

The Quaid-i-Azam Lecture

The Potential for Economic-Demographic Development: Whither Theory?

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1. INTRODUCTION

Changes in stable socio-demographic systems, barring environmental accidents have occurred when major new production technologies are widely adopted and socially institutionalized. In most instances, this process of change is associated with a high degree of specialization and through it with the opening up of local markets and their integration into the wider regional and international system of trade and exchange. It must be emphasized that major technological changes are but one facet, albeit a central one, in the development of our ever-evolving technological civilization. But as major new "production technologies" take hold, a new system of human settlements and social relations evolves which is in harmony with the new wave of emerging "techniques".

During these periods of structural changes, mortality and reproductive behaviour tend to adjust themselves to new levels that are compatible with these new sets of production relations and their associated social formations. This movement from one equilibrium level of vital rates to another is called in the population literature a "demographic transition". Indeed, the current "demographic transition"¹ is the consequence of the world dramatic experience with new technological changes (dubbed industrial revolution). This socio-demographic transition that has its origin in the seventeenth century and accelerated during the second part of this century has

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¹ As is well known, the current demographic transition associated with the industrial revolution has not been the only experience of mankind, nor will it be the last. For a review and discussion, see [81].

influenced all the parameters of human and non-human life, including the vital rates, and has apparently set the world society on the path of irrevocable "technicalization".²

Demographic transitions, accordingly, cannot be defined independently of their socio-economic context and, more fundamentally, the prevailing production technology. It is possible for demographic parameters to change as a result of changes in social relations without associated significant changes in the technological parameters. But such changes are necessarily limited by that system's production potential, which, in the final analysis, should be able to provide the necessary biological support for the growth of population.

Contemporary discussions of demographic change that theorize or prescribe ways and means of influencing fertility or migration behaviour without first considering the structural causes that caused those changes are doomed to failure. It does not follow, however, that knowledge about structural causes alone is sufficient for a correct diagnosis and prescription of development issues. Once set in motion, demographic change has its own momentum that interacts with the socio-economic parameters of society. Understanding both the determinants and consequences of demographic change is extremely essential.

Accordingly, discussions regarding economic development or the choice of appropriate developmental styles that do not integrate population dynamics in the sense just outlined are deficient. Indeed it is the main thesis of this paper that for most analyses of socio-economic development, this is the case. As will be evident from the present discussion, while a localized analysis of demographic change is not necessarily complete, an integrated "world view" of socio-economic development that does not endogenize the dynamics of demographic change is internally inconsistent. Our focus, however, is diagnostic rather than prescriptive.

In the second section we examine demographic trends in the less developed countries with emphasis on the Arab Region up to the end of the present century and evaluate their momentum. Our focus will be on vital rates. The important phenomenon of intra-regional migration will be examined later in the paper. In the third section we review various development paradigms to examine the role of population dynamics in their specified structures. Our next step is to assess, in the fourth section, the applicability of these various paradigms to the economic-demographic potential of the developing countries, with the Arab World as a case study. In the concluding section we discuss briefly some theory and policy implications.

²"Technicalization" and "techniques" are used in the sense in which Ellul [29] defines them, and thus differ from technology. In this frame of reference, technique refers to "any complex of standardized means for attaining a predetermined result" (p. vi), or to "compel the qualitative to become quantitative . . . (and) . . . force every stage of human activity and man himself to submit to its mathematical calculation" (p. xvi).

2. DEMOGRAPHIC TRANSITION IN THE DEVELOPING WORLD: A PREDETERMINED DESTINY?

In 1960, crude birth rates in low-income and middle-income countries were 40 or more births per thousand population for all countries with only five exceptions, and were closer to 50 for most of them.³ Crude death rates, on the other hand, were over 16 per thousand for all except thirteen countries and few Asian countries. In 1982, fertility continued to maintain its high levels, with a few exceptions attaining somewhat lower levels. However, mortality declined dramatically, reflecting a combination of improved health status and young age structure, thus creating a dramatic increase in the natural rate of population growth. Figure 1 illustrates for the Arab

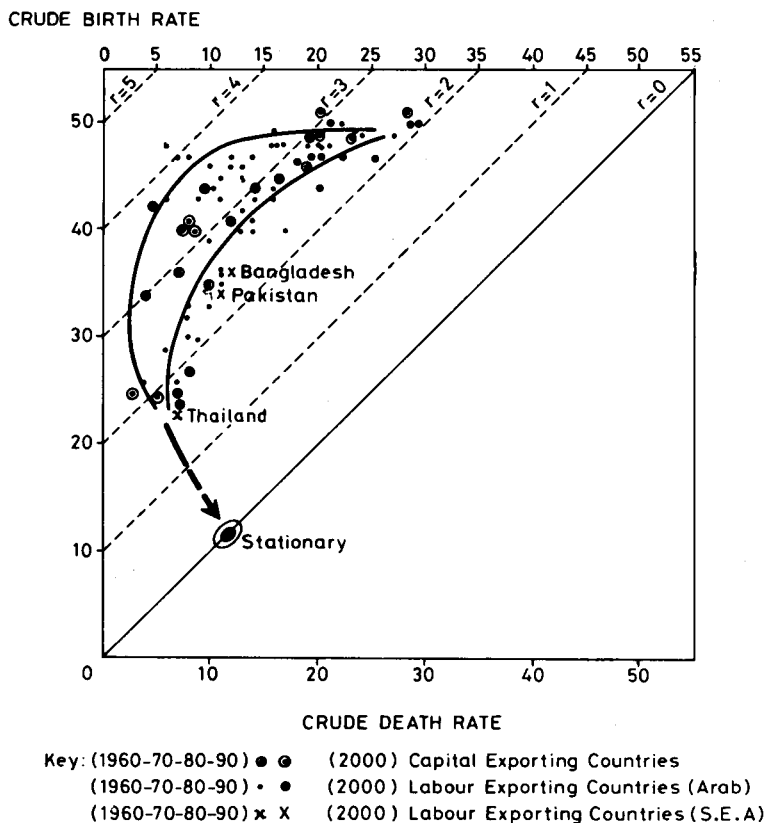


Figure 1. Demographic Transition(s) in the Arab World and Selected South-East Asian Countries (1960–2000)*

*Selected Countries.

Source: See Table 1 for details and sources.

³The exceptions were China, Haiti and Jamaica with CBR equal to 39, Sri Lanka and Cuba with CBR equal to 36 and 32 respectively [101, p. 186].

countries, Pakistan, Bangladesh and Thailand the situation between 1960 and 1980 and the expected trends up to the year 2000. Basic demographic data are presented in Table 1.

Table 1
*Demographic Change: Arab Countries and South-East Asia:
1960-2000**

Country	* 1960		** 1970		** 1980		1990		2000		NRR = 1
	BR	DR	BR	DR	BR	DR	BR	DR	BR	DR	
Bangladesh	47	22	48	21	46	18	43	15	36	12	2035
Pakistan	49	23	47	19	43	16	41	14	34	11	2035
Thailand	44	15	39	10	30	8	26	7	23	7	2010
Sudan	47	25	47	22	47	18	44	16	41	12	2035
Yemen PDR	50	29	49	24	48	20	48	17	44	14	2040
Yemen AR	50	29	49	27	49	23	48	20	45	16	2040
Egypt	44	20	40	17	40	13	33	10	27	8	2015
Morocco	50	21	48	17	45	13	41	11	33	8	2025
Tunisia	47	19	40	14	35	11	32	8	25	7	2015
Lebanon	43	14	36	11	30	9	28	8	24	7	2005
Syria	47	18	47	14	47	8	43	6	34	4	2020
Jordan	47	20	48	16	46	10	47	7	42	5	2020
Algeria	51	20	49	16	46	13	45	11	40	8	2025
Iraq	49	20	48	16	46	12	43	9	36	7	2025
Oman	51	28	50	22	48	17	42	13	35	10	2020
Libya	49	19	49	16	47	12	44	10	41	8	2025
Saudi Arabia	49	23	48	18	45	13	43	11	40	8	2030
Kuwait	44	10	48	6	40	4	32	3	25	3	2010
U.A.E.	46	19	36	11	29	6	26	4	25	5	2015

Source: World Development Report, 1984, IBRD

World Population Projection 1984, IBRD

Note: *IBRD

**UN

It is evident that with few exceptions, the rate of growth of these populations of Arab countries will be over two percent per year and for the majority will exceed three percent by the year 2000. The potential for high rates of population growth will continue to persist through the twenty-first century. In other words, the completion of the demographic transition in its narrow sense will not materialize in Pakistan, Bangladesh, Thailand, or the Arab World, for example, until well through the twenty-first century. The following question presents itself:

What are the socio-economic implications of this demographic picture and how do they affect the developmental potential or limit the viability of the available policy options?

In attempting to answer this fundamental question we may follow two possible paths. The first is to project and examine a battery of consequence indicators in order to illustrate what the developing countries have to deal with during the next few decades. For example, the aggregate size of the Arab population is estimated at between 190 million and 200 million in 1985. With some plausible assumptions regarding the paths of fertility, mortality and net migration, it is expected that between 140 million and 150 million births will be added between 1985 and the end of this century, and about 40 – 45 million deaths will occur during the same period. Assuming a net out-migration of about 5 – 10 million, we would expect the total size of the Arab population to reach between 275 million and 305 million people by the year 2000. We can safely assume that about half the 40–45 million deaths will be among infants and that the family income and wealth distributions of these 40 – 45 million deaths will be very skewed (e.g. a Gini co-efficient exceeding 0.6).

Similar guesstimates can be made for Pakistan, Bangladesh or Thailand. For example, the populations of these countries are expected to increase by 41 million, 45 million and 15 million people respectively by the year 2000. Most of that increase will be of rural origin. About 71 percent, 88 percent, and 83 percent of the increase will originate in the rural areas of Pakistan, Bangladesh and Thailand respectively. The momentum for population growth will continue to have its effect through the end of the twenty-first century. It is a long-term analysis. For details, see Demeny [27].

On a more programmatic plane, demographers, economists and sociologists may quibble about the assumptions underlying the projections in order to improve the various guesstimates, especially when attempting to estimate, for planning purposes, the number of additional jobs that need to be created in the various sectors and regions by the end of the century. In principle, such an exercise should be a relatively easy task since for the next twenty years the labour force is already "on board". Controversies arise, however, not only with regard to data quality and the realism of the fertility and mortality assumptions, but, more importantly, to expectations regarding labour force participation rates (especially for females), skill composition, and the geographical distribution of the work force within and across the various countries. Such estimates are necessary for the calculation of the size and structure of investment outlays required to maintain or attain a desired level of labour productivity. Similarly, the implication of population growth to social investments necessary for education, health, housing and other basic needs and their incorporation in a macro-economic framework opens up a very substantial role for a skilled technocratic cadre of economists, sociologists and demographers. It has even created a sub-discipline labelled "planning for growing populations" Cassen and Wolfson, [23]. It also provides a lively numbers game—a serious game notwithstanding.

This is the approach that is most widely used in dealing with population implications. It does not, however, probe the fundamental forces that brought the demographic picture to its present status.

The second approach, which is the one we will adopt, is to investigate the determinants of the system parameters and relate them to consequences. More specifically, it seeks to investigate how endogenous the demographic factors in the current phase of the developing countries' socio-economic experience are. But the policy conclusions derived from such an examination can only be interpreted in the context of developmental paradigms. For that purpose we need to understand how population is treated within the various development perspectives. It is not our aim to secure a consensus or to provide a comprehensive assessment of the current debate regarding development paradigms. Such a task is too large and fundamental and is clearly beyond the scope of the present study. The aim is to present our own understanding of the role of population dynamics in the various developmental paradigms in order to relate the demographic situation just outlined to the context of the developing world within a coherent framework. For the purpose of focusing the discussion, the Arab experience will be taken as a case study.

3. POPULATION IN DEVELOPMENT PARADIGMS

It seems that the pace and diversity of national and international events and the associated structural changes that took place in the world during the past two decades have had the effect of discrediting a number of comfortable generalizations that have been nurtured and cherished with respect to a spectrum of development paradigms. These events include the changing role of China in both its internal and international policies; the changing fortunes of OPEC; the emergence, from within the ranks of the less developed countries, of a set of Newly Industrialized Countries that may be labelled semi-imperialistic; the apparent decline of some previously industrial nations, the rise in Latin America of a new brand of military-bureaucratic regimes in close alliance with international capital; and the disillusionment with the progress of the North-South negotiations. These events have created disillusionment among social scientists concerned with development studies. As Portes and Walton observed [59, p. 1], for those whose perceptions of the world are based instant analysis, the 1970s and 1980s must have surely projected a state of confusion. Regardless of one's ideological leanings, it was increasingly difficult to identify either international friends or enemies or to predict even short-term trends during that period. As a result, development economics as a sub-discipline was put to task.⁴

⁴The response by development economists has been varied. See, for example, Joan Robinson [67], Hirschman [40], D. Seers [74], the special issue on "Economic Development and the Development of Economics," *World Development* (1983), Bhagwati and Ruggie [15] on North South Negotiations and its review by H. Singer [78], the IEA (1983) volumes on Human Resources, Employment and Development [93], especially Vol. 1, S. Tsuru ed., and S. Amin contribution to Volume 5; Weisskopf [98], Portes and Walton [59] that also includes, aside from a penetrating analysis, an extensive bibliography, Naqvi [56] on defence of the "discipline" of development economics, and Arndt [11] on the Origins of Structuralism, among others.

It is apparent that the current status of development economics is rather fluid. We need not be dogmatic in taking stances before a careful survey of the grounds. In what follows we present a brief review of various development paradigms starting with the classical model. Our interest is to illustrate how population is treated in these models. We must, however, be aware that our rejection of a given paradigm, if based on moral (or emotional) grounds, may not spring so much from the unsoundness of its analytical structure, as from its unsound application. The same knife may save or take a life depending on whether it was used by a surgeon or by a criminal.

a. From Malthus to Marx

Malthus, as a system of analysis and not of exploitation, was born a long time before the birth of the man of that name. From this viewpoint, the Malthusian assumption that the average productivity of labour declines with an increase in population size, as well as the familiar Malthusian assumptions of a fixed resource base and a fixed technology that implies the idea of an optimal population size, defined in the context of a desirable average level of welfare (or subsistence), was elucidated by Confucius and his followers in China almost a millennium before Malthus's time (Hammel, [39]). It is hard to perceive Confucius as Malthusian.

Malthus was a classical economist, although he anticipated Keynes in questioning the stability of the system. According to the classical (as well as the neoclassical) thesis, in a perfectly competitive economy and in the absence of externalities, market forces operating through the price mechanism assure both a stable system and an optimum allocation of resources, statically and dynamically. This paradigm has been open to three major lines of criticism. One that it is unjust and exploitative. Two, that it is unstable, prone to crises and doomed to collapse. Three, that its alleged optimum allocative conclusions are not guaranteed because its very quintessential mechanism of market forces operating through the price system fails to work, either because of a distorted signalling mechanism, an inadequate response of labour and other factors of production to price signals, or because of the lack of mobility of such factors.⁵ Our focus will be on the first two lines of criticism, exploitative and instability, because of the critical nature of their assumed demographic behaviour.

A critical examination of the classical system can be made in the light of Marx's critique. Marx considered the exploitative nature of the capitalistic system as inherent in the internal working rules of the system. As put eloquently by J. Robinson,

Exploitation is the great engine for accumulation and what is nowadays called economic growth. The capitalists extract surplus value, not to enjoy luxury,

⁵ See for example the discussion by Arndt [11].

but to accumulate the means of increasing employment so as to extract more surplus [65, p. 27].

The surplus of production over wages belongs to the capitalists. They use it partly to supply their own wants but mostly to build up more capital to extract more surplus. In essence, the "bourgeoisie" class is viewed in this paradigm as being "programmed" to accumulate — like bees. It is evident that investment (i.e. profits minus luxury consumption) in the capacity to produce wage goods is a necessary condition for growth, but the viability of the system is based on an objective, albeit contradictory, relationship between profits and real wages. To an individual firm, an increase in the wage bill represents a "loss", while for the capitalist class as a whole it is the pre-condition for an expansion of the market and, accordingly, a continuation of the accumulation process. Furthermore, for the system to operate without real wages overtaking profits, the labour force must be increasing all the time, and at the same time there exists a reserve army of potential unemployed workers.

Indeed, it is a tight-rope game. If capital accumulates faster than the labour force growth, including the exhaustion of the reserve of labour, real wage rates rise and profit per worker falls, thus slowing down accumulation relative to the growth of labour. A new cycle begins where the relative increase of the labour force will tend to reduce real wages and, accordingly, increase surplus and accumulation. It is evident from this analysis that

In a class society (whether feudal or capitalist) a growth of numbers is advantageous to the owners of property. It provides them with more people to exploit, as tenants, servants, slaves or workers. [65, p. 8]

It is a mercantilistic world that favours population increase in order to maximize wealth while being oblivious to problems of inequality of income and wealth or accepting its inevitability. It is also the Age of Malthus. The attack on the Malthusian framework has to do with its analytic focus and moral implication. Teitelbaum summarizes the ideological issue succinctly when he said that

Malthus argued that the English poor laws and the utopian socialism of Godwin and Condorcet were doomed to failure by the 'principle of population'. According to Malthus, the effect of social welfare measures was simply to lower mortality while fertility stayed high. Hence the population will grow to the margin of subsistence, and thereby leave eventual overall welfare improved not at all. Unless fertility could be reduced, he (Malthus) held, the ultimate population restraints of famine, war and disease would be imposed by nature. [91, p. 831]

In essence, Malthus considered the inequality in the functional distribution of income as datum necessary for the stability of his system and, accordingly, blamed the reproductive behaviour of the working class for excessive poverty and unemployment. It is the growing subsistent consumption needs of this group that outgrow output growth – thus reducing profit and accumulation. The cure from misery lies squarely on the shoulders of the proletariat and not in the characteristics of the social structure of the capitalistic system and its production relations.

It is evident, therefore, that population plays an important, albeit different, role in the functioning of both the classical and the Marxist systems.

In the Malthusian framework (ignoring its reactionary interpretation) population is treated endogenously in the sense that its rate of growth is a positive function of real wages. But the conceptual framework that underlies the relationship is never articulated and is mainly based on biological forces of passion. It must be emphasized that there is nothing “sacred” about the distribution mechanism perceived by Malthus. As John Stuart Mill wrote in his *Autobiography*, partly a reflection of his utilitarian convictions,

“Malthus’s population principle was quite as much a banner and point of union among us [utilitarians], as any opinion specially belonging to Bentham. This great doctrine, originally brought forward as an argument against the indefinite improbability of human affairs, we took up with ardent zeal in the *contrary* sense, as indicating the sole means of realizing that improbability by securing full employment as high wages to the whole labouring population through a “voluntary” restriction of the increase of their numbers. (Quoted in [16, pp. 220-21] ; emphasis added.)

Indeed, as Blaug observed, one can read in Mill’s principle “a relentless insistence that every conceivable policy measure must be judged in terms of its effects upon the birth rate” [16, p. 220]. It seems that Mill assumed the presence of a divergence between individual and social demographic objectives – a divergence that required a conscious policy intervention. But he also assumed a “voluntary” adjustment mechanism on the micro level. However, Mill did not provide the necessary “behavioural” theory of population dynamics, essential for the viability and stability of his harmonious economic-demographic system.

It is of interest, however, that the recent revival of the classical theory of profit ignored even this weak link and treated population as completely outside the system [96]. In Von Neumann’s world the employment of labour grows automatically as the flow of output of wage goods increases. Such state of affairs implies either that population is always growing at just the right rate, or that there is an indefinite reserve of potential labour living on nuts in the jungle, always ready to take up

employment when the standard real wage is offered. Such treatment is most evident in Morishima's (1969) extension of the Von Neumann model. G. McNicoll describes this aspect of Morishima's specification more vividly when he says that in Morishima's model,

People in excess of the minimum needed to work with the available physical inputs to the set of production processes at a given time can be excluded from participation in the economy either dying of starvation or becoming otherwise unemployable without being a burden on the economy! [52, p. 2]

In the Marxist framework, although the role and influence of population are central to the system, its dynamics are not given careful consideration. Marx's prediction about the fate of the capitalist system is that the very mechanism inherent in the process of production will result in constantly increasing numbers of the working class that would be trained, united and organized to finally revolt and take over the system for their own benefit. This vision includes the element of a rudimentary population theory which shares the same response mechanism as that of Malthus. But Marx's system could equally accommodate an alternative population theory where the response mechanism differs. For example, as Joan Robinson [65] argues,⁶ it is possible that

Marx, in his desire to combat the reactionary doctrines of Malthus, did not stress the point that growth of population, under capitalism, is inimical to the interests of the working class, though his own theory clearly indicates that this is the case . . . when the labour force is not growing, accumulation takes the form of technical change which raises output per man employed. Then organized labour can catch a share in the growth of productivity by raising real wage rates. This, indeed, has happened in the Western economies. The moral seems clear, but some fanatical dogmatic Marxists have joined with the Pope in refusing to admit that the growth of population, in modern conditions, is an impediment to the growth of human welfare. (p. 8) . . . (evidently, Marx) neglected demography. (p. 26)

Indeed, classical Marxism puts forward the thesis that each socio-economic formation has its demographic law. Marx believed that⁷

⁶Notice, however, the conceptual similarity between Joan Robinson's remark on Marx's economic-demographic system, and that of John Stuart Mill's on Malthus quoted above.

⁷The quotation is from Volsky [95, p. 300]. He quotes K. Marx and F. Engels, *Obras Completas*, Vol. 6, pp. 441 and 645-6.

Men establish certain links and relations to produce, and it is only in the context of these links and social relations that their relationship to nature exists and their production takes place . . . (accordingly) every special historic mode of production has its own special law of population . . . under the demographic law of capitalism, the working population, by producing capital accumulation, increasingly produces resources that run into a relatively surplus population; and this demographic law is inherent in the capitalist mode of production . . . that characterizes the degree and kind of use of labour resources.

These Marxist demographic laws are basically “methods of understanding”.⁸ They may provide refutable hypotheses. But our point of view is that they are not backed by a clear theoretical framework that elucidates the behavioural mechanisms of the implicit but necessary micro and macro demographic adjustments. This analytic weakness is evident in Volsky’s discussion [95] of Latin America’s demographic problems and socio-economic development. Volsky, a member of the Moscow-based USSR Institute of Latin American Studies, argues that accelerated population growth in Latin American countries creates difficulties, that Latin American countries need a well-grounded demographic policy, that such policy as exists in Latin America is divorced from general socio-economic policy (demographic policy is used only for the purpose of measurement), that it (population policy) suffers from the “negative attitude of the Catholic Church on the use of artificial means to limit births”, and that attention must be given to “the struggle by the masses to have demographic problems solved within the framework of radical overall changes” (pp. 304–308). However, it seems that with few exceptions the decline in mortality has been dramatic and uniform across the Latin American countries and that the decline in fertility seems to be negatively correlated with per capita income [102]. Cuba is the exceptional leader in the decline of both mortality and fertility. But close contenders include such socially and politically diverse countries as Chile, Uruguay, Trinidad and Tobago, Jamaica and Argentina! Evidently, there is a need for clearer conceptual guidelines. Does the *neoclassical* perspective or the new World-System vision of development and underdevelopment provide such needed conceptual guidelines?

b. The Neoclassical Perspective

The *neoclassical* (*neo-Malthusian*) school developed the Malthusian analytical framework in two directions: macro growth models and micro household economics.

⁸S. Amin [7, p. xi] argues that Marxism is a “method” and not a “theory”. Accordingly it “does not imply logically necessary unilateral conclusions”.

As mentioned earlier, neoclassical growth models are based on the presence of perfect competition in both the product and factor markets as well as on the assumption of constant returns to scale. The literature is enormous and the relevance of this body of theory to explaining actual situations even in the developed world has been highly questioned. For a review and assessment, see Eltis [30] and Pitchford [58]. For our purpose we narrow our focus on how population growth is treated in these models. Three possibilities may be identified [58]: (i) as an independent variable, (ii) as an endogenous variable, and (iii) as a policy instrument. The first assumes a constant population growth rate and may be labelled a descriptive neoclassical growth model. To a large extent, the absolute size of population plays no essential part in determining the results of this class of models. Pitchford, critical of such implication, sums the lack of relevance of such analysis to the developing countries' context as follows:

The originators of this approach were, of course, aware of this sort of implication of their models, and it is true that for some purpose it need not be a serious limitation . . . yet there were underdeveloped countries where there seemed to be a conflict between population growth and economic welfare, and casual observation of the real world would suggest that the time must come when the same applied to developed countries. For these situations the neoclassical growth model was not relevant. [58, p. 54]

As the previous discussion illustrates, the Malthusian and Ricardian growth paradigms treat population endogenously but the assumed demographic behaviour is rather weak. Attempts to endogenize population in the neoclassical framework were also questioned with regard to the plausibility of their assumed demographic behaviour. Underlying recent development is the concept of an "optimum population" size or path which requires explicit assumptions about the adjustment process of population. In most cases the adjustment is assumed instantaneous. Again, according to Pitchford [58, p. 90] the utility of the models diminishes greatly if it is assumed that

Population can be freely and instantaneously adjusted to any value or that . . . an adjustment process does take place [;] but the level of population at any time is adjusted relative to the capital movements and the process does not take into account the realities of costs and restrictions on population movements. The "optimum" level of population at any time may have no relevance at all to a level that can be attained.

These classical-neoclassical conclusions may be illustrated by the use of a variant of a graph developed by Eltis [30].

In Figure 2, the horizontal axis shows the rate of population growth while the vertical axis shows the real wage rate. The S_s schedule illustrates the hypothesized 'classical' supply curve of population. At W_s , the rate of population growth (n) is zero. Its rate of growth increases whenever W_1 exceeds W_s along the S_s schedule. The DD curve illustrates the society's demand curve for population. It shows the rate of growth of population that the economy can support, and

This depends on the rate of growth of circulating capital (i.e. the rate of growth of the 'wage fund'), and this will grow more rapidly in given technical conditions where wages are low so that profits (which are largely reinvested) are high, than where wages are high, leaving little surplus for accumulation. [30, p. 203]

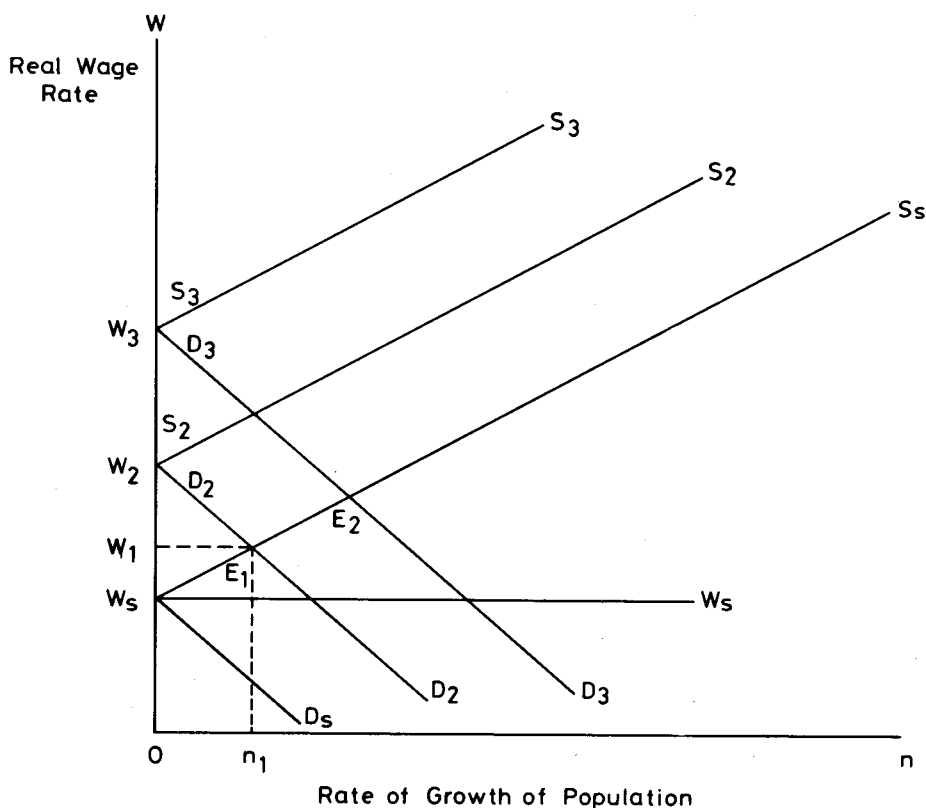


Figure 2*

*Based on Eltis [30, p. 203].

Its negative slope indicates that a country will only accumulate enough capital to support faster population growth at a lower real wage.

At E_1 there is a rate of growth of population n_1 and real wage rate W_1 that are compatible with a rate of net capital accumulation and an implied profit rate. But W_1 exceeds the subsistent wage W_s . The question is whether W_1 is a stable economic-demographic equilibrium? Various scenarios may be examined by the use of Figure 2. In a Malthusian-Ricardian world D_2 will shift to D_s at W_s the subsistent wage, the only long-term equilibrium perceived by Malthus or Ricardo. In an optimistic neo-Malthusian world D_2 will shift outwards to D_3 through new inventions and advanced technology. In a "population push" scenario technological advance is a function of the rate of population growth itself [17; 18]. However, it seems that this latter scenario attempts to apply long-term historical experience to the recent experience of developing countries with large exogenous shocks that took place in relatively very short periods of time. It seems to compress a thousand-year adjustment process into a 0.025 scale! Finally, according to the neo-Malthusian scenario S_g will shift to S_2 where W_2 exceeds W_s , implying a rising subsistence level, either through increasing labour bargaining power or a more complex dynamic process of economic-demographic household behaviour that includes reproduction as an argument in an individual welfare function that is being maximized while the level of "subsistent aspiration" is rising. One debatable policy implication is that total welfare may be maximized if demographic behaviour is left to adjust itself freely in response to market forces.

Logically, such discussion leads to the study of the micro economic foundation of demographic behaviour. The literature and debate on the neoclassical theory of household fertility behaviour are known and need no elaboration. It attempts to show, through the calculus of maximizing behaviour based on individual self-interest, that fertility behaviour is responsive to changes in the relative costs and benefits associated with different reproductive strategies. The paradigm has been criticized on various grounds [81; 85]. The debate, however, has advanced knowledge about the complexity of the reproductive structure and its time dimension. But, in the analysis, the focus is on individual action. It has isolated individual behaviour from the long-term dynamics of economic growth and social class formation. It is assumed that the worker can improve his/her situation regardless of the pattern of class development and without appeal to class solidarity — a questionable proposition. It is a development paradigm that focuses its attention on the micro elements of society, whether national or international, as being "responsible for" their current undesirable status and as being "able to change" such environment through individual actions alone. In this neoclassical paradigm, group interactions, whether intra- or inter-country, are basically ignored. This brings us to an alternative viewpoint: a global view of development and underdevelopment.

c. A World-System Vision

Development studies tend to regard underdevelopment as a social “problem” – a syndrome in which Third World countries suffer from a disease called underdevelopment or lack of modernity. The less developed countries should consider the industrial nations as their model of a healthy body and follow their path in terms of either specific processes or historical stages. But the disease is diagnosed as self-inflicted and localized inside the patient’s body. Research and policy analysis guided by this modernization syndrome concentrates on problems internal to Third World countries. Linkage mechanisms between the developing and the developed nations are outside the paradigm and are not examined. The World-System vision, on the other hand, treats development as part of integral totality. It must be emphasized that the World-System paradigm is not a uniform entity. There are differences of opinion with regard to conceptualization and empirical methods.

As a historical note, the World-System view may be regarded as starting with the insight of Lenin [49] into world imperialism and Luxemburg’s analysis of accumulation on a world scale [50].⁹ In her analysis, she was able to show that accumulation and market expansion in the industrial countries take place simultaneously with the continuation of primitive accumulation in backward areas. Capitalism does not only coexist with different economic structures but, being the hegemonic mode of production, relies on less developed periphery structures, those that are located in industrial countries (the urban working class) and in the less developed ones (peasant labour) for the extraction of surplus value.

Application to the Latin American case by Prebisch [60] and associates includes some specification weaknesses and so does the remedial attempt by Frank [35]. For example, Prebisch and associates of the Economic Commission of Latin America (ECLA) fail to consider the rise of monopoly capital that, in the face of technical innovation, is able to simultaneously displace labour at the centre and also permit a partial transfer of productivity rises among those not displaced. Alternatively, Frank viewed the system as a single hierarchical vertical chain of exploitation that extends the capitalist link in a descending order from the capitalist world in the centre, to the national level, the metropolises, all the way to the small peasants and the landless labourers; see Laclau [48], cited in [59]. The validity of this linear conceptualization of the world has been questioned on theoretical and empirical grounds.

However, Frank’s vision of a hierarchical continuum of exploitation cannot be completely ignored. For example, in pre-Nasser rural Egypt, with cotton as the main cash crop, tenants squeezed the landless workers (*taraheel*) below subsistence wages;

⁹ As Blaug [16, pp. 259-60] observes, “if Marxism is alive today, it is so more by virtue of the Marxist theory of imperialism than of any other aspect of Marxian Economics”. However, Blaug (pp. 260-64) provides a critical examination of the empirical foundation of Lenin’s proposition.

landlords, in their turn, squeezed as much surplus as they could from tenants; landlords, seeking cash, made future cotton sales through financial intermediators (mostly foreign), far below international market prices, and, finally, at the core centre, the latter group was squeezed by industrialists and traders in England.

In both visions, however, the process of reproduction of the labour force in the periphery is not adequately explained [59, p. 8].

At present there has been a return, beyond the conceptualization of Lenin and Luxemburg, to the original Marx. This is being accomplished through the elucidation by A. Emmanuel (1972) and S. Amin [8] of a World System based on the principle of Unequal Exchange.¹⁰

In general, the *World System* paradigm views the world economy as one of a dual dialectic [26]: the dialectic between production and circulation internal to each sector of the system, and the dialectic between centre and periphery.¹¹

Unequal exchange implies that surplus value, after allowing for different capital investment or differential productivity, flows from peripheral production into the core because of different levels of remuneration to labour. S. Amin estimated that the value of this hidden transfer was about US \$ 22 billion in 1966 [8, p. 144], almost twice the amount of "aid" and the private capital that the periphery received.

Based on World-System analysis, what is the population mechanism underlying this conceptual framework? This question was put more clearly by Wallerstein as follows:

(What are the) mechanisms which permit the reduction of money wages in peripheral activities below the level minimally required for the reproduction of the labour-force and yet maintain the labour force in existence? [97, p. 10]

Indeed, according to this paradigm, the continuing existence of a labour surplus in the periphery is a necessary condition for depressing wage rates and, accordingly, perpetuating the system of unequal exchange. Samir Amin elaborates the dynamic nature of accumulation on a world-wide scale as follows:

... the system tends to reproduce *unceasingly* the reserve army which it needs to ensure the profitability of capital. This fundamental law of accumulation

¹⁰For a brief survey of the issues see Portes and Walton [59], especially the first and last chapters. A detailed review should include Bukharin [21; 22], Lenin [49], Preobrazhensky [63], Luxemburg [50], Prebisch [60; 61; 62], Frank [35], Hobson [41], Wallerstein [97], and Amin [6; 8]. And for critique: Brenner [20], O'Brien [57], Laclau [48], Bach [14] Foster-Carter [34], Gereffi [38], Blaug [16] and P. Samuelson (1976).

¹¹Portes and Walton [59, p. 68].

community bondages are weaker, it disposes more freely of redundancy. As the world society becomes more “technicalized”, where “technique” controls “technology”, the criterion of efficiency takes supreme status – disposing of redundancy becomes more cruel.¹³

Let us elaborate. First we briefly review current efforts to develop an Arab population development paradigm. Then we outline and evaluate the current Arab – international system of production and exchange from the viewpoint of a world-wide system paradigm.

b. A Note on Arab Population-Development Paradigm

Is there an “Arab Population Development Paradigm” that differs from those reviewed above? This is a difficult question to answer. There has been a large and growing literature on Arab development styles by Arab economists and social scientists but no dominant “Arab” development philosophy similar, for example, to the “Latin American School” has emerged. At the cost of under-representation (and probably over-simplification) we will focus on four recent contributions. The first, by G. Amin [4], is an attempt at classification and evaluation of the various development paradigms reflecting the planning experience in the Arab world. The second is a collection of articles on Arab development [24]. It includes contributions on the subject published in the *Al-Mustaqbal Al-Arabi* in 1983-84, reviewed by Abdel-Khalik [2]. The third is an interview by S. Amin [6] on Independent Development and the Third World. The recent works of R. Zaki [106] and N. Fergani [33] on the population problems with emphasis on Arab development constitute the fourth contribution.

Galal Amin [4] argues that the development experience in the Arab world has been a result of the dynamic interaction of three schools of thought: laical liberalism, laical Marxism and traditionalism. Traditionals, dominated by the Islamic

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“Some attention might be given to *denying* increases in land allotment for higher order births. *Care* will have to be taken to *achieve* such measures on a per-couple, not a per-household basis, peasants throughout history *have been quite clever* about “dividing” complex households to *make* their work units small to *tax-collectors!*” (emphasis added).

The concern is clearly with efficiency rather than equity and the possibility of a harmonious inter-class solution does not exist! Is Marx right after all? Is Capitalism with its class struggle a necessary stage before the attaining of true socialism?

Although not evident which direction the technological society is leading us, i.e. *Panglossian* or *demise*, it is certain that techniques’ relentless march for efficiency is imposing more standardization in all facets of human affairs – and the process is cumulative. If the road leads to collapse, it will be ironic that man, being a unique creature – since he alone creates sanctuary for his own victims (witness the sanctuaries maintained for the endangered species), will not find such help when needed either from self or from other surviving species.

increased occupational differentiation that reduces the rigidity of social stratification, or an improved system of information flow that reduces the cost of mobility. Other changes, depending on the style of development, may have been engineered by the corporate authority as, for example, attempts to reduce inequity and/or enhance the process of social mobility.

This process of change creates new roles, eliminates some established ones and reduces the relative importance of others by establishing new rules that govern their terms of exchange. The result is tension and conflict between and within groups. It is the dynamics of this conflict, the extent of its universality and the path society takes for its resolution (i.e. its influence on the trade-offs among individual needs, group needs and the more general social needs) that produce different patterns of demographic change.

It is evident that generalization about demographic change should be guarded and context-specific; see also [80; 83].

However, a key point to consider is this: if reproductive behaviour could be modified by public policy, and the experience of the last quarter-century illustrates the viability of such possibility [25; 53], then why is it that the World-System framework ignored the possibility of such social engineering in the analysis? For example, it did not examine the implication of a potential dramatic decline in the peripheral rate of population growth (i.e. labour force and reserve army) to the behavioural dynamics of the system of accumulation on a world-wide scale and, accordingly, to the welfare of the periphery. This crucial question needs careful analysis.¹² Similarly, the implication of the apparent secular decline in the rate of the population growth of the capitalist group of countries needs equal attention. For example, given the current declining fertility trends, it is estimated that the size of the annual immigration flow required to stabilize the population size in the Western industrial countries will be in the order of 2 – 3 million people by the dawn of the twenty-first century [19]. It seems that the dualism between global theorizing and intermediate sub-process analysis has created a conceptual gap yet to be bridged in the development literature.

To summarize, population plays an important role in the various development paradigms reviewed in this section. Its growth is important for capital accumulation in the capitalistic system. In the Marxist system, its differential growth by social classes provides the bases for exploitation as well as for the ultimate demise of the capitalistic system and for paving the way for socialism. The paradigm of unequal

¹² Shifting the responsibility for the reproduction of the peripheral labour force from rural subsistence enclaves to urban unemployed enclaves, as suggested by some writers, does not solve the logical or the empirical contradictions.

exchange expands this last proposition to a world-wide scale. However, the determinants and consequences of population dynamics are not critically examined in either case. The neoclassical analysis attempts to develop a behavioural theory of reproduction, but, being individualistic in scope, it divorces itself from the very context of development as a social issue.

However, regardless of whether it is the classical, Marxist, or the Unequal Exchange system, an important conclusion (partly an outgrowth of J.S. Mill's insight discussed above) emerges:

Changes in the structure and growth of population are assumed to have causal linkage to the dynamics of production, accumulation, and distribution. There is a delicate balance between the reproduction of population and that of capital. The system of distribution of the social product determines the stability of the system. Population change is an integral part of the socio-economic system; it does not act in a vacuum.

This is an essential point to keep in mind when we examine, in the following section, the applicability of the various paradigms to the developing countries' situation, with the Arab countries as a case study.

4. DEVELOPMENT PARADIGMS: HOW APPLICABLE TO THE ARAB CASE?

a. The Setting

The current phase of population and economic change in the Arab world is unique in terms of the magnitude of change in its parameters, but is not unexpected. The general demographic-economic characteristics of the system are rather simple. The story is familiar. Our purpose is not to document events and trends but rather to evaluate the applicability of the various development paradigms in explaining and predicting the emerging general patterns.

The general outline of the demographic picture has been presented earlier. The Arab population is one of the fastest growing in the world and because of its young age structure has a long-term built-in growth momentum. Arab demography follows the familiar transitions of the less developed countries that experienced colonial domination. Our contention is that this transition is part and parcel of the technological development of capitalism and its implied international exchange system. At the turn of the century, investment in public health measures started slowly and was limited to ensuring the adequate reproduction of the work force involved in the production of the export primary goods needed to fuel the engine of the industrial revolution (e.g. cotton in Egypt and the Sudan), and in the civil and police administration required for ensuring an efficient flow of these goods and safety of the

colonial presence. Countries or areas outside this international exchange system did not have this limited social benefit! A global conscience for an international health policy had not been born at the time. However, as evident from our discussion, exogenous health improvement that occurs in isolation from an integrated economic-demographic development policy is not a "sufficient" condition for increasing "net" social welfare. Under such conditions, public health could turn in the longer term into public hazard!

As "direct" colonialism declined, interest in economic development among the newly independent nations became a primary focus, at both national and international levels. In many countries, "average" health status improved. Among the Arab countries, the decline in mortality became more dramatic after World War II and accelerated, especially in the oil-exporting countries, after the oil boom. Fertility, on the other hand, did not show any significant departure from its high level up to the present [104]. Accordingly, the rate of population growth accelerated. This demographic picture raises a pivotal question: is the accelerated reproduction of the potential labour force in the Arab world warranted by the pace and structure of capital accumulation and by the structure of the production relation in the region? Our answer is in the negative. We even assert that within the present socio-political context, the long-term demographic trends, implied in the current structure and parameters of the population could have dire consequences for the countries of the region as a whole, whether they be importers or exporters of labour/capital. How could we reach such conclusions in the face of what appeared to be clear contradictory evidence as illustrated, for example, by

- (i) a huge inflow of expatriate non-Arab labour;
- (ii) apparent underpopulation as illustrated by such crude measures as density; or
- (iii) a large financial capital outflow that finds no adequate internal outlet.

The combination of these three elements may constitute, on the basis of "Says" prediction, the possibility of a process of self-sustained growth in the area, since the supply of national labour (replacing expatriates over time) may create its own demand, especially if low density implies the presence of unutilized natural resources and of the potential creation of a large market through an efficient accumulation of capital financed by oil revenue. However, on close examination, the viability of such argument depends on the presence of specific internal and external conditions that may not materialize within the present system of international capital accumulation and its underlying dynamics of the world demographic transition. Our main argument depends on a modified classical-Marxist dictum:

Capital has no feelings for any negative consequences resulting from disequilibrium in human reproduction. It only reproduces what it needs for its own reproduction and accumulation. On a world-wide scale, where national or

community bondages are weaker, it disposes more freely of redundancy. As the world society becomes more “technicalized”, where “technique” controls “technology”, the criterion of efficiency takes supreme status – disposing of redundancy becomes more cruel.¹³

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movement, regained purpose after the collapse of the Nasserist experience — by blaming its collapse on the system's failure to acknowledge religion as the foundation and blueprint for inspiring and specifying development strategies. The negative economic and social side-effects of the Sadat "open policy" and the spectacular success of the Iranian Islamic revolution in ousting a strong regime backed by the strongest of super-powers reinforced the traditional stance, defining the development problem as a lack of purpose. In their view, societal problems have solutions in Islamic principles and not in imported ideologies.

Laical liberalism also gained ground after Nasser and Sadat. The real problem of underdevelopment is seen as being a lack of scientific development and the application of scientific methods and techniques not only in production and organization, but also in governing and in personal relations. They view independent development as unrealistic in a highly interdependent world. They adhere to the principle of the market, competition, and a small government. To a large extent, laical liberalism may be labelled neoclassical.

Laical Marxists, according to the typology of G. Amin [4], are equally enthusiastic about the power of science and technology but see the international system of dependency and unequal exchange as major obstacles to development. They also differ from the laical liberals in stressing the need for restructuring the society as a prerequisite of ensuring long-term equity even if it means a slower pace of development.

With the exception of the traditionals, the liberals (neoclassicals) and the Marxists do not present new paradigms. It is curious that the traditional paradigm was not represented in that important collection of articles on *Arab Development: Present and Potential* [24].¹⁴ What is included has been categorized by Abdel-Khalik [2] as belonging to various themes of Marxism. Both Abdel-Khalik [4] and Fergani [33] argue that no dominant Arab development paradigm exists at present. We may also add that the demographic content in the theoretical analysis presented in the book is limited. In his introduction to the volume, A. Hossain [42] provided a deep and penetrating assessment of the theoretical contributions but does not dwell on the absence of population-development analysis in the book. We can safely conclude that in the discussions of the six theoretical contributions there is no attempt made to provide the conceptual basis for a unified population and development policy.

In a stimulating interview, S. Amin [6] examines development in the Arab world from his familiar world-wide Unequal Exchange System. The solution, similar to that in his other work [7], is to focus on the agricultural sector, fully utilize the potential labour force, increase demand through more equity (wage equalization),

¹⁴ The volume includes, aside from the penetrating review by Adel Hossain, contributions by N. Fergani, Y. Sayegh, A. Al-Kawari, M. Masoud, M.A. Saeed, N. Ramses, and I.S. Abdallah among others.

and in the initial stage make industry subordinate to agricultural development, i.e. produce what is required to enhance agricultural productivity. It is reminiscent of the original Chinese model. The discussion provides a general outline. Details, especially as to how this development vision relates to the particular nature of population dynamics and labour mobility in the region, are left out at this stage.

The book by R. Zaki is an ambitious attempt to provide such a vision. It provides a well-researched historical viewpoint on population in economic thought. Most of it, however, is an attack on the neo-Malthusian framework, repeating and reinforcing well-known reservations. Zaki's main thesis (p. 455) is that the present population problem is not a Malthusian race between population growth and the development of resources but rather a race between high population growth and a stagnant socio-economic structure that is unable to ignite the engine for true development. We certainly agree with the diagnosis but we do not understand the rationale for excluding controlling of population change as a policy parameter, especially if, as our previous analysis of the various paradigms illustrates, the "stagnant" socio-economic structure is a function of population growth! Actually the result of Zaki's contribution is a set of standard propositions calling for liberating the economy, realizing independent developments, self-reliance and more equity based on well-intentioned social criteria. The analysis, however, falls far short of integrating population dynamics with development in a systematic framework. The same reservations apply to Fergani's discussion of population and development in the Arab world [33].¹⁵ One of the possible sources of confusion is mixing of short-term with long-term changes in population, and, accordingly, their determinants and consequences [81].

c. The Anatomy of Arab Economic-Demographic Development

The Arab region has witnessed dramatic socio-economic and political shocks during the past three decades that are unparalleled, in terms of size or intensity, by other historical events that took place in the region and that influenced significantly the structural pattern of production and consumption. On an abstract level, the present experience of the Arab region provides a classic study or a test-lab to examine the applicability of many assertions and conclusions derived from the various development paradigms discussed earlier. Indeed, the dynamics and the relations involved are very complex. But, given our economic-demographic focus, we abstract ourselves from many of the fine, albeit important, details.

¹⁵ Fergani [32] adopts the view that the assessment of the impact of population on development can only be done within a socio-economic and historical context. He also asserts that theoretical frameworks that link population and development are not applicable for the Third World situation (pp. 78-79). However, he takes a strong policy stance.

To facilitate the discussion, the complex relations will be reduced to three main actors. The *first* represents the source of demand for oil and supplier of industrial goods and technology (Industria). The *second* is the owner of the primary resource (oil) required for industrial production (Resourcia). The *third* has a rate of population growth (supply) that is faster than the demand for labour generated by its present local condition of production and capital accumulation (Subsistencia). Figure 3 provides a schematic presentation of the operation of this simplified system. As mentioned earlier, the story is a familiar one and needs no detailed elaboration or documentation. For simplicity, only Arab and industrial countries are identified in Figure 3. The implication to other developing countries can be inferred. The basic data discussed in the text are presented in Table 2. The Arab countries are divided into two main groups: *Resourcia* and *Subsistencia*¹⁶. The third group represents the industrial nations (the core) and labelled *Industria*. There are three direct pairs of relations: (a) *Resourcia-Industria*, (b) *Subsistencia-Resourcia*, and (c) *Subsistencia-Industria*. Each relation has its own past history, present short-term dynamics, and future long-term paths. The first two relations will be examined in turn, first from the viewpoint of each group in isolation, then as an integrated Arab community within a world-wide system vision. Discussion of the third relation will be incorporated in the discussion of the second relation and in the concluding remarks.

a. *Resourcia* – *Industria*

The past experience of this relation is wide-ranging. It takes its roots from the reminiscence of the Ottoman Empire and the French colonization of Algeria to that of the Italian in Libya and the British in Iraq and Arabia. The colonial past is important in understanding the present pattern of development. But the present is largely dominated and shaped by oil. The shape of recent ten-year history of *Resourcia's* changing fortunes may be summarized as follows:

¹⁶ *Resourcia* includes the major oil-exporting financial-capital-surplus countries (Algeria, Iraq, Qatar, Libya, Saudi Arabia, Kuwait, UAE, Bahrain and Oman). *Subsistencia* includes the rest of the Arab countries, mainly the labour-surplus, capital-deficit ones. This classification follows that of the Unified Arab Economic Report, called the Report henceforth [9], also adopted by Sayegh [71; 72]. We put group one and two of the Report together under *Resourcia* and added to them Bahrain and Oman. Although the classification of the Report is more detailed and refined, it will complicate the discussion without affecting its general conclusions. For example, it is arguable that some countries may be misclassified in our schematic presentation. Morocco or Tunisia has little labour migration to the Gulf. Its link is mainly to Europe, especially France. Or that Iraq and Algeria have a demographic and natural resource base that is different from the rest of *Resourcia*. However, the fact that there is an overlap seems to reinforce our main thesis regarding the long-term dynamic nature of the system. Using a Physical Quality of Life Index (PQLI) that includes various indicators of social and economic development, Riad Tabbarah [90] arrives at a different classification. Tabbarah's work, although important and relevant for social planning, is not relevant for our present purpose.

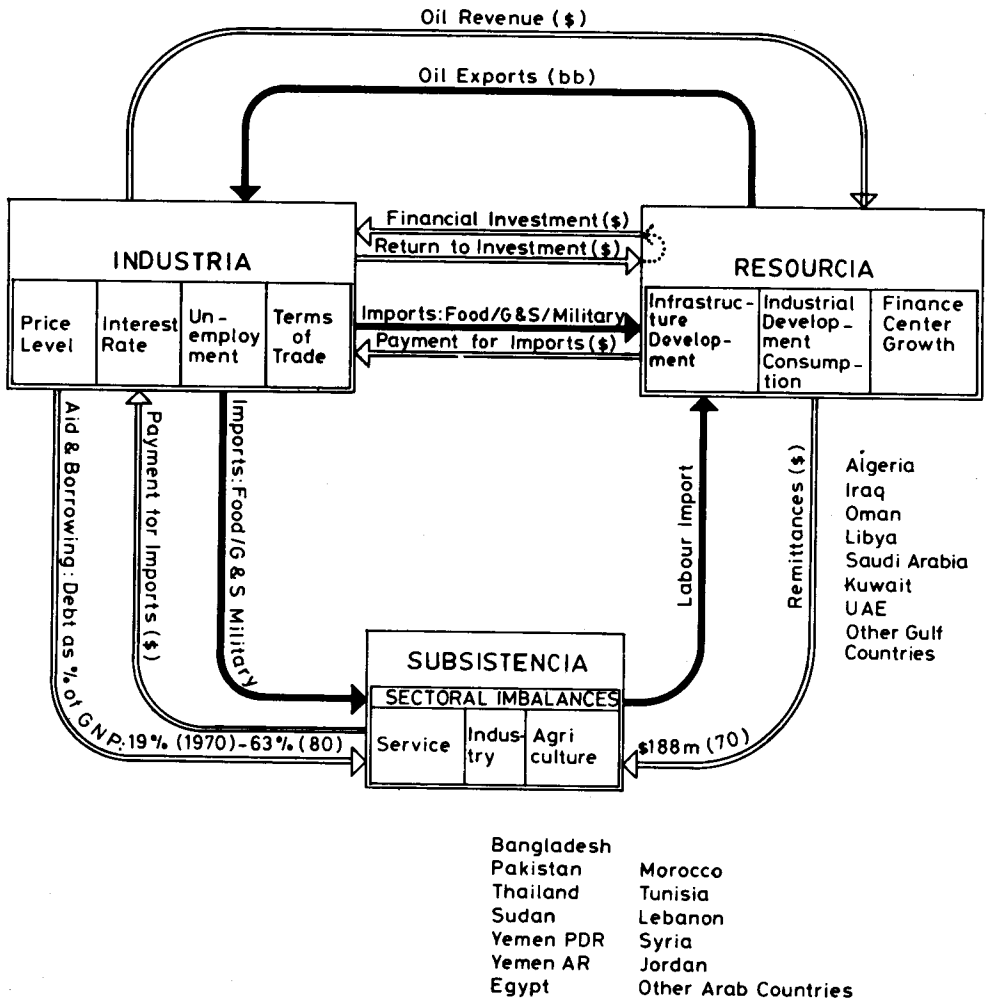


Figure 3. Socio-Demographic Transitions: A New International Revenue System (NIRS)

Table 2
Selected Economic Indicators
Arab World Selected South-East Asian Countries 1970-82*
(with Percentages)

Country	VA Agriculture (m\$)			Cereal Imports (000 tons)			Food Aid (000 tons)			Per Capita Income (\$)	Average Growth (%)	Current Account Balance (m\$)		Merchandise Balance (m\$)	Remittance (m\$)	Month of Import Reserve (month)		External Public Debt. % of GNP				
	'70	'82	%	'74	'82	%	'74-5	'81-2	%			'70	'82			1982	'70		'82	1982	'70	'82
Bangladesh	9475	58	11027	53	1719	56	1375	74	2130	77	1076	74	140	3	—	(632)	(1531)	—	329	.9	—	39
Pakistan	3258	20	4406	20	1274	41	361	19	619	23	368	25	380	2.8	(667)	(811)	(2993)	—	2580	3.0	31	32
Thailand	3591	22	5837	27	97	3	133	7	0	5	1	740	4.5	(250)	(1144)	(1603)	—	616	3.0	5	17	
Sudan	1367	19	2127	23	125	2	611	5	50	5	185	7	440	(0.4)	(42)	(248)	(786)	—	131	0.2	16	48
Yemen PDR	—	—	—	—	149	2	271	3	38	4	25	.9	470	6.4	(4)	(221)	(613)	60	411	3.4	—	80
Yemen AR	221	3	401	4	158	3	560	4	0	13	.5	500	5.1	—	(610)	(1943)	—	1118	2.9	—	36	
Egypt	2683	38	3878	42	3877	60	6703	53	610	66	1952	69	690	3.6	(148)	(2216)	(5958)	29	2074	1.9	24	53
Morocco	1725	24	1836	20	891	14	1913	15	75	8	465	16.4	870	2.6	(124)	(1876)	(2256)	63	849	1.1	18	61
Tunisia	480	7	816	9	307	5	946	8	1	.1	96	3.4	1390	4.7	(53)	(657)	(1334)	29	372	2.1	38	42
Lebanon	..	..	..	..	354	6	529	4	21	2	11	.4	(1500)	—	—	(2644)	—	—	..	..	4	..
Syria	595	8	..	..	339	5	426	3	47	5	8	.3	1680	4.0	(69)	(493)	(1989)	7	140	1.5	13	15
Jordan	92	1	132	2.0	171	3	668	5	63	7	73	3	1690	6.9	(20)	(336)	(2488)	—	1084	3.8	23	43
Algeria	952	36	1375	57	1816	45	3831	28	54	5	2350	3.2	(125)	85	(125)	85	1596	211	447	4.6	19	32
Iraq	1172	45	..	..	870	21	2510	18	1	..	(6000)	—	105	—	—	105	(9972)	—	—	9	—	—
Oman	..	..	..	..	52	1	217	2	—	—	6090	7.4	—	358	—	—	1739	—	43	4.8	—	12
Libya	126	5	388	16	612	15	849	6	—	—	8510	4.1	645	(2977)	—	—	977	—	—	6.9	—	—
Saudi Arabia	331	13	616	26	482	12	5584	41	—	—	16000	7.5	71	(45125)	—	—	38469	—	—	5.9	—	—
Kuwait	20	1	30	1	101	3	439	3	—	—	19870	(0.1)	—	5786	—	—	8519	—	—	7.5	—	—
U.A.E.	..	..	..	..	132	3	282	2	—	—	23770	(0.7)	—	—	—	—	7464	—	—	—	—	—

Source: World Development Report, 1984, IBRD

.. Not available

* Selected countries

1. Resourcia exports oil to Industria.
2. Oil revenue exceeds Resourcia's initial capacity to invest. Between 1973 and 1983, Arab oil-exporting countries earned a total of approximately US\$ 1,347 billion in which Saudi Arabia's share was 28 percent and Kuwait's was 9 percent; see Editorial in [87].
3. Resourcia embarks on a spectacular programme of building physical and human infrastructures.
4. Excess revenue is ploughed back to Industria.
5. Resourcia has limited manpower relative to the pace of its investment expenditure.
6. Resourcia opens its door to expatriate labour.
7. Resourcia (with the exception of Iraq) does not adopt naturalization as an option for reducing the "transitional" shortage of its national labour supply.
8. Resourcia adopts a strong pro-natalist policy.
9. Resourcia transfers part of its new wealth in terms of producer and consumer subsidies to its nationals for social and political reasons, and, with an open door policy for admitting expatriates from all nationalities, new high levels of per capita consumption in general, and conspicuous consumption in particular, take hold in a very short period.
10. Resourcia gets committed to an expensive arms purchase programme and to financing local wars and uprisings. According to some estimates Saudi Arabia's annual military expenditure alone increased from U.S. \$ 7 billion to U.S. \$ 22 billion between 1976 and 1981 and has remained at that high level since; see Editorial in [87].
11. Resourcia's expenditure plans are based initially on optimistic "expectations" of trends in oil demand and prices.
12. Prices and volumes of Resourcia's imports increase relative to the value of oil exports "realized" (short of "expectations"). It is estimated that the import price for OPEC increased by 350 percent between 1973 and 1977.
13. Resourcia, being committed to OPEC production, ambitious development plans, and social welfare expenditures, runs a sizeable deficit. In the first quarter of 1985 Resourcia's trade deficit in relation to USA alone increased by 23 percent from the 1984 level of \$ 1.25 billion [54(b), p. 5]. Since the early '80s Resourcia's position was reversed from one of a net buyer to that of a just seller of equities and securities in the US market. In 1984 Resourcia was a net seller of \$ 2 billion of U.S. equities, corporate bonds and treasuries – a 60-percent increase over the 1983 level [54(b), p. 21]. The dramatic change in the economic position of Saudi Arabia – the giant of OPEC – is illustrative. At present, the Saudi budget deficit is second only to that of the USA; its oil revenue fell by 60 percent between 1981 and 1984, its foreign exchange reserve fell by 40 percent between 1983 and 1984, and it is

estimated that foreign workers left the Kingdom at the rate of 50,000 a month during 1984 [28, p. 55].

14. *Resourcia* has to evaluate its stance on OPEC oil policy, on foreign investment criteria, on international assistance programmes, on its national subsidy and welfare policies, and on expatriate labour policy.

The response of *Industria* to the initial increase in the price of oil has been an attempt to maintain a tolerable balance between negative short-term consequences such as a rise in unemployment rates, in balance-of-trade deficits, or in minimizing negative structural consequences of recycling a substantial oil revenue that is flowing back from *Resourcia*, on the one hand, and the longer-term central issue of coping with the technical, institutional, and other structural adjustments necessary for maintaining the "centre's" dominance over the "periphery", on the other. The set of policy tools used by *Industria*, given the intra-*Industria* contradiction of competition on market shares, includes the direct and indirect manipulation of the structure of interest rates, of exchange rates, and of domestic inflation rates, as illustrated schematically in Figure 3. However, the dynamic nature of these issues will be taken as datum and not examined in the present analysis, since they cover a wide spectrum of issues that go beyond the scope of the present inquiry. Our main focus is limited to understanding the economic-demographic behavioural response of *Resourcia* and *Subsistencia* to the present phase of the technological-demographic transition.

What does the future hold for *Resourcia*? Seeking the future through a looking glass could be misleading. We may only see our own images, i.e. preconceived ideas and ideologies. This is more a reminder to the present authors than a reflection on the state of the art. The future results from interaction among the forces of accumulated experience, external exogenous factors (whether by design or random), and the conscious effort within *Resourcia* to shape its future. Let us consider these issues within the context of the various paradigms.

To many futurists, oil is the main actor. Its course provides the main "course" for future scenarios. As Mabro [51, p. 55–58] and Sayegh [71], have shown, there is now a change from a sellers' to a buyers' market. According to many scholars, during its prime, oil has been beneficial, not only in igniting economic activities in *Resourcia* but also as a weapon in the hands of the South for the North-South negotiations [15; 78, p. 255]. This last view was also advocated by S. Amin [6] – a champion of the Unequal Exchange paradigm. It is ironic, since "the weapon" seems to have another edge: integrating *Resourcia* into the international system of Unequal Exchange and cementing its "dependency"! However, the relevance of a sellers' or a buyers' market to the analysis of long-run dynamics, especially in the context of *Resourcia* development, is not evident to us.

Oil has always enjoyed a buyers' market. Its demand stems from the technological needs of *Industria*. Capital needs it for its own reproduction. This is the

long-run view of the socio-demographic transition that has taken place since the beginning of the industrial revolution as mentioned earlier in the paper. The events of the Seventies are short-term repercussions. The Eighties return to the long-term course. There are important insights that arise from this last view:

1. Oil production is a highly capital-intensive activity. The idea of a “reserve army” of labour or the “reproduction” of capital through labour, or the mutual benefit, though “unequal”, between core and periphery becomes irrelevant in elucidating the Industria-Resourcia relationship.
2. The dramatic increase in revenue supports the institution of small, otherwise non-viable states within Resourcia.
3. Maintaining high oil prices will continue until Industria adjusts itself to the diffusion of new technologies.¹⁷ In 1975, H. Kissinger was reported as

presenting, in Europe, a plan for an investment programme of one thousand billion dollars for the development of new sources of energy . . . Dr Kissinger has also been very particularly adamant – that the price of petroleum had to rise and remain high in order to make it profitable to develop these alternative sources of energy [36, p. 854].

In 1979, there was another price hike. In 1980 the Iraq-Iran war started. One of its outcomes is a reduction in oil supplies. In that respect, M.A. Adelman indicates that

“Another cartel resource is the instability and violence of some members . . . The Iran-Iraq war has been a piece of great good luck; the next fighting may be due more to good management”! [3, p. 20].

4. Human resource development is a long-run commitment. The fast pace of building the necessary infrastructures implied in the socio-economic plans and the large inflow of expatriate labour required for that phase of economic activities have generated confusing signals between short-term and long-term needs. It has also created a “segmented” labour market that violates basic neoclassical assumptions [86]. In essence the “Dutch Disease” that is being blamed for the decline of non-oil traded goods in the manufacturing sector in the new oil-exporting industrial countries such as the Netherlands and England – see, for example, [99] and [69] – might be responsible for creating serious imbalances in the human resource sector in the Arab world. The Dutch Disease may be labelled the Human Resource Disease in

¹⁷ Maintaining high oil prices is primarily directed towards consumers and not producers. This can be achieved for example through a reduction of the price of crude and a retail tax on gasoline.

the present context of the Arab world. There is a dire need for a full analysis of the relationships between policies that provide subsidies to producers, to education, to housing and to the importation of labour on the one hand, and the attaining of desired social objectives on the other.¹⁸

5. In the midst of the expenditure euphoria generated by the expanding oil revenue, a fundamental truth seems to have been forgotten: the dramatic expansion of the native population could not have been supported without the oil revenue. Without that revenue, population growth of the native population is excessive. The vital question to be addressed is: Do current efforts provide the base for a viable employment of the existing and growing labour supply? As it stands, the demand for expatriate labour is a consumption demand; it will become a production demand if the answer to the above question is in the affirmative.

6. Finally, the long-term negative impact of the emerging pattern of consumption behaviour needs no emphasis. The intergenerational implication of this behaviour is yet to be assessed. What will be the mechanism of public and private adjustment to a decline in oil revenue and at what cost? These are questions that need inclusion in the current research agenda of future Arab development.

These last two points have serious implication for the development case of Subsistencia.

b. Subsistencia – Resourcia

The literature on the development experience of the Subsistencia group is substantial.¹⁹ Our focus is limited to highlighting a few issues in the recent Subsistencia-Resourcia interaction. For many analysts, inter-regional labour migration is the main focus.²⁰ The emphasis has been on the role of remittances, the social and

¹⁸For example, housing subsidies may discourage labour mobility. So will import of labour in critical skills that may depress relative wages and reduce incentives for training and occupational mobility for the national labour. Also educational incentives that do not discriminate between short- and long-term skill requirements create the wrong signals for individual choices and create a divergence between private and social objectives, especially when public sector employment is perceived as a major resort to national employment. (For an analysis of Saudi Arabia case, see [86].)

¹⁹The recent growth of Literature, Conferences or Symposiums on the development experience of the non-oil Arab countries (Subsistencia) has been exponential. For recent global assessment see the Arab Planning Institute [10] and I.S. Abdallah [1; also in 24] and the references cited therein.

²⁰The literature on international migration to the Gulf and oil countries (Resourcia) is substantial. For recent contributions and references see [86], Jalal-Eddine [45; 46] or Fergani [32]. For a recent assessment of the Egyptian case see Adel Hossain [43, Vol. 2, pp. 560–625]. In general, the important economic consequences of emigration to the labour-exporting countries relate to the effect of the flow of workers' remittances, to its influence on employment, its effect on the structure of the labour market, on income distribution, on urban growth, and on fertility.

political impact of Arab versus non-Arab expatriate labour in the receiving countries, on the sectoral imbalances created in Subsistencia as a result of selective immigration, and on civil rights issues. As indicated in Figure 3, the migration flow (and its remittance counter-flow) has been substantial. This is evident in Table 2 in the rise of unrequited transfers to Egypt from abroad, from 29 million in 1970 to 2,074 million in 1982, or expressed as a percentage of merchandise exports, from 63.9 percent in 1973 to 72.5 percent in 1980 [44]. For Syria, official unrequited transfers went up from 7 million in 1970 to 140 million in 1982, or from 53.5 percent of merchandise exports in 1974 to 72.0 percent in 1980. Other Subsistencia countries also show a similar increase in unrequited transfers. We argued above that its occurrence has been an outcome of the specific resource base characteristic of Resourcia and the demand for oil generated in Industria.

Another main effect of migration from Subsistencia has to do with sectoral imbalances. Again, the story is known, although empirical evidence is not always conclusive. The dramatic increase in remittances has created an equally dramatic increase in the demand for goods and services in Subsistencia. For example, food imports increased substantially in all countries of Subsistencia between 1974 and 1982 as illustrated in Table 2. Some countries like Egypt, Sudan, Morocco and Jordan received substantial food aid as well. However, food production did not keep pace with that exogenous and sudden increase in demand. The issue has been examined extensively in the literature; see for example [100] on agriculture and development. We argued elsewhere [79; 82] that another important reason has to do with the dynamic interaction of emigration and agricultural production on the micro level. As a consequence of various factors, including emigration, the merchandise balance was negative for all countries in Subsistencia and exceeded the value of remittances by a wide margin. Subsistencia fell into the international debt circle. External public debt as a percentage of GNP increased from an average of 19 percent in 1970 to 47 percent in 1982. Indeed, there are positive elements to emigration. But whether these are short-term gains that reverse direction over time is precisely the point being made in this paper.

It must be emphasized that the sudden and external increase in the demand for labour in Subsistencia is derived from the structure of the Industria demand for oil and only conditioned by the pattern of development expenditure in Resourcia. It seems to have diffused any concern with serious long-term population-development policy that could deal squarely with the imbalances between the reproduction and accumulation of capital and labour. The fact that the reproduction and "accumulation" of population in Subsistencia have been ignited and accelerated by forces external to the pace of social change, that such forces are of short-term nature and its reversal as discussed above is inevitable, and that they need to be dealt with by simultaneously adjusting the two sides of the equation as well as the social framework to

accommodate these necessary changes, has been brushed aside. More seriously, short-term events are being perceived as permanent phenomena, as illustrated, for example, by proposals to maximize migration returns through establishment of training programmes or other means that increase the efficiency of the labour export market [75]. There is similarity here between the rejection by the Marxist philosophy of the neo-Malthusian population solution on the premise that it may provide a diversion of the long-run march for the ultimate solution, and that the acceptance by Subsistencia the short-term consequences of emigration as a temporary relief for its demographic-economic ills without regard to the longer-term negative impact.

5. CONCLUSIONS

The discussion in the paper relates to conceptual and application issues. On the conceptual level, we hope we contributed a bridge between global theorizing and intermediate process analysis. The main thesis may be summarized as revolving around the following proposition mentioned earlier:

Changes in the structure and growth of population are assumed to have causal linkage with the dynamics of production, accumulation, and distribution. There is a delicate balance between the reproduction of population and that of capital. The system of distributing the social product determines the stability of the social system.

In the Western as well as the Eastern industrial transition experiences, the balance between the demographic forces and capital accumulation was maintained, in the natural course of events, within tolerable bounds. When large diversions occurred (never as large as the present experience of the developing countries), outlets were found in the colonizations of new lands. Changes in fertility and mortality were both a negative function of the process of industrialization. They were endogenous to the system. Indeed, if they were not, the system must have had a different solution and, accordingly, a different outcome. This simple truth seems to be forgotten when applying the various paradigms.

A decline in fertility that is independent of, and achieved in the absence of, the true forces of a self-sustained process of capital accumulation in the context of an integrated social development framework, cannot be considered either a necessary or sufficient condition for development. We agree that fertility policy should be part and parcel of development strategy. But we add that the same must be true for mortality. To illustrate, most demographic-economic models incorporate a population growth equation of the Lotka type [12; 47]. The equation relates birth per unit of time, $B(t)$, to the preceding flow of births, given a survival probability parameter,

$p(t, x)$, and the probability of bearing a child, $m(t, x)$. In their analysis of optimal time paths, Arthur and McNicoll specified the equation as follows [12, p. 5]:

$$B(t) = \int_0^\omega B(t-x) p(t, x) m(t, x) \nu(t) dx; t \geq t_0$$

where

$B(t)$ is assumed given and continuous for times $t_0 - \omega \leq t < t_0$;

$p(t, x)$ is the probability that a birth at time $t-x$ survives to age x ;

$m(t, x)$ is the probability of bearing a child (assuming no fertility control) at time t if aged x ;

ω is an upper bound on the length of life; and

$\nu(t)$ is a policy factor manipulating the age-schedule of fertility $m(t, x)$. For example, $\nu(t) = 1$ implies no control, $\nu(t) < 1$ implies policy to discourage fertility.

In an optimizing framework, the optimal economic-demographic policy is derived by selecting the saving rate and the fertility control parameters that maximize *over time* a specified welfare function. For a detailed discussion of optimal accumulation paths of population and the economy within a framework that incorporates the age dimension, the reader is referred to Arthur and McNicoll [12]. Our present concern is limited to the implication of the analysis to an integrated policy of health, fertility, migration and capital accumulation. The point is that the path of the mortality function, although the opposite image of the fertility function, is outside the optimization policy control procedure. But it is precisely because of the exogenous nature of the large and accelerated mortality decline that took place in the recent experience of the developing countries that it is imperative to reduce fertility in a compatible pace. It seems that the pace of mortality decline is essential for the solution of the optimization policy exercise. On the practical side, this latter policy cannot succeed without endogenizing the two determinants of the natural growth of population, viz. mortality and fertility. But endogenizing the mortality function implies a level of "effective" demand for adequate health behaviour that is sustainable on the individual and community levels. In short, "public" health as a commodity must be "earned".

In his concluding chapter in one of the most thorough analyses of the Egyptian economy during the Sadat era, Adel Hossain [42, pp. 641-42] raises the question as to how it was possible to completely uproot the foundation of Nasser's social revolution in such a short period of time. The question was left less than partially answered. Is it possible that, in the presence of a huge demographic imbalance, some of the cosmetic distribution policies of the social product, e.g. increased public employment or consumer subsidies, were not sufficient to provide true system stability?

The recent pragmatic shift in China's population policy and a comparison with that of Korea may give credence to our point of view. Comparing Korea with China provides a classic case of the fallacy of composition. What is true for the part may not be true for the whole. Korea, having great success in both its economic and population policies, was also able to export its excess labour through an export-led labour-intensive strategy, albeit at a great social cost. It seems that China knew that it could not replicate the same strategy, given its large scale. China's population policy is more dramatic and, for some Marxist "believers", implied an ideological twist. We disagree, as our analysis implied. The socio-economic cost of China's population policy will be borne more intergenerationally and less by letting the country be absorbed in the "Worldwide Unequal Exchange System". We feel that the "why" needs no more elaboration. It is the "how" that needs elucidation.

On the *application* side, the current socio-economic status of the Arab world can be better understood within the long-term perspectives of the international demographic-industrial transition — a transition that has two known effects. The first is the latent but dramatic increase in population rates of growth in the less developed countries — the Arab world being no exception. This sudden and unbalanced (only mortality declined) demographic change does not necessarily produce those positive outcomes predicted by the optimistic neoclassical, Marxist or post-Marxist paradigms. Logically, the same paradigms could equally indicate an unnecessary cost if trends are left unchecked.

The second effect is the role of Resourcia as a provider of the resource necessary for fuelling the demographic-industrial transition. Since the decline of the textile industry in England, an industry that relied on labour-intensive cotton cultivation, the demographic component, essential in the hypothesized accumulation process of the "World System" paradigm, has lost its relevance. Oil is now the main actor in the equation. It is a highly capital-intensive industry located in areas with national boundaries that lack other resources. From this point of view, conventional paradigms fail to give guidance. Economic and demographic trends in both Resourcia and Subsistencia indicate severe imbalances.

The overall picture can be viewed as overly pessimistic. But there are positive notes. In the context of the Middle East, the Arab countries cannot continue to live beyond its means, expanding and changing the pattern of its consumption far ahead of its real production capabilities. The present national boundaries are preventing the region from achieving its full potential. Within these limited boundaries potential growth is limited at best and continuous dependency is inevitable. Even if more efficient economic policies are pursued, as long as they are pursued in isolation, this will be the case. The momentum of population growth, if it does not find its requirements of adequate capital accumulation to generate a real and balanced demand within a cohesive socio-cultural framework, will write its own

demise. We feel that this will be the future as long as the Arab world continues to be divided. Political unions based on short-term convenience are not sufficient. The challenge to development may be characterized in G. Myrdal's terminology as both a drama and a dilemma. Unfortunately, this is where optimism gives way, since rejecting real medicines based on non-scientific conclusions is a common characteristic of the real world.

Finally, we conclude with a vision that we hope crosses national, ideological and even species boundaries in this ever-shrinking world that hosts us. It is evident that we are witnessing the birth of a new scientific revolution: the post-industrial information society. A new core will be established [19]. But, more importantly, the information revolution will certainly imply new rules governing the accumulation-reproduction game, thus setting the stage for a new socio-demographic transition. The relevance of current paradigms has to be critically and continuously re-examined. As we adjust ourselves to the difficult present situation, we must also keep an eye on the future. Basic researches in genetic engineering, the functioning of the brain, and artificial intelligence are trespassing each other's domain, producing exciting and unexpected results. It is possible, and evidence about it is accumulating, that fundamental changes may occur which will influence all facts of human organizations including biological and social foundations of reproduction as we know them now.

As we mentioned earlier, we cannot judge the utility of the end result of this relentless "march of technique", since this "march" is not guided by a recognizable social welfare objective. As Toynbee [92] indicated, it seems as if society is moving its 'head' far ahead of the 'heart'!²¹ On the optimistic side, Ledyard Stebbins [88, p. 440] believes in the "durability" of the human race even under conditions of severe social and biological stresses. His conclusions are based on the historical evidence of the survival ability of slaves and conquered people under unbearable conditions. But, as the discussion illustrates, these were the outcome of a socio-economic system that included in its internal dynamics a maldistribution of a growing social output and not the genesis of its destruction. There is a written rule in at least one leading scientific research institute in the developing world that forbids its members to sleep during working hours. But, aside from the possibility of a lack of environmental "incentive" how could we advance without dreams, even those including nightmares!

²¹ "Pray, Sir, will political economy uphold the Athenian theatre?" asked the Rev. Dr Follitt. "Surely not. It will be a very unproductive investment," answers Mr MacQuody. Quotation in Ian Steward [89, p. 20].

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