A Theory of Supra-Surplus Capitalism

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I. THE CLASSICAL VERSUS NEOCLASSICAL VIEWS

The marginal product theory supposes that employment and wages are determined at the same time in the same place by the same forces. However, there are numerous institutions—schools, training centers, family structures, governments, and so on—involved in the allocative process over long periods in many different places. It's unlikely that all these institutions would converge to equilibria simultaneously everywhere. Moreover, for labor to be paid its marginal revenue product everywhere requires that short- and long-run equilibria coincide. Finally, labor market returns must be independent of consumers' or workers' needs and wants, another way of saying that wage rates are based strictly on worker productivity rather than on physically or culturally determined needs. If money income increments are not really based upon marginal revenue products, neoclassical productive efficiency fades into the background and the income distribution issue dominates the landscape.

In contrast to the neoclassicals, the classicals had working beings paid subsistence wages with subsistence often defined in cultural terms. Wage goods provided subsistence. For these economists, necessity was the mother of invention. The neoclassical economists presumed that all income is discretionary. Without the burden of purchasing necessities, the imaginary consumers are "free to choose" any set of goods and services. Most important from the viewpoint of theory, the implicit assumption that necessities are unnecessary and luxuries are a special case, guarantees the convexity of indifference curves on which adequate budgets always yield matching marginal utility ratios. However, the idea that discretion is the better part of value provides a bottomed view of capitalism.

Classical subsistence income and neoclassical discretionary income coexist in surplus capitalism. Production surpluses are created when net output exceeds biological necessities and depreciation on replacement capital. Under supra-surplus capitalism, production surpluses are so great that producers and governments must spend great resources in order to massage the interests and demands of the middle class (and beyond) to absorb supra-net-output. When private demands nonetheless falter (for whatever reason), federal budget deficits financed by the Central Bank, combined with a depreciating international currency prop up supra-surplus capitalism.

Some pioneers have prepared the way for a modern theory of surpluses. In particular, Piero Sraffa and Michal Kalecki can help us to understand the "necessary economy" that precedes surplus capitalism and coexists with it in the global economy.

II. THE NECESSARY ECONOMY: FROM SRAFFA TO KALECKI

Sraffa's View of Production and Value

After introducing a classical subsistence model, Sraffa (1960) quickly moves on to a production surplus economy, one that produces commodities in excess of labor's physiological

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necessities plus actual depreciation of all the means of production. Only in Sraffa's subsistence model are basic commodities necessities in consumption as well as in production. In Sraffa's model of the surplus economy, basic commodities or goods that appear as inputs and outputs are necessities only in a technological sense. Nonetheless Sraffa's notion of a standard commodity group made up of those basic commodities that enter into production in the same proportion that they exit production demystifies neoclassical value theory.

In an industry where equal amounts of, say, labor are always combined with a unit of capital, the marginal product of capital evaporates. Profits can no longer be said to be a return on capital. Moreover, this neo-Ricardian theory tells us that relative production price movements are driven by changes in the income distribution and technology rather than by demand movements. Finally, the income distribution can be altered without changes in the economic surplus, relative to the available means of production. There is little room for the usual supply-and-demand considerations so central to orthodox neoclassical theory, because the wages-to-profits relation becomes a social-political question to be answered elsewhere. Income distribution issues become central to economic theory and policy.

Reconciling Kaleckian Income Distribution with Sraffa's Subsistence Model and Vice Versa

Kalecki divides the national income between profits received by capitalists and wages received by workers. The national product is divided among the investment and consumption spending of the capitalists and the consumption expenditures of the workers (Kalecki, 1971). If we simplify by saying that all profits are diligently plowed back into the business to purchase new investment goods, then saving (as well as investment) is equal to profits. The capitalist is the lone saver in this simple, precompetitive economy.

A Kaleckian view of production can be made to conform with Sraffa's subsistence model, if we divide Sraffa's output sector into two distinct industries, one producing necessary consumption goods, the other producing necessary investment goods. The introduction of subsistence wages into Sraffa's subsistence model transforms it into a Kaleckian world of income distribution; workers eat, drink, wear, and drive what they produce. Subsistence wages decide the quantity of consumer necessities manufactured. Since investment goods are consumed at a given technology, the demand for consumer necessities and necessary investment goods determines the employment level. The distribution of income between workers and capitalists (between wages and profits) becomes the mirror image of the distribution of national output between consumer necessities and investment goods.

Beyond Kaleckian Subsistence

What happens to this Kaleckian-type scenario when the production system produces surpluses and the "working class" receives a larger share of the national income than required for subsistence? When wages (perhaps bolstered by interest and rents) become substantially greater than required for subsistence, the economy is on the way to becoming supra-surplus capitalism. Ironically, a critical insight into the surplus economy lies hidden in the subsistence model. This model reveals that labor is best treated as a basic "commodity" or better, basic service, because labor is still necessary to produce subsistence commodities (Canterbery, 1987, pp. 283-284). Labor is an input and an output (basic) in the (at least) self-reproducing economy. Nevertheless, in the long run, just as Sraffa's standard commodity must change with new technology, the quantity of consumer "necessities" must change as what is necessary is redefined.

III. DEMAND: A FUNCTION OF INCOME AND ITS DISTRIBUTION

It cannot be denied that there are many American households existing at the biological subsistence level, but American capitalism is indubitably an economy of surpluses. In a supra-surplus economy, we have a hierarchy of absolute physical necessities and "wants." The satisfaction of a greater number of wants is usually associated with "higher standards of living."

Engel's Law

There is a certain regularity in the way most households allocate expenditures on food, clothing, transportation, and other items. The poor spend their income primarily on physiological necessities in violation of the neoclassical convex indifference curve. Beyond meeting basic nutritional needs, food expenditure as a share of the household budget grows slowly. This general behavior pattern was first identified as Engel's Law. The same needs are met by the non-poor, but the discretionary income remaining meets "wants" or wants that are difficult to price in. As income increases we shift focus away from specific needs, such as the need to be housed, toward the particular way these needs and wants are met, such as through grandiosity and elegance. Households tend to eat more (and sometimes better) as income increases, but there is a limit to the amount of extra money that people spend on food as incomes rise.

The relation between reported personal income and expenditures by category for American families in 1985 is illustrated in Figure 1. For example, the highest-quintile household spends about 9.6 percent of its income on food, whereas the lowest-quintile household's share is 62 percent. Note the pattern. First, the more "necessary" the product or service, the sooner expenditure for that product or service begins to slow. Second, this pattern suggests a hierarchy of rankings. Expenditure shares for food begin to slow down at a very low level of income; transportation at a somewhat higher income level; housing at a substantially higher income level, and clothing (a small and potentially self-indulgent budget share), as well as medical care, education, and recreation (a large, rising share) appear not to slow at all at higher income levels.

Evidently, the income distribution has a lot to do with the overall level of demand in the economy, as well as with the composition of production. Furthermore, expanded consumption by those households above the middle quintile requires that households either satisfy certain wants at a higher level, or discover new wants. This is what the "middle class" really means. The consumer once satisfied with a telephone in each room of their home must now "want" at least one in their auto.

Engel's law is as successful in suppressing the role of consumption price as it is Sraffa. What turns out to be important to households is the ability to meet needs and wants with their real income levels, given their budget shares. The cost of a need or want is a weighted price index for a bundle of necessary and complementary production inputs, not a single price. It is more meaningful to speak of lexicographically-ordered budget shares allocated to bundles of consumer inputs than to individual consumer products (Canterbery, 1979b).

Engel's law places the role of discretionary income under supra-surplus capitalism into proper perspective. Discretionary income is to consumption what physical surplus (over-capacity) is to production; budget shares are to consumption what market shares are to production. Budget shares lead to an understanding of non-price competition that is lost when disputes are confined to market pricing. The greater the surpluses, the greater the difficulty in
wage—the actual wage negotiated—separates itself from the real wage or labor productivity. The mark-up could only be a return on capital in a "fit" of circular definition. A strategic role is played by the mark-up on unit costs (mostly wages) in the manufacturing sector. The mark-up depends upon the current number of firms in the industry and the perceived deviation of the firm’s price elasticity of demand from the industry elasticity based upon the firm’s ability to further differentiate its product and the firm’s expectations of a market share gain from its lower relative production costs. Since ordinary price elasticities are higher at higher income percentiles because of stronger substitution effects and weaker income effects (Shostky (1915) and Frisch (1935)), "price" elasticities at different income intervals are the relevant ones for the differentiated products aimed at the middle and upper income classes. Non-price forms of competition displace price competition (rotating the demand curve) so that the economics of markets cannot remain simply the theory of price.

Given the expected "price" elasticities, the corporation sticks with the market-bearing mark-up that will provide its target level of retained profits, a target that depends upon its dividend payout ratio to stockholders, its amount of debt relative to its equity, and, most importantly, its perceived investment needs. As long as the firm meets demand for its products, and its perceived elasticities and production costs do not vary greatly from expectations, the firm’s bureaucracy will cling to the price derived from corporate strategy. The margin of prices over current average costs already reflects the degree of market power of the giant corporation. This present day configuration serves roughly the same purpose as Keynes’s capitalist piling all profits back into the firm.

The mark-up and investment plans are inextricably linked. Because of the degree of monopoly factor, actual prices charged by the industrial firm do not reflect current demand conditions; they more closely mirror the funds requirements for the planned investment expenditures that the corporate bureaucracy deems sufficient to increase capacity (plant size or number of machines) to meet expected future demand. When costs of production rise, the firm protects its profits-for-investment flow by raising prices according to its established mark-up. Only upon industrial maturity—near Engel curve peaks—will the producer select new labor-replacing techniques that create still greater excess capacity.

The Money Supply and Money Wages

Rather than money entering the economic system only from the sky via Friedman’s helicopter, the supply of money comes into existence as Keynes describes it, with private debts ("inside" money). Therefore, the money supply is related to debts created by contracts to purchase or produce goods. Production takes time, so the agreements or contracts for the goods are denominated in money units to be paid upon delivery. However, the production costs have to be paid during the time of production, so that producer debt may be incurred prior to any sales revenue.

If prices are set with a constant or even a variable mark-up over wage costs, money wages become central to the price level. The money wages are inflable and deflatable because to reduce money wages violates the actual or implicit labor contract. In the short run, therefore, market prices must adjust to money wages and the cost of production rather than vice versa. There is a revised sequence in which the price level and the rate of inflation or deflation are resolved after the money wage rates and increases are determined, though the process does not end there. Money wages, exogenous in Schaffer, are endogenous in a system in which the income distribution is determined by socio-political conditions, and not directly by the technology of production
The technology of production and the prevailing level of production capacity still decide the total potential output of two types of goods: now culturally "necessary" consumption goods and the requisite investment goods. However, realized output depends upon effective demand and the income distribution. Effective demand depends upon income from the industrial system that, for the most part, is decided at the labor-management bargaining table. Only in the guise of consumers are there any losers: so much the worse for the sovereignty in which consumers wear the crown.

For the most part the industrial system has been successful in convincing consumers that they should expand the number of goods they consider necessary. In response to these culturally determined desires, labor demands higher wages so that workers can pay for the newly defined standard of living. The corporation often enough capitalizes, knowing that the higher cost of production from a larger wage can be passed on to consumers. If foreign competition becomes a threat, the American corporation moves abroad to a developing, or subsistence economy and enjoys wages a fifth to a tenth of those at home, or else demands protection from foreign competition. Workers continue to believe in the illusion that higher money wages are always good; they don't quite sense the fallacy of composition in their trilateral role as wage-earners, employed persons and consumers. Wage increases merely cover the "cost of living."

There is also a fallacy of composition on the manufacturing side. Throughout the history of capitalism, the idea that workers have to be employed in order to purchase the producer's goods has eluded manufacturers. Though it is in the interest of any single producer to minimize his total wage bill, if all producers succeed in that calculus they will find there is no outlet for their products. Keynes' concept of this fallacy of composition has yet to be denied effectively. The determination of money wages brings us to the broader issue of the personal income distribution.

IV. THE VITA THEORY OF THE PERSONAL INCOME DISTRIBUTION

Despite Kalecki's remarkable insights, the reliance on a stereotyped income division between workers and capitalists is an inadequate explanation for the income distribution of supra-surplus capitalism. We need to know more about why different households occupy varied places in the income distribution. My vita theory provides a more eclectic explanation. In the vita theory, labor is not paid its marginal product and therefore labor falls into the same category as Sraffa's capital goods. The theory—fully developed elsewhere (Canterbury, 1979c, 1990b)—will be summarized briefly.

A vita is a brief summary of the main attributes and events of one's life, a kind of autobiographic sketch. The main thrust of a vita theory can be simply stated. Imagine that one labor market exists for each general class of labor, such as plumbers, medical doctors, electricians, or elementary school teachers. The individual's quality as a productive member of the economic system determines which labor market that person enters. A person "qualifies" for a particular labor market by the state of his or her vita at that time. The vita begins with birth, when race, sex, religion, national origin, inherent or (nata) mental and physical capacities, inheritances, and family background (endowments) are duly noted.

The autobiography is added to over the life span by education, other training, and experience. Although an individual has some control over the length and depth of his autobiography, production "recipes" change in the long run. Labor demand is related to technology as well as to product and services demand, so that only the rarest of individuals can predict with any accuracy the future demand for workers with his or her own emerging or nature biography. Beyond this, specific labor queue conditions are a collective outcome that is beyond personal control.

The Labor Market

The person's human capital type is decided simultaneously by the individual's characteristics and training, and by the labor markets and occupations currently available in the economy. If there is a one-to-one correspondence between general human capital classifications (HHCs) and labor market types, there will be many homogeneous and, thus, non-competing national labor types. In the short run there is no mobility among the homogeneous labor markets.

Not surprisingly, the number of persons geared to a labor market decreases with increases in the skills, special aptitudes, and credentials requirements of the market. The number of persons who can qualify as unskilled labor greatly exceeds the number who can qualify as medical doctors. Formally, we can think of the number of human capital types (say surgeons) as being in a rank order queue (for example, 1, 2, . . ., g) from most to least preferred employee characteristics, a labor force queue at either a local or national level.

In the short run the wage rate and the employment level are decided by different forces. Economically, this separation of forces stems from the set nature of production processes combined with union and firm regulations in the short run. Union or firm rules usually specify the number of workers assigned to a machine and floor area, as well as their work speed. As employment is a fixed share of production, the amount of labor demanded is directly related to production.

The Wage Rate

Labor's instrumental variable is the wage rate rather than the labor queue over which no collective control exists. The industrial union, for example, is aware of the pricing power of concentrated industry in which higher wage costs can be passed on through a constant or rising mark-up over variable or average costs. The likelihood of full mark-up pricing increases with greater product market imperfection.

In turn, in the supra-surplus capitalist system, discretionary spending and the production of non-essentials is not independent of the wage rate. Just as with the agricultural economy in which the classical saw labor being paid in food supplies, the wage earners in manufacturing are paid in terms of the goods they produce. Unlike the classical system, however, there is, in part, a revised sequence in which the producer stimulates wants and often helps to define what the worker will demand in wage goods.

Given his vita and the characteristics of the applicable labor market, the individual's base wage rate depends upon the average wage for such services. Upon closer examination, however, the individual's personal income exhibits differentials from potential labor market earnings. Those differentials: occupational, geographic, inter-industry, union—non-union, discriminato-ry, and so on—can often be traced back to the first vita stage, the birth vita. At birth one's initial or innate IQ, sex, race, and initial state of health are already determined; earning qualities nonetheless can be enhanced through education. For example, education adds substantially to the income of blacks, though not nearly as much as to that of whites. Individuals have only moderate control over their precurator vita because voluntary schooling and training are often directly related to inherited material endowments.

In the unskilled, non-organized labor market, the longer-period queue of unskilled labor is determined by non-wage elements. Few individuals actively strive to achieve characteristics
that would yield low wages. Indeed, the unskilled might be viewed as failures, so their long-term queue is a kind of residual unrelated to wage rates. The wage differentials between the union-certified skilled and the unskilled is the consequence of (at least) dual labor markets that reflect the duality between the manufacturing system and the competitive system.

V. STAGFLATION

This political-social process of wage setting means in the short run that employment is not related to the wage rate, and the wage rate is related to employment only if full employment exceeds all labor queues. Therefore, a high wage can be associated with a high unemployment rate, because employment is decided by technology and effective demand, rather than by the marginal product of labor. This process is so deeply imbedded in the U.S. economic system that it took a four-year global depression (1979–1982) to slow (not end) wage (and price) inflation in the United States.

The prerequisites of technology rearrange the demands for different qualities of labor. The consequent arrangement of incomes is the stage upon which demand plays. The cultural generation of wants, though not entirely separate from technology, plays out much of its destiny within this dimly lit arena at the interface between the wants of labor and those of corporate management. Within that dimly lit area, Veblen and Galbraith and other organization theorists can tell us more than Sraffa or Kalecki can. Neoclassical theory does not extend beyond its own lump point.

In the Sraffa-Leontief input-output sense, the raw materials, or primary, sector feeds inputs into the secondary sector. Thus, a change in the price of raw materials at fixed price mark-ups has the same effect as a change in the wage rate—a higher or lower cost of producing manufactured goods. Moreover, the primary sector serves a dual role in production and selling because it supplies a biological necessity—food—to fuel the labor input of manufacturing as well as services.

If production techniques (technology) and the money wage rate are given, the faster the growth rate of national income, the higher will be the rate of profit (non-wage income) relative to wages. If the relatively high level of profits result in a higher level of investment, a greater share of national income necessarily goes to "capitalists."

How can a division of income described so long ago by the classical economists be relevant to a modern industrialized economy? Because supra-surplus capitalism is dominated by large corporations, a great share of the economy’s savings and leveraged debt comes out of the corporate sector. Therefore, the savings-out-of-profits behavior of large corporations is a key determinant of the distribution and level of income because profits are a prime source of discretionary investment expenditures, just as household discretionary income is the source of discretionary consumption expenditures.

If labor is treated as a basic service, the true nature and importance of necessities compared with luxuries in supra-surplus capitalism is revealed. Income earners are then viewed as allocating expenditures among goods on the basis of a budget related to their personal income levels. In this way the consumers’ budget can be incorporated into an aggregate consumption function. (As Cantorbery, 1979; Bray, 1979, has shown, the extended linear expenditure system can be used for this purpose.) As it turns out, the variety of income classes and discretionary spending power adds to a volatility of total demand traditionally assigned only to business investment.

We shall shift our attention to the very long run or the long wave for reasons that will become obvious.

VI. STAGNATION AND THE LONG WAVE (BYE-BYE CAPITALISM?)

Two key assumptions of post-Keynesian growth theory must be relaxed to provide a more reliable explanation for the longer-term growth of the economy. The composition of output, as well as the methods of producing that output (technology), do change. Though the production techniques and the amount of labor relative to machines may remain constant for several years (or even decades) during a stagnation in any particular industry, at any moment other industries may be switching to different methods of production. It is likely that any new techniques will exhibit different mixes of inputs.

The changing composition of demand, the uncertain timing of new products and new technologies, and the uncertainty of when investment will take place, means that economic growth dependent upon investment necessarily proceeds at an uneven pace. We would not expect the private economy to perform an impossible balancing act.

Schumpeter’s Entrepreneur

In Joseph A. Schumpeter’s (1883–1950) theory of capitalism, the entrepreneur is the innovator, the agent of economic change. In Schumpeter’s view, the Kondratieff or long wave is spread over roughly half a century.

As Schumpeter correctly notes, there is no extraordinary opportunity for profits in the stationary state of Walrasian equilibrium; a circular flow of economic activity takes place, and the system merely reproduces itself. The entrepreneur daringly robs the circular flow and diversifies labor and land to investment. Since savings are inadequate for such ventures, the entrepreneur must be provided credit created by the capitalists. Since only the more enterprising and venturersome persons act, innovations appear in “swarms.” The innovations include setting up new production functions, techniques, organizational forms, and products. Even though they stand above the reluctant crowd, the heroic entrepreneurs create favorable conditions for other, less venturesome business persons to follow.

It is industrial concentration—the rise of big and stubborn business—that weakens capitalism. The maturing of an industry into a gigantic monopoly generates the political and social attitudes that ultimately destroy it. The growth of giant business deprives capitalism of its individual entrepreneurs even as it makes itself vulnerable to political and social assault. New Deal nostrums sustained capitalism by artificial means, but they was paralyzed in those functions that had guaranteed past glories. The beneficiary of capitalism’s fatal disease was socialism: Schumpeter’s prophecy for capitalism is Marx’s denouement. Like the whale that saved Jonah, the state swallowed capitalism in order to save it.

The Product Cycle

In my view stagnation is related to the composition of aggregate demand and aggregate output. Although Schumpeter treated demand with non-benevolent neglect, he nonetheless saw some branches of industry flourishing while other branches floundered. Schumpeter’s “process of creative destruction” is evolutionary; with firms and industries coming into existence, growing, declining, and disappearing. When change is the constant, the very long run is one of industrial evolution or even revolution.

Specialists in marketing research have known for a long time that products have a sales life cycle. Initially, a product innovation coming from one of Schumpeter’s entrepreneurs will be
sold (perhaps experimentally) to a handful of consumer pioneers, who are often the richest households in the society. Since a new product is usually very expensive to develop, its introductory price will be very high. However, if a middle-income class exists, Veblen's class emulation emerges, and the product is gradually diffused among a larger and larger number of families. When the product hits Main Street, the sales growth is exponential; the product "takes off." Any market thus ignited is limited only by its human population and the distribution of income.

Mass production of a product eventually turns the emulator's gold into fool's gold. When products are sufficiently diffused throughout the economy, they can be standardized in gigantic factories and produced with large-scale technology that yields low prices. When virtually every family of the society has at least one of the "new products," the market is saturated. This product cycle looks like a flattened S and is often called, appropriately enough, the product S-curve. It is illustrated in Figure 2.

Economic development brings standardized technology even as it increases the complexity of the overall production system. In the agrarian society, generic goods from the land are the only goods required in consumption. Value added or the difference between the value of sales and the cost of production (and therefore economic surplus) does not exist because goods are not marketed. In contrast, the supra-surplus society relies upon a highly interdependent production system in which a longer and longer chain of suppliers supply each other—adding layer upon layer of value added—until the final product emerges.

![Index of Units sold](chart)

**Figure 2.** The product-curve in supra-surplus countries. Note: Each product, of course, would have its own curve, each being uniquely shaped except for the generally flat S configuration. In this illustration, however, I assume that each product follows the same life cycle in order to show where (approximately) each product is in its life cycle in the supra-surplus economies.

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**Budget Shares and the Size of the Firm**

A reduction in income inequalities is a precondition for a middle class, and a middle class is essential at a critical historical moment in providing a product market size sufficient to warrant the standardized technology, and ultimately, the surpluses. Thus, income levels and the number of households with those incomes are related to the size of the firms and industries producing goods and services. The linkage derives from the value of total expenditures given by budget shares, which defines the overall size of the market for a particular product.

Plant size is usually decided by the lower-cost technology. Given technology, even the smallest plant may be too large for the market. If so, the plant will not be built until incomes, budget shares, and population warrant it. In some cases, the smallest plant is gigantic, and its levels of production may absorb all the revenue available for the particular product. The telephone companies, regional monopolies, fall into this category.

**VII. INNOVATIONS AND STAGNATION**

The long wave appears smooth over time. This is an illusion, for a set of data over a sufficiently long historical epoch is "stretched out" so much that the appearance is one of continuity. Yet, the historical reality is quite different: the world economic crises of 1825, 1929 and 1987 were a bit more like falling off cliffs than gliding through gentle valleys. Moreover,
the ups and downs of the 1970s and the 1980s are enough to give continuity a bad name. A German economist, Gerhard Memisch (1979), has taken his lead from Schumpeter but favors the pattern of the discontinuous path of capitalism. Fortunately, Memisch’s model, which he calls the metamorphosis model, is derived from the product cycle or product S-curve. The configuration of Memisch’s theory is displayed in Figure 3.

Innovations can be either of the product variety, such as laser disc recordings, or of the production-process kind, such as computer-assisted design (CAD) of an automobile or a house. We will be concerned only with technological basic innovations that produce new markets and industry branches. The lone entrepreneur is often the one who first commercializes a basic innovation, creating a temporary monopoly in the production of a new product. Eventually, an entire new industry is born. The production of electricity (1800), the first use of the coke blast furnace (1796), the first commercial use of photography (1838), the production of the jet engine (1928), and the production of nylon (1937) were basic technological innovations. An entire industry unfolds as a basic innovation generates various new industrial products. Neoclassical capital-labor substitution takes place if the long run average cost curve is viewed as a planning curve along which choices of technique are made.

The remarkable contribution of Memisch is to provide data suggesting that basic innovations do occur in swarms, as Schumpeter claimed; and, importantly for the present malaise, the frequency of the most recent swarm of basic innovations peaked in 1935 (in the middle of the Great Depression). If the average product life cycle—from basic innovation to maturity—is a half century, a large share of the 1935-centered swarm would reach maturity, or the top of their S-curves, in 1985. If so, the overall real GNP takes on an S-curve configuration that is flat by 1985. Our Engel curve analysis combined with observed satiation in automotive, airline, household appliance, and even housing markets, bolster the idea that stagnation best describes the condition of the suprasurplus economies—Great Britain, Western Europe, Northern Europe, the United States and Japan—by 1985.

Stagnation from market saturation and inflation may be two sides of the same coin; at least, this is Memisch’s claim. Stagnation describes the condition of the main branches of industry in the suprasurplus countries since the late 1960’s. Giant scale production facilities in the suprasurplus economies cannot overcome the affliction of many product cycles peaking more or less at the same time (i.e., from my demand perspective many Engel curves are flattening out simultaneously). Otherwise, the expansion in private and public credit would have fueled a sustainable expansion in real output rather than substantial inflation and the future prospect of rapid debt deflation (Postscript: Debio deflation is epitomized by the global stock market crashes of 1987).

At the end of its long expansion, the suprasurplus economy sees the number of industrial branches that are peaking exceeding those beginning with basic innovations. The sunset-to-sunrise ratio of industries means that bankruptcies and liquidation of assets are just over the horizon. Those groups whose income and wealth are threatened will circle the wagons at sunset. Coalitions demand even more subsidies and protection from foreign imports. Such coalitions in the United States, W. Germany and Japan make simultaneous expansion of such interdependent economies improbable. The compositions of their surpluses are similar.

VIII. ENTREPRENEURSHIP, THE PRICE MARK-UP AND SRAFFA-LEONTIEF

Historically, stagnation has had not only a beginning, but also an end. We must wonder why the corporate cash flow fails to lead to basic innovations. Apparently, it is because concentrated industries producing standardized products are not very innovative. The market power of these giants enable them to get by with mostly imaginary product innovations (stimulating wants) and with price increases for products whose sales no longer respond significantly to price changes. (They are producing cultural necessities.)

Fixed Coefficients

During the last half of a long-wave economic expansion, the Sraffa-Leontief fixed technical coefficients industrial model takes on an unexpected realism as neoclassical labor-capital substitution fades in importance. Once the basic process innovations that define the relations between inputs and outputs are widely diffused, the industrial branch becomes remarkably rigid in its technique. True, the size of plants and of the companies grows large, but the same technique is simply replicated on a larger scale. In the final throes of decline, ironically, the production technology finally is modified by improvement innovations; in the present wave, automation in the standardized product-manufacturing industries is being used to replace high-priced labor. Improved judgement born of necessity begins to break through the rigidities.

The age of the entrepreneur, however, is like Carnet; it is only here for one brief, shining moment each half century (roughly).

The Rise and Decline of Coalitions

Manuel Olson (1982) considers the “rent-seeking” coalition as “bad” because his focus is upon economic efficiency and economic growth. If, however, we shift the focus back to concerns with the income distribution, coalitions can be viewed as organized efforts to avoid the income-reducing effects of stagnation or competition. When technology is sufficient to create a surplus and inputs are complementary (as in Sraffa, Leontief, or Cantorbery), it is very difficult, if not impossible, for even a free market to assign “marginal products” to the appropriate persons, for labor and capital goods are equally necessary. And yet, the surplus must be divided by some rule. If coalitions as “rent-seekers” design the rules, the income distribution is decided by their powers.

Long as the growth rates of wages and labor population do not exceed that of “productivity,” the rent-seekers divide the surplus without creating much inflation. This could describe the first half of the long-wave expansion. Only when the swarm of innovations have been widely diffused do the rent-seekers create instability in the economy.

For the most part, we have written of economics in isolation. The integration of the global economy enables us to extend the product cycle theory to the rest of the world.

IX. THE INTERNATIONAL PRODUCT S-CURVE

The developing countries’ sales normally are nowhere near the flattening-out and turning-down range of their S-curves. The global patterns of the S-curves, originally portrayed by economist Raymond Vernon, are replicated in Figure 4. The product cycle is divided among three stages: new product, maturing (growth) product, and standardized product. In the early stage an entrepreneurial near-monopoly guarantees a small number of firms and high profits. When the production plant becomes large enough and the product price low enough to satiate the domestic market of the supra-surplus economy, production levels off. Long before that happens, however, the marketeers of that product begin to look for sales possibilities abroad
monopoly position is eroded. (This happened as the OECD countries became more alike in their postwar recoveries and sated each other.) The newly industrializing countries (NICs) become effective competitors because their adoption of the now-standardized technology is coupled with cheap labor. As a result, the rise in output of standardized products through standardized technology in the NICs has diluted barriers for trade protectionism.

The saturation of a particular or even a collection of product markets is a concern, nonetheless, only for those who out of necessity or ignorance take a parochial view. If one takes a global perspective, for example, there is no glut of automobiles. Around the world in 1978 only 300 million autos were available for about 4.25 billion people. The global market for autos is new and fresh, and the production technology is well defined and standardized. The developing nations are frontier for products commonplace in the supra-surplus countries.

Despite the setbacks of the 1980s, the drive to industrialization by the developing nations can be resumed if certain requirements are met. The standardized technologies of the traditional industries are transferable from one country to another. State-of-the-art steel and automotive plants are found in Brazil, Mexico, Taiwan, and the Republic of Korea. These NICs have gone through their “industrial revolutions” at great historical speed and are presently investing large sums in electronics research and development, an act ordinarily assigned to the supra-surplus nations. In terms of production techniques, the NICs are already surplus economies. The experience of the newly industrializing countries tells us that the diffusion of existing technology is happening much faster than in the past, mostly because information systems have improved.

We need to go a step beyond the supra-surplus economies in order to identify the next leading industries and to chart the next century. If information networks are sufficient, inventions and even innovations are available to every country that has the infrastructure to absorb them. The continued dominance of autos, household durables, steel, and other traditional manufacturers in many supra-surplus nations is based more on the power of rent-seeking oligarchic coalitions than upon domestic consumer needs; the illusion of innovation has masked the reality of stagnation.

With investment growth related to technological imperatives and interacting with the division of income, incomes earned can be explained without reference to individual or economic class productivity. As profits—flowing from a price markup—are not explained as the result of a “productive” factor called capital, the income distribution is more the result of social and political customs, including those institutions that generate special market-power privileges. This view leaves few strictly economic obstacles to a more equal income distribution. It also opens the door to policies regarding income payments as a means for controlling inflation (Canterbery, 1983, 1987; Canterbery, et. al., 1985).

The Long Run

It is far more efficient to subsidize individual human capital development, irrespective of the industry affected, than it is to subsidize indefinitely a specific Sunset industry. Industries can live and die with product cycles without hurting people if the transition is eased through proper care and nurture of individuals. Well-designed education and training programs directing persons into skills that are in short supply could gradually reduce otherwise necessary government income credits (Canterbery, 1983, 1987).

As we shift our concerns to the very long run, we necessarily return to economic development and the problems of the Third World. The long-run vision is presently blocked by the global debt and financial crises, which must be met first. But global financial fragility is
more consequence than cause. Only a global realignment of industry and new policy instruments can circumvent punitive policies in the global economy. In an integrated global economy, such structural change happens because consumption patterns change with movements in per-capita income and because technological innovations alter production recipes around the world in many ways.

X. SUMMARY

The present day orthodoxy, neoclassical economics based upon marginalism, avows what it claims to prove. The core of the orthodoxy is the belief in labor markets as auction markets that always clear at full employment. From full employment all household's incomes are discretionary so that imaginary consumers are "free to choose" any qualities and amounts of goods they desire.

The reality of supra-surplus capitalism in which an hour of labor, in fact, is not paid according to its contribution to output of autos, steel, textiles and computers is quite different. Since theory should not be judged more reliable the less it squares with facts, an alternative view requires that the usual demand and supply relations be put aside. This suspension of belief enables us to think of goods and services as either necessities or luxuries. Production surpluses are created when net output exceeds biological necessities and depreciation on replacement capital. Under supra-surplus capitalism production surpluses are so great that producers and governments must expend great resources simply to sell the supra-net-output. Since modern corporations rely upon a price mark-up for profits that can be levered by corporate debt, investment growth depends upon the ability of supra-surplus firms to persuade consumers to buy goods they initially feel no need for:

Traditional supply and demand is replaced with Engel curves and flat S-shaped product curves that depend upon the income distribution, real (price-adjusted) income changes and household-budgets. As households become satiated with products (a car in every garage, a computer in every household and a TV in every room), the amounts acquired no longer respond to discretionary income increases; the Engel and product curves flatten out and stagnation in those product markets and industries sets in. A simultaneous maturing of several products and industries leads to national stagnation in the supra-surplus economies. On the way to this stagnation we have stagnation in which "rent-seeking" coalitions (labor unions, professionals and producer alliances) help to determine wages and the income distribution; this outcome is independent of incremental products or productivity which are decided by technologies and market sizes.

"The Konstrativ" or long wave shows how stagnation can end. About every half century "waves" of technological basic innovations occur which create new products, and new industries. Like in Camelot, for one brief, shining moment entrepreneurs make a difference. However, organization pushes the innovators aside and as the industry matures, only a few increasingly rigid giant firms of standardized technology remain. The short-lived Age of the Entrepreneur gives way to the Age of "rent-seeking" coalitions.

There is an international product S-curve that extends growth and decline to the global economy through international trade. The standardized technology of mature industry in the supra-surplus economies has been transferred to newly industrializing countries (NICs) such as Brazil, Mexico, Taiwan, and the Republic of Korea. Unfortunately, the supra-surpluses of the U.S. and other industrialized countries need the "vent for surpluses" provided by the developing nations.

A THEORY OF SUPRA-SURPLUS CAPITALISM

Policies such as "wanker-state" protectionism in the U.S. are short-sighted. The global and the U.S. economies would be better served by a continued global realignment of industry aided by policies bolstering human capital that ease the transition of persons from the traditional into the new industrial branches. Moreover, an income policy would enable the supra-surplus economies to take the inflationary fear out of economic expansion.

FOOTNOTES

*greatly benefited from the comments of Peter Gray and the editing suggestions of Guy Lebeau.

1. Canterbury (1985) has assumed a mark-up pricing rule of:

\[ P = V C + M \]

where \( P \) is variable costs and \( M \) is the percentage mark-up. In turn, the mark-up is determined as:

\[ M = \frac{1}{n} (F_{L}) \]

where \( n \) is the current number of firms in the industry and \( F_{L} \) is the perceived or expected price elasticity of demand to firm j at time t. The perceived deviation of the firm's price elasticity of demand from the industry elasticity \( (N_{I}) \) is assumed to be based upon expectations of a market share gain from firm j's ability to further differentiate its product and its lower relative production costs. That is, if \( N_{I} \) is greater than \( N_{I} \), it is because a market share gain is expected. The perceived or expected firm price elasticity is:

\[ E(N_{I}) = N_{i} + INN_{i} \] where \( INN_{i} = C(VC_{i} - VC_{j}) + e \)

which says that firm j's expected price elasticity equals the industry market price elasticity plus an incremental elasticity \( (INN_{i}) \) which is a positive linear function of the difference between the variable costs of the average firm in the industry \( (m) \) and firm j plus an error term \( (e) \). That is, an expected market share gain is based upon the capability of firm j in differentiating its product and the cost differential between firm j (say Boeing in aerospace) and the other firms in the industry. In this way, the mark-up potentially can be varied in order to provide funds for investment purposes.

2. The motivation for investment "needs" has been variously attributed to market share and power of these explanations, which lead nonetheless to similar outcomes, have been put forward, respectively, by Eichner (1976) and John Kenneth Galbraith.

3. To the extent that borrowed funds are used to finance increments to the capital stock, new financial assets are created in the process of business investment. Hyman Minsky (1975) takes this position.

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Economic Paradigms and Slow American Productivity Growth

Lester C. Thurow

No problem is more central to the United States than that of slow productivity growth. International competitiveness and future standards of living, both absolutely and relative to those in the rest of the world, depend upon it.

In the United States productivity growth has gradually but persistently declined from 3.5 percent per year between 1948 and 1965 to 0.8 percent per year between 1978 and 1986. Nothing in the most recent data indicates a turn around—the average growth rate in 1983 and 1986 was 0.8 percent per year. After the first OPEC oil shock in 1973 productivity growth fell everywhere in the industrial world as attention was focused on saving energy rather than labor, but in the late 1970s and 1980s there has been a sharp rebound in the rest of the industrial world. In contrast within the United States the decline in productivity growth began earlier and still continues. Our major industrial competitors have productivity growth rates four to six times as high. What is happening is peculiar to America.

With low productivity plants closing under pressure from foreign competition productivity growth rates in manufacturing (2.7 percent from 1978 to 1986 versus 3.2 percent from 1947 to 1965) have not slipped as much as those for the entire economy but U.S. growth rates are far below those of its major manufacturing competitors and seem to be slowing based on the data for 1986.

From the point of view of growth accounting the decline in productivity growth is a major mystery. Labor productivity growth rates can decline because of a deterioration in the quality of labor itself or because of a deterioration in the quantities or qualities of physical capital, natural resources, and technology with which labor works, but analysts cannot find declines in the quantity or quality of any of these inputs large enough to explain the observed decline in the rate of growth of productivity. Often inputs have in fact risen rather than fallen. Investment in plant and equipment, for example, has risen from 9.5 percent of the GNP between 1948 and 1965 to 11.5 percent of the GNP between 1978 and 1986. Those who go beyond an analysis of inputs to look at shifts in the industrial structure and industry specific problems similarly come up short. What must be explained is substantially larger than what can be explained.

Often the analysts who have failed to find a rational economic explanation suggest that the unexplained slow down might be produced by non-economic behavioral factors such as a deterioration in the American work ethic. There is little independent evidence to back up such an assertion, but if true it would mean that a non-economic set of behavioral models—sociological models that might explain why the work ethic has deteriorated—will have to be employed to understand why productivity has slowed. The ‘homo economicus’ model doesn’t work when it comes to explaining the central problem facing the American economy.

Even if conventional analysis could explain the decline in productivity growth, however, there still would be a problem. If a market system of individually rational choices lead to a decline in the quality or quantity of economic inputs, so be it. A deterioration in productivity