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LEWIS AND THE CLASSICISTS

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I. Introduction

The recent revival of concern with development in the so-called "overseas territories," after 150 years of virtual neglect, will undoubtedly be recorded some day as one of the transcendental events of the post-war era. This phenomenon undoubtedly had much to do with fundamental changes in the political map of the world. But the "academic scribbler" who will be among those most remembered in that context will just as undoubtedly be the man being honored in this volume. Both by means of his sometimes neglected encyclopaedic contribution, The Theory of Economic Growth,¹ which managed to touch virtually every base and yet convey important insights, and via his celebrated "unlimited supplies of labor" articles,² Arthur Lewis has been heavily responsible for imbuing this subject of inquiry with renewed respectability and intellectual vigor. His contributions to a deeper understanding of history, of development planning, of North-South relations, even of the philosophical underpinnings of growth as a desirable objective, are many-- and have been expounded, by Bhagwati and Findlay, earlier in this volume. But what we would like to focus on here is Lewis' major single intellectual contribution seen in the context of both its Classical roots and its modern analytical extensions.

¹London: Allen & Unwin, 1955.

²The Manchester School, May 1954 and January 1958.

That central idea, the notion of a dualistic economy, with its traditional sector containing a pool of surplus labor setting labor supply conditions for the capitalistic sector is indeed almost annoyingly simple--thus uniquely elegant. In that sense it reminds us very much of the consumption function which occupies a similar central role in the Keynesian system. Few of our own contemporaries indeed have demonstrated anything approaching the same "feel" for analyzing history with the help of simple analytical constructs without which all the heavy equipment of modern-day economics may in the end yield very little. Lewis indeed belongs to a tradition of basically literary economists which is unfortunately about to become an endangered species.

Both in the choice of subject matter and in the method of analysis Arthur Lewis is clearly more comfortable in the company of the Classicists. But while it is generally recognized that he deserves major credit for re-introducing us to the Classical tool kit it is our contention that he deserves even more credit for applying those tools to a really rather different problem and in a rather different historical and analytical context. We will also conclude that not all of the voluminous literature to which his seminal contribution gave rise has been fundamentally constructive.

II. Lewis and the Classicists: Roots and Differences

In evaluating Lewis' contribution in leading us back into the Classical fold we will find it helpful to relate it to Simon Kuznets' idea of modern economic growth. According to Kuznets,¹ the industrial

¹Modern Economic Growth: Rate Structure and Spread, Yale University Press, 1966.

revolution which spread through Western Europe in the last quarter of the 18th century was a major event marking off rather sharply two major phases of growth, that of a long historical epoch of agrarianism which preceded it, and that of modern economic growth which followed. The characteristics of modern economic growth include the systematic application of science and technology to industrial production, an acceleration of growth, major structural change, and the diffusion of the process across countries.

As is well known, the so-called stylized facts of modern economic growth seemed to first take hold in England, then spread to the Continent, from there to some of the late-comer countries, including Germany, the United States, Japan and Russia during the 19th and early 20th centuries. Only after World War II, with the exception of some earlier Latin American cases, did the so-called developing countries begin their own efforts to reach the modern growth epoch.

Lewis' writings, like much of the work of the so-called contemporary development economists, is really directed towards an understanding of transition growth through which societies endeavor to move between the sharply contrasting regimes of agrarian colonialism and modern economic growth. Such a period may last approximately fifty years, as in the case of England between 1775 and 1825, or the case of Japan between 1870 and 1920. Over the three post-war decades a number of third world countries have similarly registered a major try at achieving successful transition.

These two historical efforts, one in the "West" and one in the "South" are very relevant to our discussion of Lewis and the Classical tradition, for the obvious reason that theories relevant to any such change are likely to develop during any such period of upheaval. Smith, Ricardo and Malthus' growth theory was developed at the end of the 18th century, as was Lewis' during the past thirty years. While the physiocrats described the more or less constant rules of the game during the long agrarian epoch, and growth theorists in the post-Keynesian tradition described behavior in the steady state of advanced industrial societies, the Classicists and Lewis were really engaged in analyzing the transition process from one to the other, if from a somewhat different perspective.

One major difference is that Lewis' analysis is really heavily based on the existence of organizational dualism which, in the case of successful transition, ultimately yields to organizational one-sector homogeneity. While Lewis does not employ this terminology, his two sectors, the traditional and the capitalistic, are essentially marked off by differences in their institutional/organizational behavior--one emphasizing sharing rules of distribution, the other competitive rules under profit maximization. In the case of the Classicists, on the other hand, such a differentiation is not made, largely because they wrote under the influence of the world as they saw it, i.e. one which was heavily agricultural but also capitalistic. The Classicists were essentially production-oriented and worried about the inability of the agricultural sector to overcome the drag

of Malthusian population pressures and thus generate the savings required for the sustained growth of non-agricultural activity.

A second difference may be noted with respect to the identification of evolutionary sub-phases of growth during the transition period. In the Classical context we encounter the famous long-run stagnation thesis towards which the system is gravitating, with an essentially heavily pessimistic pall covering the proceedings. Looking back over more than 9000 years of settled agricultural life under the long agrarian epoch, the Classicists clearly saw non-agricultural activity as little more than a temporary "blip" on the body economic. While they discussed industrial activity--and Smith, more than the others, perceived a certain potential dynamism there, associated with economies of scale--the focus of most of the analytics was the land; and the predominant view was that the land was not about to lose its dominant grasp over the economic fate of mankind. The preponderantly pessimistic conclusions of the Classical school can be traced in large part to this essentially agrarian one-sector view of the world, especially when that one sector's own prognosis was not viewed as favorable.

For Lewis, quite in contrast, the definition of different phases of growth is crucial, because he is essentially engaged in depicting the metamorphosis of the system from a preponderantly traditional to a preponderantly capitalistic set of rules of the game. This, plus the fact that he is basically optimistic about the outcome, marks him off sharply from his Classical mentors.

He, of course, had the benefit of hindsight provided by almost two centuries of successful transition growth in the now advanced countries of the world. But it was his general view not only that the contemporary developing economy, like its predecessors, could move from a predominantly traditional to capitalistic organization via a turning point landmark, but also that the chances of achieving such a goal, i.e. for the continued spread of the modern growth phenomenon, were substantial.

There are unfortunately, few, if any, development economists who have studied the Classical writers as carefully as Arthur Lewis has. Because of his dusting off of analytical tools which had fallen into disuse and his contribution to the revival of interest in the age-old problem of development, the facile assumption has often been made that Lewis simply accepted and then built upon the Classical foundations. In fact, however, while no one will deny Lewis' Classical roots, the differences we have already briefly noted above are as important, and instructive, as the common heritage. They are based on at least three factors, all relating to Lewis' historical advantage: the benefit of being able to take into account actual global experience since the last quarter of the 18th century; a different view of the role and importance of science and technology; and a different conceptual and practical view of capital formation.

The Classical economists were writing at the time of a great flurry of a new kind of economic activity, in textiles, in textile machinery, etc., organized under a mass production factory system.

It focussed attention for the first time on non-agricultural activities and on the so-called urban employment problem which might accompany development. This break with the relative tranquility of the agrarian society of the middle ages and with the regularities of a well understood system as portrayed in the physiocrats' tableau economique, led them, however, to believe that this was but a transient deviation from the norm rather than a fundamental change in the rules of the game. Their basic conclusion was that the new urban centered activities would not turn out to be a permanent feature and that agriculture would continue as the main-stay, i.e. that sooner or later England would probably revert to the type of peaceful agrarianism which was part and parcel of contemporary Europe's historical experience.

They were, of course, proved wrong in this overall prediction, partly because of Engel's Law but mainly because they underestimated the potentialities of science and technology in overcoming what they believed to be a system's overwhelming natural resource constraints. That the, not always causally clear, interaction between science and technology would not only render the predictions for longer term agricultural stagnation irrelevant but prove a major feature of sustained non-agricultural growth was, of course, difficult to anticipate. How could they know, as Lewis did, observing the world many years later, that the flurry of industrial activity being observed was really more than a temporary departure but marked the arrival of the modern growth epoch.

Lewis' relative optimism on the possibility of reaching the promised land of modern growth stands in sharp contrast. The fact that his was basically a dynamic theory taking the economy through various sub-phases of growth has usually been ignored. His famous unlimited supply of labor diagrams really indicated two phases, the first characterized by the relative constancy of the real wage, and the second by a substantial increase in the real wage. The essential message that cut through all this was that a labor surplus economy can be successful when it ultimately experiences a metamorphosis from one to the other state in its transition to modern growth. The fact that the economy is likely to throw off its initial economic/geographic constraints, with technology change overcoming demographic pressures over time, and evolve into a situation where the real wage can increase in a sustained fashion is clearly an optimistic view and a far cry from the long run stagnation thesis in the Classical tradition.

Lewis' greater faith in the power of science and technology to overcome not only the initial unfavorable endowment situation but also rising population pressures over time is clearly related to his adoption of a more realistic and modern concept of capital accumulation. While the Classical school still focussed heavily on agriculture and on the circulatory or wages fund type of capital accumulation, Lewis accepted the view that fixed capital, represented by machinery, plant and equipment etc. is likely to be more important and, moreover, essential for "carrying" the new processes and product designs resulting

from the advances of science and technology. Finally, the successful demographic transition of Western Europe provided evidence that population growth, while a formidable obstacle--and presumably much more so in more over populated regions impacted by modern health and sanitation methods--could be overcome by the forces of capital accumulation and technology change. It is really small wonder that, in the light of past "Western" performance, Lewis could favorably assess the prospects for success in the post-war "Southern" transition effort.

Lewis' unlimited supply curve of labor, first only gently and then steeply sloping, constitutes, moreover, more than just an optimistic prediction. It constitutes at the same time an important behavioristic hypothesis with large operational significance. An approach to real wage constancy in the first phase really represents behavioral tools which simplify the analysis of the functional distribution of income, always an integral part of growth theory, especially when growth is thought of as of the savings pushed variety. Classical economists envisioned an increasing dosage of labor and capital, as a wages fund, applied to a fixed amount of land and leading to diminishing marginal productivity and an ever increasing rental share. In the Classical, especially the Ricardo, world this rental share is wasted in consumption by the labor aristocracy, while the rate of return to labor cum capital keeps falling steadily. When it finally comes to the battle between labor and capital, since the wages are kept constant by institutional forces, the rate of return to capital must decline. Hence, with profits as the exclusive source of savings, stagnation

inevitably results. In this way, the constancy of the real wage in the hands of the Classical economists is a simplifying hypothesis integral to the theory of the functional distribution of income. It is needed as the foundation of Classical capital accumulation and growth theory.

There is little doubt that the constancy of the real wage plays a similar role in the Lewis system. The simplifying assumption about the real wage leads to a simple version of functional distribution theory and of savings and inevitably to the turning point and phase two. Before the turning point the constancy of the real wage implies natural austerity contributing favorably to the generation of a larger volume of profits and thus savings, thus in turn rendering the arrival of the turning point more likely. Once the elastic supply curve of labor ends and the real wage begins to increase markedly the rules of functional distribution and the rules of savings, as Lewis puts it, begin to change. In this fashion, the same view of the functional distribution of income problem commits Lewis to arrive at a more optimistic vision of successful transition growth which, unlike the Classical thesis, is in fact fully borne out by the contemporary facts in many of the more successful labor surplus contemporary LDCs, e.g. the East Asian "Gang of Four."

III. Lewis and the Classicists: Extensions and Controversy

By proudly accepting his Classical heritage Professor Lewis also inherited what appear to some modern economists two flaws within

the system, namely the aforementioned ambiguity about dualism itself and the indeterminacy of real wages. These "flaws" have proven a source of unnecessary misunderstanding and irritation, but also at times a blessing in disguise as they have led to some helpful clarifications and extensions of the debate and advanced our understanding of the development problem. We, finally, turn to a more detailed illustration of this general point.

The term "dualism" is one of the more overburdened and misused terms in economics as well as in anthropology and sociology. When Professor Lewis speaks of dualism or a two-sector world he starts with the simple coexistence of two production sectors, which differ in organizational rules only. To others, including many of Lewis' followers, dualism meant specifically a division into agricultural and non-agricultural activities, in a mode familiar to analytical economists in the two sector neo-classical trade theory context. Lewis' organizational dualism as between a traditional and a capitalistic sector may or may not completely map into the notion of agricultural and non-agricultural sectors. The capitalistic sector is characterized by contractual hiring of labor in order to maximize profits while the production unit in the traditional sector coincides practically with the household decision making unit containing members glued together by kinship or some other non purely economic relations. The distinction between non-economic and economic arguments is drawn much more sharply in modern economics, the essential point being that the particular commodities produced is not what constitutes

the essential ingredient in the dichotomy, while the method of organization as between traditional and capitalistic certainly is.

By modern standards the Classical growth model is, of course, ambiguous with respect to dualism. The very fact that overall economic stagnation was traced to the shortage of land relative to population betrays the fact that agricultural production is viewed as the dominant production sector and that the nature of the product centrally matters. The urban centered industrial production story is thus really marginal and relatively unimportant in most Classical writings. Modern economists presenting the Classical model to a group of graduate students, in fact, often feel somewhat uncomfortable because the formal operational relationships between the dominant agricultural and the non-dominant non-agricultural sectors (presumably both capitalistic in organization) are not clearly spelled out. It seems quite clear, however, that to the Classical economist the agricultural production sector was also the capitalistic sector in the sense of Arthur Lewis, i.e. the tripartite division of labor of Smith, with capitalist farmers renting land from the aristocracy and hiring labor is as close a representation of the profit maximizing capitalistic method of organization a la Schumpeter as one can find.

It is thus not an accident that both the Classical theory and the development theory of Lewis encompass notions of institutional economics if we may designate concentration on the method of organization of production in this fashion. For transition

growth as distinct from epochal growth involves two dimensions of evolution: the way resources are utilized and the way methods of organization are modified. This second consideration may be trivial for an economy already in the modern growth epoch.

Mature socialist economies differ from mature capitalist economies in the type of production organization they have chosen but in either case they stay relatively put and are judged by their ability to solve complex issues of modern production. The difference between Lewis and the Classical school, however, is that while the latter did not concern themselves with organizational evolution, just as they did not concern themselves with technological change, the evolution of organizational choices really lies at the heart of the division of production sectors into capitalistic and traditional and is central to the Lewis turning point thesis.

If pushed to the logical extreme, the arrival of the turning point is really the result of a race between capital accumulation, represented by an upward shift through time of the marginal product curve M_0, M_1, M_2 in Diagram 1 to determine the amount of labor absorbed E_0, E_1, E_2 etc., and the amount of labor available, related to the initial labor surplus and to population growth, represented by the population growth curve shown in the lower diagram along $P_0 P'_0$. Labor absorption finally catches up with labor supply at the turning point when the reservoir (represented by the horizontal gap between the labor force growth curve and the capitalistic sector employment path) is exhausted, at point T. While Professor Lewis himself abhors such dynamic formulism he nevertheless makes it clear that

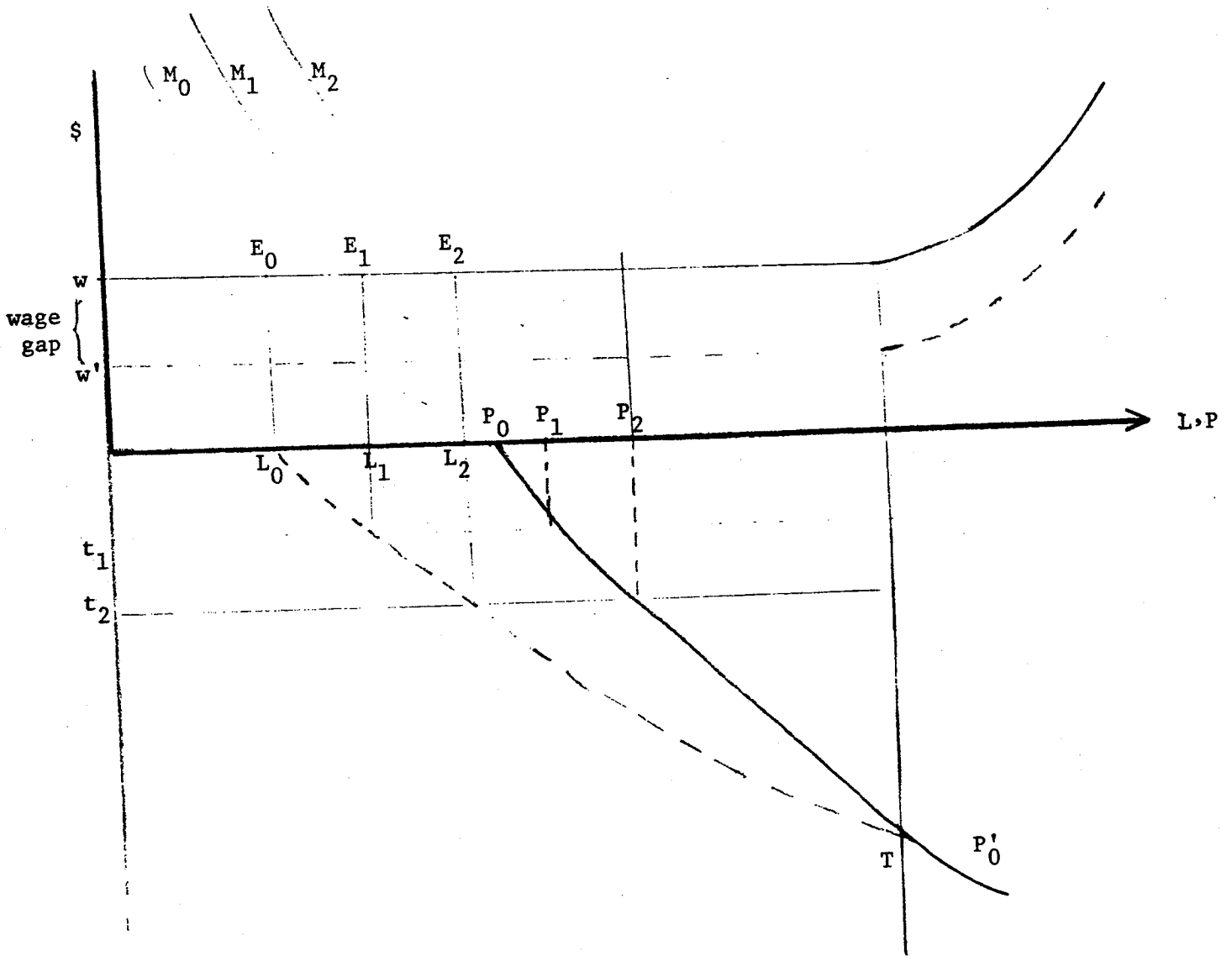


Diagram 1

it was the savings pushed growth of this type that was the essential driving force for solving the development problem. In this sense, in spite of the claim of many of his critics, he has never, in fact, neglected agriculture or emphasized industrial expansion as the main savior. His is an operational dualism which emphasizes the crucial role of the traditional sector in generating the necessary savings to enable therace between population growth and labor absorption to be won.

Professor Lewis is, of course, aware of the fact that the meaningfulness of the postulation of two sectors hinges on its operational significance. On the surface there are two "constant" wage rates for the capitalistic sector w , and for the traditional sector w' , represented by the two horizontal lines in Diagram 1 such that there is a wage gap ww' which attracts labor into the capitalistic sector provided employment opportunities can be found. Beneath the surface, "the non-capitalistic sector serves for a time as a reservoir from which the capitalist sector draws labor."¹ We may quickly add that because of the demographic transition this pool is also continuously being augmented. Thus the unlimited supply of labor which at a given wage rate w' is available to the capitalist sector will, for some time, exceed the demand. This is really all Professor Lewis needs for his purposes, namely the analysis of transition growth in the context of a functional income distribution-determined and savings-pushed growth. The reservoir of labor in his dualistic model corresponds to disguisedly unemployed

¹W. Arthur Lewis, "Reflections on Unlimited Labor," International Economics and Development, 1972, p. 76.

labor in all kinds of occupations, i.e. retail services, distribution etc. and is explicitly not restricted to the agricultural sector. Dynamically speaking, the reservoir is fed by population growth as well as determined by the size of the initial pool of underemployed in all such activities.

Lewis' unlimited supply of labor condition, like Keynes' consumption function, represents a key behavioral assumption on which many others have been able to build. One apparently innocent extension of Professor Lewis' work, in fact, may represent a potentially very important departure, i.e. that of substituting or augmenting his organizational dualism with product dualism. In the realm of substitution there exists a long tradition of two-sector models in the economics literature as illustrated by the well-known neo-classical two sector model of international trade and other neo-classical models applied to development. Some such models involve food and clothing, a two commodity specification a la Ricardo and Heckscher-Ohlin, with the emphasis on intersectoral resource allocation and taking into consideration both production and consumer preference conditions. More generally, in addition to intersectoral commodity flows, such models can focus on intersectoral relations including migration and capital mobility.

Once product dualism is added, rather than simply replacing organizational dualism, we have a potentially much richer broth, permitting us to analyze important intersectoral issues in the context of development phasing. Lewis himself still seems not

fully aware of this distinction: "Other writers with different purposes have made different divisions. A now popular division is between industry and agriculture."¹ The point is that Lewis' own purposes might well have been better served by superimposing product dualism explicitly on his organizational dualism. The reason for this is that intersectoral analysis really must lie at the heart of a meaningful dualistic development theory. As Kuznets' modern economic growth concept indicates, the speed, spread and structural changes of an economy focus our attention on intersectoral changes of the product type. When the contemporary LDC, on the other hand, attempts its transition from agrarianism to modern growth, the key structural change is, in fact, the anticipated growth of the capitalist non-agricultural sector at the expense of the traditional agricultural sector as proxied by labor allocation and/or the percentage contribution to value added. The two sectors are, however, neither organizationally symmetrical in the input-output sense nor in the product content sense. In fact, the impediments to reaching the turning point center on the commercialization of the agricultural sector as a pre-requisite. All essential intersectoral issues, not only the intersectoral allocation of labor but also intersectoral commodity and financial markets, represent crucial links for determining the success of the transition growth process.² We need to be in a position to analyze the full range of interactions between the two sectors. This forces one to move beyond organizational dualism and to incorporate important aspects of product dualism as well.

¹W. Arthur Lewis, "Reflections on Unlimited Labor", International Economics and Development, 1972. p.76.

²See, for example, the authors' Development of the Labor Surplus Economy: Theory and Policy, Irwin, 1964.

It must, of course, be recognized that the attempt to capture the full interplay of the two sectors with a focus on both types of dualism also requires delving more deeply into the behavioristic equations which need to be postulated in order to determine the magnitude of these various flows over time. Any such deterministic model is certainly not Lewis' cup of tea, but he is happy to let others furrow the field he has laid out. What he does find somewhat annoying is the persistent questioning by those who want to build such models based on a fully determined real wage in agriculture. This touches on a sensitive nerve because the question appears to be so basic to the thesis of unlimited supply of labor, and yet Professor Lewis and his followers cannot provide a coherent, rigorous answer which will satisfy modern analytical economists: "The model does not attempt to derive the conventional wage: as in the Classical system, this depends not only on productivity but also on social attitudes"... Lewis barely conceals his irritation when he states that "whether marginal productivity is zero or negligible is not at the core of fundamental importance to our analysis. It was probably a mistake to mention marginal productivity at all, since this has merely led to an irrelevant and intemperate controversy."¹ Almost by definition, any "institutional explanation" of the level of real wages can never satisfy the card-carrying theorist. But the key point is that much of the controversy between the so-called Classical and neo-Classical positions on this very point may really constitute a misdirected search for concreteness. The persistent challenges

¹"Reflections," op. cit., p. 77.

by modern analytical economists concerning a coherent and rigorous determination of the real wage have stimulated the search for the construction of a rural real wage theory down to the present time, taking into account many specific micro peculiarities of rural organization and tenure arrangements.¹ Many arguments have focussed on the attempts to demonstrate that the marginal productivity of labor is not, in fact, zero, i.e. that the real wage may, in fact, simply not be as high as the marginal productivity of labor.² Others have tried to explain the empirical fact of a gently sloping real wage by elaborate assumptions on the agricultural production function within a basically neo-Classical context.³

The real wage, in fact, really has three basic elements of significance. On the one hand, from the point of view of factor rewards, it has distributional significance. This, when combined with assumed Classical savings behavior, attributes savings mainly to income from property and can be fully explored in the context of a one sector growth model. On the other hand, it also has allocation significance, an aspect which is fully explored in general equilibrium theory, namely in relation to the equalization of wage rates among production sectors as a key condition for allocative efficiency. In this respect the allocation significance of the real wage is manifested in the context of any two-sector

¹ e.g. the work of Bardhan, Srinivasan, and Rosenzweig.

² This, rather than the conceptually, as well as statistically, unlikely event of zero is certainly what most of Lewis' followers had in mind, and on paper.

³ See, for example, Kelley, Williamson and Cheetham's, Dualistic Economic Development, Chicago Press, 1972.

model. The notion of an unlimited supply of labor model as developed by Professor Lewis refers mainly to the distributional significance of wages. However, when the notion of unlimited supplies of labor is extended to a two-sector world, with product dualism superimposed, the wage rate takes on an additional allocative significance since it is the main regulator of the allocation of the labor force, as well as of the determination of the terms of trade and of intersectoral exchange in the context of a mixed economy. Intersectoral labor, commodity, and financial markets become crucial and the food, non-food content of the two sectors assume its own special importance within a general equilibrium context.

A third and final element of significance of the real wage relates to its impact on technology, an issue especially--but not exclusively--sensitive in the non-agricultural sector of a dualistic economy. This is another big subject, related both to technology choice, given relative factor prices, and to the inducement of technology change in one direction or another depending on the expectations with respect to future relative factor price movements. While Harris and Todaro¹ have analyzed the wage and expected employment in the industrial or capitalistic sector as the regulators of the intersectoral rate of labor migration, other extensions have included a focus on the closely related intersectoral commodity and financial markets and on the size and direction of induced innovative activity.

¹"Migration, Unemployment and Development: A two-Sector Analysis"
American Economic Review, March 1970.

Lewis knows, as well as his critics, that once one abandons the marginal productivity theory of the real wage one is hard put to construct a credible alternative; this is true even for the advanced countries where institutional forces and attitudes towards collective bargaining also play a role. It is easy enough to construct arguments and alternative models for the determination of the real wage. But after the model is constructed one also has the right to ask the following question: if an already relatively abundant labor force is being augmented very rapidly by population increase and/or by labor saving technology change, is it not true that, in whatever system is adopted, the real wage is not likely to be rising very much over a considerable period of time? If that is so, and there is presumably no basic disagreement here, empirically speaking, Professor Lewis, one suspects, would be perfectly happy to accept whatever theory one might want to construct leading to the relative constancy of the real wage over a considerable stretch of historical time.¹ In his work he was simply assuming that those basic conditions are met--which freed him to focus his analysis on the issues he really cared about, the distribution of income, and the process by which a 5% saving rate gradually yields to a 12% saving rate as the capitalistic sector exerts its increasing dominance in the course of transition growth.

¹In this sense, we may note again the analogy with the Keynesian consumption function. We all know its operational significance as lying at the heart of Keynes' system, i.e. aiming at the determination of income with the help of the multiplier. It was much later that analytical economics began to explore the precise behavioristic foundations of the consumption function, e.g. whether it rests on the foundations of the Slutsky equations, generally on the work of Patinkin, and to what extent other than income factors affect consumer behavior. To Keynes such theoretical niceties were also somewhat secondary, his main objective being the use of the consumption function for a larger analytical purpose rather than complete agreement on its derivation.

Almost three decades have passed since the theoretical construct of unlimited supplies of labor first made its appearance. As with all ideas, it did not emerge full-blown from the brow of Zeus but had its antecedents; much additional construction, some glittery some faulty, has since been added, and much controversy has swirled about the edifice. But no one will dispute that it has been and remains impossible to write about development without reference to Arthur Lewis' contribution. It has become part of the precious and unavoidable core of the profession, rising above disagreements, extensions and polemics.