Hindsight Economics *

Many years ago, when asked to write my recollections as an economist, I demurred, believing that the work I was then doing was more valuable and interesting than my recollections could possibly be. But now, at 80, my writings are seldom more than variations on or postscripts to work I originally failed fully to develop or bring to fruition; and I discovered a common thread connecting much of my earlier work, which gave me a new insight into the subconscious workings of my mind. That was something new, which seemed worth spelling out; and that is what I am proposing to do in the following.

As an overprotected, privately tutored, only and lonely child, I became an avid reader and do-it-yourselfer, with my parents' chauffeur as my only friend. Chauffeurs in those days were skilled mechanics who had to spend much of their time attending to the many problems with the early cars; and I soon became our chauffeur's apprentice garage mechanic. As such, I owe to him my knowledge of things mechanical, love for exercizing my manual dexterity on home repairs and, since he was a socialist, also my acquaintance with socialism and first introduction to economics through reading the first volume of Marx's *Das Kapital.*

In the semi-feudal Hungary of those days, all upper middle-class youths with no special talents or vocation studied law; and I too followed that course. But since I was able to do most of the reading and preparation for the exams during summer vacations, I concurrently spent 5 terms at Cambridge where, on exhausting the University's meagre offerings in international law, I switched to

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economics, more or less as a hobby. I did not study very seriously at that stage but learned enough to return to the subject later and to enable me even then to come up with the most valuable economic advice I have given in my entire career. For when I returned home from Cambridge in the spring of 1931, my father asked what if anything I had learned that would be useful in those difficult days to someone like him (he then was president of Hungary's largest bank). I mentioned Britain's declaring bank holidays in past financial crises; he listened carefully and soon thereafter prevailed upon the Government to proclaim the bank holiday that helped Hungary weather the Great Depression somewhat better than did neighboring Austria, the closing down of whose largest bank, the Kredit Anstalt, was a landmark of the depression.

I learned economics in earnest only years later, when I became anxious to emigrate and found myself woefully unprepared to make my own way in the West. I enrolled at the London School of Economics (LSE) in 1935 more or less by chance; and that turned out to have been an excellent choice, because the School exposed one to many conflicting ideas and ideologies, forcing one to compare, judge, reconcile and choose. At that time, many of the students and the non-economic faculty were Marxists; whereas the Economics Department, save for one or two junior members, was very conservative, with Hayek its leading light and young Nicholas Kaldor still his ardent admirer and follower. Apparently fearful of becoming a poor man's Oxbridge, the Department spurned Anglo-Saxon economics, hardly even mentioned Alfred Marshall and relied on texts by Wicksteed, Taussig, Frank Knight, Mises, Hayek, Gustav Cassell (Walras' popularizer), and Knut Wicksell.

Like many of my fellow students, I was seduced by the elegant logic of what we were taught and the utopian picture it presented but also disturbed by its unreality and apparent uselessness. In the London of the depressed 'thirties, we witnessed plenty of misery and unemployment, labor demonstrations were frequent; and we were disappointed by the economics profession's failure to come up with a remedy. Young economists increasingly studied the socialist alternative; and Hayek edited a volume of essays that argued the pros and cons of *Collective Economic Planning*, concluding in his "Summary of the Debate" that the nays had it. He was the only one in the LSE faculty to diagnose the pressing economic problem of the time in his *Theory of the Trade Cycle*; but his diagnosis was too

involved and his remedy (curbing the preceding prosperity) too ascetic to attract many followers.

Some of us students felt that there must be something seriously wrong with an economic theory that leaves its practitioners quite so helpless in the face of severe economic problems. We often discussed the need for reforming the theory or adopting a completely new approach that would expose rather than hide the economy's shortcomings and point the way to remedying them; but we had no idea how to go about it. I had a vague feeling that the concepts of conflict and exploitation, eliminated in the model of perfect competition, ought somehow to be reintroduced into a more realistic general model of markets and the economy; but not knowing where to start, I merely worked very hard, reading and studying way beyond what was required and recommended, discovering the existence of national income estimates and generally hoping to find clues to a better approach and trying to prepare myself for an active role in bringing about the reform that the discipline needed.

Then, a year after my arrival, Keynes' *General Theory of Employment* appeared and put an end to all those thoughts. I remember persuading the manager of the School's bookshop to let me have a copy the day before its publication and staying up half the night to read it. For it was like a breath of fresh air, making all our texts look stale and stuffy. It seemed to have accomplished much of the reform of economic theory we were hoping for; and the angry, passionate strife it brought into the Economics Department soon filled our lives. Lionel Robbins's Monday seminars became the scene of heated arguments between the solidly anti-Keynesian senior faculty (Hayek and Robbins) and the Keynesian young instructors (Kaldor and Lerner), foreign visitors (Kalecki and Lange) and some of us students. Witnessing and participating in those weekly battles became the main excitement of our lives; and for those of us preparing for exams and writing dissertations, it was excellent training as well. For anxious both to get good grades and be honest to ourselves, we tried not just to give the answers expected or the ones we believed right but to state our beliefs *and* defend them against, or reconcile them with our examiners' conflicting beliefs. That was a difficult but rewarding task and made me feel that I had acquitted myself reasonably well. One day, however, when Kaldor paid me the compliment of suggesting that I submit a paper for publication in the forthcoming but not yet

complete issue of the *Review of Economic Studies*, I shamefacedly had to admit to having nothing on paper or in mind that would be fit to print.

I learned to write economics only much later when, after two minor temporary jobs, a traveling fellowship from the University of London brought me to the United States and World War II stranded me there, with no job in sight and not a printed page to my name. I tried in vain to have my fellowship extended, when a well-meant but unavailing telegram I received in that connection turned me into a suspect and unwelcome alien. It came when German submarine attacks on British merchant shipping were at their height and the campaign was supposed to be aided by information sent from and via this country by spies, masquerading as refugees. The cable said: RE FELLOWSHIP CONTACT KALDOR BURNTCLOSE GRANTCHESTER NEAR CAMBRIDGE. My first reaction to reading it was a feeling of unease, thinking that an alert censor, seeing the syllables SHIP and BURNT in a seemingly cryptic text, might smell a rat. Indeed, many years later, a friendly FBI agent confirmed that I had been put under surveillance as a result of that telegram.

Being on a student visa, I could not accept Paul Samuelson's offer of a research assistantship, nor could I leave; so my only hope of saving my career lay in establishing a reputation by publishing as much as possible. With the words publish or perish constantly ringing in my ears, I made the rounds of Columbia, Chicago and Harvard, spending agonizing months in their libraries, chewing my pencil and waiting for inspiration that was awfully slow in coming. I was obsessed with the idea that I must be able to explain how and why Keynesian unemployment fitted or failed to fit into classical economics, which I believed Hicks' "Keynes and the Classics" and Lange's almost identical article had failed to do.[1] I suspected that the answer lay in some prices' failing to clear their markets; the question was which prices and why.

That started me on a life-long preoccupation with the way prices were determined. I pored over a shelf-full of T.N.E.C. reports, Gardiner Means' *The Structure of the American Economy* and several other American studies of the frequency and magnitude of price changes; but my work on all that bogged down and bore fruit only years later, when after my military and civil service I started teaching and teaching duties forced me to focus on micro-economics.

[1] J.R. HICKS "Mr. Keynes and the "classics": a suggested interpretation", *Econometrica* V, Apr. 1937; and O. LANGE "The rate of interest and the optimum propensity to consume" *Economica, N.S.* V, Feb. 1938.

In the interim, my first published article explained involuntary unemployment by showing that interest rates failed to equate the flow of new capital formation to what the flow of saving would be at full-employment, because they also had to equilibrate people's desire to hold previously issued financial assets against their accumulated stock; and the same price could not simultaneously perform both tasks, equating instead one market's excess demand to the other's excess supply. I still believe that to have been one of my best papers, because it uncovered an important gap left by the classical economists.[2]

The classics' great achievement was to recognize the advantages of the division of labor and the contribution markets make to it by enabling people to specialize. That was well brought out by their simple model of the economy with its small cast of characters and all attention focussed on the market transactions necessitated by the division of labor: trades between people cast in different characters, such as workers and managers, producers and merchants, merchants and consumers.

I was dimly aware of the incompleteness of that cast of characters; and it gradually dawned on me that by confining their analysis to only those markets that facilitate the flow of resources and products, the classics might have overlooked other markets the transactions in which inhibit that flow, which would explain their uncritical acceptance of Say's Law.

The main missing character was the capitalist, whose role was the financial management of his wealth (I misnamed him speculator at the time); the overlooked markets were the single-character markets where capitalists trade with other capitalists in the accumulated stock of financial and tangible assets.

The classics could hardly be faulted for those omissions. In their day, financial markets, instruments and information were not yet good enough to enable people efficiently to separate the financial management of their wealth from the physical management of the equipment and other tangible assets in which it was embodied, so there was no need to distinguish capitalists from entrepreneurs.

As to the markets in which the holders of the accumulated stock of assets traded them among themselves, they must have seemed unimportant at the time, because the prices they generated performed no function beyond reflecting the owners' marginal valuations of

[2] "A study of interest and capital", *Economica, N.S.* VII, Aug. 1940.

their possessions. Those prices could, of course, influence the prices of the newly created counterparts of those goods and assets in the parallel first-hand markets; but that influence was negligible as long as either the second-hand markets and their transactions were negligible or contacts between the two sets of markets were small.

Only gradually have the accumulating stocks of assets and goods and the increasing volume of transactions in those stocks increased their influence on the prices that governed the rate at which new assets were issued or goods produced. Producers of durable goods, however, managed to differentiate the first- and second-hand markets for their products through frequent improvements and design changes that made the used specimens seem obsolete substitutes for the new ones and so kept their sale from depressing the latter's price.

Very different was and is the case of financial assets. Unlike physical assets, they neither depreciate nor go out of fashion, which is why they have no separate first- and second-hand markets. Moreover, the volume of transactions in previously issued financial assets has, by now, far outstripped the rate at which new issues and new savings come onto asset markets, which explains why today, the cost of raising capital by issuing financial assets is mainly determined by the price at which previously issued similar assets change hands and is no longer that which equates saving and investment, except by accident.

It appeared therefore that the stickiness of market prices was not the only obstacle to their equating the flow of demand and supply; another obstacle was their dependence also and mainly on prices in the related markets in which the accumulated stocks of similar assets were traded.

That was the gist of my first paper. It seemed to have been read by no one and did nothing to help me emerge from obscurity – owing perhaps to its publication at a time (August 1940) when even the most cloistered academics were preoccupied with the far more important events of Dunkirk and the fall of France. Anyhow, my paper's failure to attract attention changed the direction of my work. It stopped me writing on the subject until almost half a century later when I explored the macroeconomic impact of affluent people's increasing demand for positional goods.[3]

Also, it made me abandon all thought of a major contribution. Instead, I started writing short papers and notes on a great variety of

[3] "Growth in the affluent society", *Lloyds Bank Review* No. 163, Jan. 1987.

subjects, because I read a lot and, being a slow reader, slow at absorbing new ideas, became pretty good at spotting and clearing up mistakes, ambiguities and obscurities overlooked by others. These were noticed and later helped me overcome the handicap of my late start on an academic career; and they also gave me a foothold in several branches of economics, because many of them proved to be a germ I was able to develop much further.

My work on those papers was interrupted, however, by being called up for military service. I welcomed that, because it allayed my bad conscience for not taking part in the war and also because it prevented my appearing at my deportation hearing (scheduled for a few days after my having to report for duty) and possible deportation. Basic training compared favorably to my Hungarian military service and was my true initiation to America and the kindness of Americans. My subsequent training was for combat intelligence and propaganda; I shipped to Europe in a mobile radio broadcasting company, where my fellow-NCOs were Joseph Wechsberg of *The New Yorker*, Igor Cassini, the then Hollywood gossip columnist, Perkins, the *New York Herald Tribune* music critic with a double first in classics from Cambridge University who always carried a volume of Greek plays in his hip pocket, and others of that ilk. Being in the company's French section, the speedy liberation of France made me redundant and I volunteered for a truck driving job where I remained until a chance encounter with a young Harvard economist turned intelligence officer (Paul Sweezy) led to my becoming one of the first three members of the U.S. Strategic Bombing Survey (USSBS).

That was an interesting assignment from both the human and the economist's point of view. It took me to just-liberated Paris and Brussels for long enough to witness the inhabitants' adjustment to their newly won freedom, gave me a glimpse of the fighting in Cologne and provided a chance to interrogate one of the impressive technocrats in charge of Germany's war production just before his capture.

At the beginning of my new assignment, two colleagues and I did the initial thinking, planning, information gathering and recruiting of economists for USSBS, which soon became a mammoth, 1000-man organization. By luck, sheer force of numbers and thanks also to my lecturing the incoming staff on the organization of Germany's Economics and War Production ministries and the names of their top officials, we tracked down most of these from Albert Speer downwards and managed to find and assemble all the statistical

data worth having. (I am still proud of having discovered Germany's national inventory of machine tools on punch cards, evacuated from Berlin to Jena in the Russian Zone, and spiriting away punch cards, Hollerith machines, their operators and the latter's families from under the Russians' noses, convoying them to USSBS headquarters in the American zone one day before the Russians arrived.)

The main conclusions, however, of our shelf-full of reports were very simple. They were that the levelling of German cities by indiscriminate night bombing was counterproductive, because it strengthened the Germans' resolve to fight on rather than lower their morale; and that precision raids on key industries failed to reduce war production, because the Germans were much better equipped with machine tools and other productive equipment than we and the British were (and believed *they* were). All their industries worked on a single shift and could easily compensate for damage to part of their equipment by lengthening the workweek or introducing a second shift.

A colleague and I were the last members of USSBS to leave Europe, writing the final version of its main report in London.[4] On my discharge from the army, I spent some time in the Department of Commerce but then obtained a permanent appointment at Stanford University.

As soon as I started teaching there, I returned to the question of how prices were determined. For I had two problems in teaching microeconomics to graduate students. One stemmed from the very literal-minded cast of my thinking: I could not comprehend how prices come about in competitive markets, when no one is supposed to have a conscious influence on them. How was I to explain to students something I failed to understand myself? Walras seems to have shared my difficulty, because he resolved it by introducing the character of the auctioneer; but I did not like his solution, because it presupposed the existence of perfect markets, whose rare emergence, I felt, ought itself to be explained along with how prices are determined.

My other problem was how to introduce the concept of market power, not only in the limiting case of pure monopoly but into the general model of competition as well.

I resolved those problems by introducing another new character, the price maker, who sets the price and other features of the market offers that confront the price takers facing him; and I postulated the

[4] U.S. Strategic Bombing Survey, *The Effects of Strategic Bombing on the German Economy* 1945.

two necessary conditions for him to do that: (1) his better knowledge of market relevant information than the price takers' to give him a bargaining advantage, and (2) sufficient disparity in numbers between the two sides to make it profitable for price makers to exploit that advantage by making their offers on a take-it-or-leave-it basis.[5]

Looking back at it now, I believe that to have been my main contribution to economics. For my two postulates were not only realistic but turned out to be unavoidable features of most markets in every advanced economy, considering that specialization and the division of labor go hand-in-hand with the specialization and division also of the underlying knowledge and depend crucially on the existence of markets in which a few well-informed specialists confront many not-so-well informed nonspecialists. That is why the pedagogical device I introduced to explain how market prices came about was instantly and universally accepted, although more as an obvious description of reality than as an analytic model.

Yet, focusing analysis on the asymmetric market relations between price makers and price takers has raised, and pointed the way to answering, a great number of important questions. For one thing, it suggested that while competition can, to some degree, restrain the price maker's power to exploit the price takers facing him, perfectly competitive markets only emerge in those rare cases where special circumstances account for the two sides' equal expertise.

For another, once the persons responsible for setting prices were identified, the question naturally arose how long they would keep unchanged a price once set, which immediately led to the discovery and study of transaction costs, costs of change (nowadays called menu costs), the time lags with which price takers respond to price changes and price makers' offers respond to changes in turnover. In short, the character of the price maker had to be introduced to open the way to studying the speed with which and extent to which prices clear markets.

Yet another advantage of modelling the asymmetric market and adding the price-maker to the cast of characters was to bring to the fore nonprice competition, previously known only as an alternative competitive weapon; although it is also a means to secure a monopoly position, a source of various marketing amenities and valuable ser-

[5] *Welfare and Competition*, Richard D. Irwin, 1951, Chicago, Ill.; 2nd ed. 1971.

vices benefiting price takers and, most important of all, the motivation for innovation, growth and the ongoing adaptation of products to fit consumers' convenience and changing tastes. To my shame, I recognized those valuable social benefits of nonprice (and so of imperfect) competition only decades later,[6] and most of the profession ignores them still, to judge by the article on nonprice competition in *The New Palgrave Dictionary*.

The model of the asymmetric market also has its uses in macroeconomics and explains, for example, excess-claims (cost-push) inflation, the most common type which we live with most of the time. That is the kind of inflation which coexists with underemployment and underproduction, because the claims are not to output but to rates of remuneration; and they are excessive in relation not to the volume but to the price of output, in the sense that the sum of the wages and prices the suppliers of the inputs demand plus the price-maker's own markup exceed the price previously set on the product whose inputs they are. The sellers in the factor markets must be price makers or good at bargaining to make their excessive claims on producers effective; and the producers must be price makers in the markets where they sell their products to recoup their losses. In other words, excess-claims inflation and its cost- or wage-price spiral arise when producers are price makers in the markets where they sell but lack that advantage in some of the factor markets where they buy.[7]

All that work originated in my trying to find out what keeps prices from clearing markets; and while it gave me interesting insights into the workings of our economy, I am still working on the original question, this time by seeking the determinants of the floor below which price makers will not lower their prices for fear of bankruptcy.[8]

My work on international economics also started with my interest in exploitation, this time with Governmental tariffs' exploiting domestic firms' monopoly-monopsony power in foreign markets to the country's advantage, when competition among the firms themselves kept them from exploiting it with their own pricing policies to

[6] "Pricetakers' Plenty: a neglected benefit of capitalism", *Kyklos* XXXVIII 1985, and "The benefits of asymmetric markets", *Journal of Economic Perspectives* IV, Winter 1990.

[7] "Market power and inflation", *Economica* XLV, Aug. 1978.

[8] "How our economy stands up to scrutiny", forthcoming in the *American Economist*.

their own advantage. That was a popular topic as early as the turn of the century with Edgeworth, Bickerdike and Marshall; but a purely theoretical one, because few countries imposed tariffs with a view to exploiting foreigners in those days. Most tariffs were import duties designed to protect domestic industries or improve the balance of payments, with increases in the country's share of the gains from trade only a welcome by-product.

The subject acquired practical importance during the 1930s' depression when trade restrictions became an employment policy and retaliatory tariffs and trade wars entered the scene. I knew a little about that, because my father was Hungary's delegate to the many international trade conferences of the interwar period, which aimed in the '20s at restoring and expanding trade relations but after the depression merely tried, with scant success, to combat trade restriction and trade wars. In a 1942 paper I provided the theoretical underpinnings for the latter by showing that just as each producer's quest for profit diminishes the profits of all, so each country's attempt to increase its own advantage from trade diminishes the advantage of all. That is why free trade cannot be trusted to persist or come about but must be imposed either by agreement or by a dominant power. Later I was able to add that Britain was in a unique position for enforcing free trade in the 19th century, because she had much to lose from other countries' trade restrictions and nothing to gain from imposing her own.[9]

I followed up that paper during the late 1950s and early 1960s with work on economic integration, balance-of-payments adjustment within and between countries, international liquidity, and the conditions necessary for a unified currency. The guesses and predictions in my 1958 book on European integration[10] must have turned out better than I had hoped, because years later, when visiting a former student in the Community's offices in Brussels, I unexpectedly found myself dined and wined and the center of attention.

In 1963, I became a member of the group of 32, also known as the Bellagio group, an assortment of academics from 11 countries concerned with international monetary problems, later joined by central bankers Paul Volcker and Otmar Emminger. I enjoyed the

[9] "A reconsideration of the theory of tariffs", *Review of Economic Studies* IX, 1942; also my entry on "Tariffs" in *The New Palgrave Dictionary of Economics*.

[10] *Economic Theory and Western European Integration*, Allen & Unwin, 1958, London.

group's periodic meetings, the lively discussions about practical problems and the contact with policy makers; but continued to feel like an intruder among them, suspecting that they, with their concentration on the problems of the day, would not share my theoretically-oriented scale of values, which assigns equal weight to problems of the long and the short run.

For example, I worked on and later published a plan to link the creation of Special Drawing Rights to grants-in-aid for Third-World countries,[11] because I had been disturbed by the gradual transformation of our generous development aid into loans and feared that the accumulation of the Third-World countries' foreign debt might lead to unmanageable transfer problems. The Bellagio group would have been the ideal forum for a constructive discussion of my plan; but I never dared to present it for fear that they would only see its short-run difficulties and be blind to its long-term advantages.

That my fears were justified I learned at one of the meetings following the 1973 oil shock. It began with general elation and self-congratulation over the successful recycling of OPEC's oil profits deposited in U.S. banks and generously lent by them (at high interest) to Third-World countries, thereby preventing the depression that the oil shock was generally expected to create. Since the debt accumulation seemed enormous, I raised the question whether the poor countries would ever be able to repay those loans, which did not even contribute to their development. Having lived through the 1930s, whose economic and political miseries seemed to an ex-European to have had much to do with the transfer problem of reparations and debt repayment, I thought that to be an obvious, important and opportune question; but many of the others seemed to consider my raising it highly inappropriate. At any rate, the chairman hastened to shut me up and change the subject, some people looked at me as if I had said something obscene; and I relearned the lesson that practical people deal with problems of the moment and let the future take care of itself.

My writing on international economic problems came to an end when divorce changed my life. To ease the pains of divorce by geographic distance, I accepted a two-year appointment at the Development Centre of OECD in Paris, which kept me busy full-time with

[11] "A new approach to international liquidity", *American Economic Review* LVI, March 1966.

development problems. I enjoyed the work, because it was my first close encounter with industrialists and real-world economies, my first chance to apply theory to practical problems, and my only opportunity for prolonged cooperation with stimulating colleagues, which led to close friendships and a joint book.[12]

But my most enjoyable work in the field was a survey of Taiwan's and South Korea's economic development.[13] The two countries looked like identical twins, equal in race, culture, religion, their recent history, and growing at almost the same, exceptionally fast rate. Economic and social indicators showed Taiwan to be considerably ahead of Korea but only because the Korean war delayed the latter's development and its devastation made her start from a lower base.

To make my paper interesting, I had to discover differences between the two and to track them down required detective work more than economic analysis. My first clue was Seoul's more prosperous, modern and elegant look than Taipei's, although Korea was much the poorer country. I had never seen such glaring conflict between the statistical evidence and my tourist's impressions and guessed that greater inequalities in Korean incomes might explain it. That was borne out by statistics; but what explained the difference between two such very similar countries' income distributions?

Identical land reforms and the confiscation of the rich Japanese settlers' property in both countries had enabled them to start their postwar development with the same egalitarian income distribution; and while development was known to increase income inequalities, why did that occur only in late-starting Korea, not in Taiwan? The reason seems to have been Taiwan's unique adherence to a high interest-rate policy throughout the postwar period. Its effect on income distribution seemed paradoxical, because according to conventional wisdom, high interest rates make rich creditors richer and poor debtors poorer. That wisdom, however, had been stood on its head in the Third World, where the creditors were the poor, whom the lack of social security compelled to save for their old age, and the

[12] I.M.D. Little, T. Scitovsky, M. Scott *Industry and Trade in Some Developing Countries*, Oxford University Press, 1970, London.

[13] "Economic development in Taiwan and South Korea: 1965-81", *Food Research Institute Studies* XIX No. 3, 1985; also in L.J. Lau (ed.) *Models of Development*, ICS Press, 1986, San Francisco, California.

main debtors were the rich corporations and their owner-managers. That is why Taiwan's tight monetary policy slowed the growth of her firms and not only helped the poor but encouraged them to save more, making the country's personal saving rate the world's second highest, thereby enabling her to minimize her foreign debt and her economy to grow, not by the increasing size of large, but by the proliferation of small firms, founded by small savers out of their own and their relatives' and neighbors' savings. A related effect of the high interest-rate policy was to eliminate the excess demand for investment funds thereby greatly limiting Government's ability to ration credit and control private investment.

Taiwan's monetary policy was best known, however, for the speed with which it stopped inflation in its tracks. After the first oil shock, South Korea adopted a similar anti-inflationary policy with good but much less spectacular success; and she soon abandoned it in order to regain her tight control over investment and the direction in which the economy was going.

In other words, of the two countries' equally autocratic Governments, South Korea's kept tight reins over its economy with the aid of giant corporations whose investments it could plan and control; whereas Taiwan's equally authoritarian Government willy-nilly allowed a surprisingly liberal, almost 19th century type of small-scale free-enterprise economy to develop. The key to that difference was undoubtedly Taiwan's much tighter monetary policy; and that raised two questions. Why has Taiwan's Government adopted and stuck to a monetary policy that limited its direct control over the economy and was very much out of fashion at the time; and why was that policy so very effective in maintaining both full employment and reasonable price stability?

The probable answer to the first question is that Chiang Kai-shek and his advisers were the only non-communist rulers to experience hyperinflation in the flesh (in mainland China) and that made preventing a repetition of that experience their highest priority.

More puzzling was the uncanny effectiveness of Taiwan's monetary policy in assuring both price stability and full employment at the same time. When the 1973 oil shock raised wholesale prices by 40% within a year, Taiwan's raising of interest rates not only stopped the inflation within the next year but rolled prices back by 5% percent, while employment and real output continued to grow. That may look like an incredible accomplishment to us, who live in economies with

downwardly sticky prices; but it is what, say, Wicksell's theory of the natural rate of interest, with its tacit assumption of flexible prices, predicted.

In my latest paper referred to earlier,[14] I argued that downward price flexibility is likely to be assured whenever and wherever firms are small enough for managers to have personal relations with their employees and suppliers; and I believe that condition to have been pretty well fulfilled in Taiwan, not quite so well in South Korea. The problem of price flexibility appears to have haunted me throughout my professional career.

My other new interest, whose beginning also dates from Paris days, was motivational psychology, the study of the various sources of people's satisfactions, whose pursuit motivates their behavior. Some of my colleagues were shocked by that change of venue, perceiving it, I suspect, as a sign of incipient senility; but to me it seemed a logical extension of my interests. After all, much of my work had a welfare orientation, what more natural than to look at the effect on consumers' welfare also of their own behavior? Besides, my main contribution to economics was to introduce and analyze the asymmetric market rendered asymmetrical by the participants' incomplete and unequal market-relevant information: in psychology, I set out to explore the implication of the individual's incomplete knowledge of sources of satisfaction on his or her own welfare. Finally, as an immigrant, transplanted from an easy-going yet varied and interesting life in Hungary into America's industrious and puritan atmosphere, I was especially interested in the sources and implications of the difference between the two cultures.

In an early note,[15] I explored the geometry of the difference between maximizing profit or money income and maximizing satisfaction – activities the profession in those days considered more or less synonymous, though attributing the former to firms, the latter to people. I showed that when (or if) entrepreneurs and managers maximize their firms' profit, they reveal a particular preference pattern, which also characterizes misers, persons who love money for the security and power it gives, for the worldly success it symbolizes, or for the spiritual salvation it signifies to Calvinist believers in predestination, and even, to some extent, people who find complete

[14] See note 8 above.

[15] "A note on profit maximisation and its implications", *Review of Economic Studies* IX, 1943.

satisfaction in their work. In short, not only entrepreneurs, but puritans, the money-minded and the workaholics are all income maximizers; and they constitute a large part of the population in most of the advanced industrial countries. One can probably attribute to that those countries' economic superiority and fast growth – as did Max Weber and R.H. Tawney in their theories of the rise of capitalism, though they put much the same argument into very different language.

But if a country's superior economic performance is due to its inhabitants' ambition to maximize their profits or money income, is there no danger that their enjoyment of life might suffer as a result? The very question must seem preposterous to those who unquestioningly accept the economist's assumption that everybody can be trusted to know best what gives him or her the most satisfaction and to act accordingly; for in that case, those who maximize money income can be assumed thereby also to maximize their satisfaction. That, indeed, was the underlying assumption of my 1943 note.

The situation, however, is not that simple, because while economists usually assume people to be rational and knowledgeable, that assumption must, at the very least, be taken with a grain of salt. To begin with, people's consumption patterns are highly suggestible and depend largely on tradition, habit, imitation and fashion. Secondly, the enjoyment of life and many of the satisfactions that contribute to it have to be learned like everything else. Indeed, the most enjoyable sources of satisfaction usually require the most skill and learning; and our educational system is much too imbued with the puritan work ethic to provide more than a modicum of that learning. Thirdly, money is general purchasing power, considered to give access to most of the good things in life; and when we make money, we often don't know, and don't have to know how and on what we are going to spend it. That is why money appears to most of us as the gateway to future pleasures and comforts even when we don't know of what these will consist.

I probably have always been more aware of those problems than my American-born colleagues; but returning to Continental Europe after 25-years' stay in America was a vivid reminder and made me realize more than I did before that the difference between the two Continents' lifestyles had more to do with differences in education and attitude to life than with affluence and élitism.

Needless to say, I was not the first economist to realize this and try to distinguish the different sources of human satisfactions. On the contrary, I may be one of the last. As long as economics was part of philosophy, economist-philosophers learnt about the various sources of man's satisfaction as a matter of course; but when it became a separate discipline, economists lost interest in the subject, assuming that each person knew best what he or she wanted. That seemed justified in earlier days; but already Alfred Marshall knew that there was something wrong with it. For he criticized Jevons for regarding human wants as the sole scientific basis of economics, arguing that activities that are their own reward are no less and possibly even more important. When Schumpeter spoke about the entrepreneur's creative urge and Keynes about his animal spirits without which there might not be much investment, they had one such rewarding activity in mind – Marx had another when he blamed the excessive division of labor under capitalism for alienating the worker from his work and depriving him of work satisfaction. Those, however, are only two of many activities that are their own reward.

One crucial difference between wants and rewarding activities is that a want, as its very name implies, is a source of satisfaction that is already familiar to, and desired by the person who wants it; whereas most rewarding activities require a skill for their exercise and enjoyment and are neither enjoyed nor even wanted by people who have not learned that skill. With respect to such activities therefore, our customary assumption that most people know what gives or would give them satisfaction is not fulfilled.

Marshall may not have been aware of that difference; had he been, he would have made more of it than merely to critize Jevons' neglect of rewarding activities. But having often questioned consumers' rationality and knowledgeability, I suspected the subject to have important consequences and to be well worth exploring. Finding little on it in economists' writings, I turned to motivational psychology for enlightenment and found its literature so rich and fascinating that I read everything I could lay hands on and ended up by writing a book on the subject.[16] It became a summary in layman's language of the motivational psychologists' theories and the findings and experiments on which they were based; but I also managed to supplement some of those findings with a few simple economic

[16] *The Joyless Economy*, Oxford University Press, 1976, New York.

statistics and to round out the psychologists' theories by adding a few of my own economist's observations.

It was the most difficult and most enjoyable of all my writings: the former, because organizing many disparate bits of material into a coherent whole proved a formidable undertaking, the latter, because overcoming difficulties is always enjoyable and also because working on that book has greatly added to my self-knowledge and understanding of others.

In the past, most of what I enjoyed writing was also appreciated by its readers; but this book turned out to be an exception – possibly because I sent it to the wrong address. It was addressed to my fellow economists and they did not know what to do with it.

For the book analyzed the different sources of satisfaction and its message was that many of us do not know enough about what life and the market have to offer to make adequate use of it. That can create personal as well as social problems and the economy can be responsible for bringing about circumstances in which it creates them; but economists are not, as a rule, the people to eliminate those problems, at least not in their capacity as economists. The reason for this is a second crucial differences between wants and rewarding activities. To satisfy wants requires scarce resources, which renders their satisfaction an economic activity; whereas there is nothing scarce about rewarding activities, which means that to perform them just to enjoy the stimulus satisfaction they provide, is not an economic activity, although it becomes one when performed to yield also income or a marketable product for sale.

Aware of that difference, Keynes, in a prophetic article,[17] defined the satisfaction of wants as *the* economic problem and called the finding and learning of activities with satisfying intrinsic rewards "the permanent problem of the human race ... a fearful problem for the ordinary person, with no special talents, to occupy himself". Bearing in mind the satiability of most human wants, he speculated that barring wars, continued capital accumulation and technical progress could, within a century, bring us close to an economic utopia in which "a quarter of the human effort to which we have been accustomed" would produce many times our present standard of

[17] J.M. Keynes "Economic possibilities for our grandchildren" in his *Essays in Persuasion*, W.W. Norton, 1963, New York.

living. Keynes feared that the resulting "technological unemployment" might lead to "a general nervous breakdown ... of the sort common enough in England and the United States among the wives of the well-to-do classes"; and R.F. Harrod, looking at the same problem, envisaged a return to war, violence and blood sports – activities that the idle rich of the middle ages occupied themselves with.[18]

We are still very far, of course, from approaching that frightening utopia but the problem already exists in our midst, plaguing not so much the idle rich as the forcibly idled unemployed, unemployable youths and men, and the aged. For the idle rich, at least the *anciens riches* among them, follow an age-long tradition of giving their children an élitist education, which usually enables them to take up some scientific, artistic, cultural, philanthropic or other more-or-less benign activity that can be just as satisfying as work would be. It is mainly those with involuntary idleness thrust upon them who suffer psychological deprivation from lack of work or too little of it. The solution of that problem awaits a reform of our educational philosophy and lifestyle, which is bound to be a difficult and very slow process; and I had hoped and still hope that my book and other writings on psychology would contribute to a better understanding of the problem and of what needs to be done about it.

Let me conclude by pointing out an affinity between that problem and the one my first paper dealt with. There, I dealt with unemployment, which was considered to be a problem because it leads to loss of income; much of my work on psychology focused on people's need for stimulus satisfaction and their difficulty of obtaining enough of it – a problem that is caused by no or not enough employment and the consequent loss of work satisfaction. Income and work satisfaction are equally important benefits of employment; but while society tries to compensate the unemployed for lack of the former, nothing or next to nothing is done to compensate them (and the underemployed) for lack of the latter. I did not set out to investigate that problem but stumbled upon it in the course of

[18] R.F. Harrod "The possibility of economic satiety" in Committee for Economic Development, *Problems of Economic Development*, 1958, New York.

studying motivational psychology, which was prompted by sheer curiosity and my dislike of the unrealistic assumptions on which so much economic reasoning is based. The fact that I did come upon it makes me feel that satisfying my idle curiosity was not only fun for me but of some social value as well.

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