receiving what they spend, given the level of investment expenditure, results in the overall levels of activity and employment, and the distribution of income between wages and profits, being determined simultaneously.

This two-sided relationship between accumulation and distribution was extended by Joan Robinson to the long period (in a Harrodian sense) in 1962 in her banana diagram (Joan Robinson (1962), 48, and even further by Donald Harris (1975, 1978) to take in the sphere of production in which the potential surplus is created as a result of the impact of the current state of the class war and the existing technical conditions of production. The realisation problem is analysed in the accompanying sphere of distribution and exchange in which the Keynesian "animal spirits" function and the Cambridge saving function interact to determine the rate of accumulation and the distribution of income and so how much of the potential surplus is realised.

IX

An essential part of setting up this alternative approach is Anwar's critique of Solow's methodology, of his theory and its application, and Anwar's recognition of the link between 'vision' and the specifics of theory, analysis and applied work. Mainstream analysis of firm's behaviour by no means implies that the system need mirror it. Anwar's contribution also puts paid to the late Charles Ferguson's, Ferguson (1969), and the late Mark Blaug's claims, Blaug (1974), that econometrics would decide how serious for neoclassical theory would be the results of the Cambridge – Cambridge capital theory controversies.[9] The hegemony and

[9] Joan Robinson further refuted the claim that econometrics could ride to the rescue by her repeated demonstration that comparisons of equilibrium positions (differences) cannot throw light on processes (changes), see, for example, Shaikh (115), n2.

ignorance of the mainstream keeps this finding at bay but surely truth will ultimately prevail. If, when, it does Anwar's contributions will be major reasons why.

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