A NEW ECONOMICS FOR THE NEW ECONOMY

by

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The enormous changes taking place in economic affairs around the world, especially since the commercial development of the internet along with other revolutions in electronic communications, raise a host of questions and issues of which this article addresses only three: What is the new economy? Why do we need a new economics? Where do we begin the construction of a new economics?

Simply put, our argument is that the economic revolution which we call the new economy calls for a serious re-thinking of the economics which provides a description and understanding of economic affairs in the new economic order, and that re-thinking begins with the issue of economic agent. We are convinced that the concept of the economic agent of the old economics should be replaced by a new version appropriate to the new economics.

What Is the New Economy?

The new economy is a term which is used widely today but has different meanings for each person using it. Often, even in serious economic literature, the term is used undefined, vaguely implying some aspect of the advances in the technology of control and information handling. The range of definitions, where they are given, is wide but, in recent years, there has been some tendency for them to become increasingly precise and narrow. For the purposes of this paper, we propose the following definition. The new economy is the economy related to the development and spread of new information and communication technologies and is characterized by the fall of national and cultural barriers, broadening of service sectors by comparison with commodity sectors, prevalence of the financial market over the real (good) market, and variability of final demand.

The new economy involves subordination of the nation-state to a larger, more powerful economic union, such as the subordination of the 15 nation-state members to the European Union, and the subordination of Mexico, Canada, and the United States under NAFTA. This development is driven significantly by the proliferation and spread of electronic communications media and an information technology revolution which increasingly allow and indeed encourage economic affairs to be conducted across national borders but outside the clear control of the nation-state whose borders are being crossed. Supra-national economic unions such as the European Union are facilitated, if not required by wider, more frequent, and faster interactions between and among economic agents which reflect and reinforce a greater awareness of others in economic affairs. This is especially the case with regard to global financial transactions. Of course, powerful economic unions are not new to Europe. By the late Middle Ages hundreds of towns in northern Europe had been formed into an economic union known formally as the Hanseatic League to handle issues regarding currency, shipping, and commercial law, and to settle disputes [Heaton 1948, pp.147-150]. However the motivation for, and far-reaching nature of the development of the European Union is of a different order of magnitude.

It is hard to be sure of the relative importance in the world economy of the economic areas enclosed within national boundaries, the international relationships between these and the global areas where economic agents and markets take on world-wide dimensions. This problem is not entirely new. Yet in the second half of the 20th century we have witnessed the beginning of a new phase, which already has been consolidated under the influence of factors such as international politics, science and technology, and economics and finance. For example, the practice of buying and selling over the Internet, the emergence of a common currency in the European Union, and the adoption of the dollar as the national currency of Ecuador in 2000 [Embassy, p. 1] and its adoption in effect in Hong Kong and Argentina [Tobin, p. 4], along with serious discussions regarding dollarization through the Americas [see IMF, pp.1-25 and Berg and Borensztein, pp. 1-7] are developments which no one could have predicted with certainty as recently as 30 years ago.

The new economy involves the practice of economic agents working in different countries and serving the world market without a prevailing national base. These agents change their location between national territories on the basis of opportunities for growth and profit, and they grow not because they are supported or protected by the nation-state but through their own efforts. They carry out their economic affairs as if the boundaries which define the nation-state do not exist.[1]

Internationalization, on the other hand, is characterized by business enterprises and markets which have a prevailing national basis and which have relationships with each other in the context of international trade. The distinction between the characteristics of the new economy noted above and internationalization does not depend on the size of the companies, since some national agents are larger and more powerful than some new economy agents. The difference is that under internationalization economic agents act with some considerable regard for the boundaries which define the nation-state where they originated and the other nation-states where they carry on their business. In 1997 the 100 largest non-financial transnational companies in the world had foreign assets of $1.793 trillion, or 42.6 percent of their total assets, and foreign sales of $2.133 trillion, or 53.5 percent of their total sales. Their combined foreign employment was 5.981 million, or 51.5 percent of their total employment. In terms of foreign asset holdings, General Electric was ranked number one with $97.4 billion. The other top ten companies were: Ford, Royal Dutch/Shell, General Motors, Exxon, Toyota, IBM, Volkswagen, Nestlé, and Daimler-Benz. Of these companies, five are in the automobile sector (Ford, General Motors, Volkswagen, Toyota, Daimler-Benz), two are in energy (Shell and Exxon), and one each in electronics (General Electric), computers (IBM), and

[1] If we substitute "new economy" for "globalization" our definition closes matches the one used by Nitikin and Elliott [p. 14]: "... globalization is ... the establishment of the global market free from sociopolitical control." And Daly's as well [p. 1]: "Globalization refers to global economic integration of many formerly national economies into one global economy, mainly by free trade and free capital mobility, but also by easy or uncontrolled migration. It is the effective erasure of national boundaries for economic purposes."

food (Nestlé). As to country of origin, five are American, four are European, and one is Japanese [World Investment Report, pp. 1-5].[2]

From these estimates we can begin to understand the enormity of the challenge of the new economy to nation-states. This challenge becomes even clearer when we begin to analyze the three great areas of innovation today -- information and communication technologies (ICT), finance, and production processes -- which are changing the very concept of national sovereignty. The old idea of the sovereign state as wielding greater power and knowledge than its agents and citizens has been challenged by the spread of technological innovation. This development has led to the consolidation and reinforcement of financial integration and economic globalization through: (1) the emergence of countless startup enterprises bringing to the marketplace products and services originating in scientific and technological research; (2) the successful transfer of this research to established enterprises contributing to important innovations in the process of production and the materials used in the production process, in the form new products and services and new market penetration, and in the new ways in which business enterprises are organized and managed; and (3) the introduction and acceptance of systems for accessing information and controlling operations which are complex and powerful and at the same time user-friendly.

The impact of ICT on both the financial and real sectors of the economy is unprecedented in economic history. By enabling companies to organize production in distant locations efficiently both in terms of production costs and markets, the ICT revolution has added an entirely new dimension to the five fundamental economic processes of production, distribution, exchange, consumption, and capital investment.

Technological innovation has been a powerful influence in overcoming barriers of space and time and the institutional and cultural barriers which separate national markets. It has spread throughout countries with important effects on product, resource, and financial markets. These changes, which are central to the new economy, require increasing levels of training and skills which transform the very nature of human work such that knowledge itself is even more critical than at any time in the past. The differences in training and infrastructure from one country to another even from one developed country to another are vast. In the early 1990s, for instance, the United States government launched a program to develop the so-called "information superhighway." More recently the countries of Europe launched the same initiative to connect individuals, families, private enterprises and organizations, and public agencies to the Internet in order to overcome the

[2] Three of the ten -- Ford, General Electric, and IBM -- also are ranked among the top ten global brand names in the first-ever ranking of the top 100 global brands by dollar value. To be included in this ranking of 100 "best global brands" a brand such as Starbucks, Coca Cola, or Marlboro is defined as a global brand only if it has sales of at least 20 percent outside its region or home country [see Khermouch and others, pp. 50-57].

information-technology gap which separates the European economy from the United States economy.

At the March 2000 summit meeting in Lisbon, the heads of government and ministers of the 15 European countries passed a series of measures aimed at connecting all European schools to the Internet by 2001. But this was not all. One of the European Union's objectives for 2000 was to define a flexible program of regulations for electronic commerce and the liberalization of telecommunications over the so-called "last mile" in order to drastically reduce the costs of Internet connection [European Commission, p. 2].

IMF Director of Research Michael Mussa has identified improvements in the technology of transportation and communication as one of the two factors -- the other is the reduction in artificial barriers to international commerce -- driving global economic integration since World War II. In the last half of the 20th century world trade in goods and services has expanded at nearly twice the rate of world real GDP, and has lifted the volume of world trade[3] from one-tenth to roughly one-third of world GDP. At the same time, the cost of voice, text, and data communication has dropped significantly due to innovations in ICT which already have had powerful implications for international trade, notably trade in services [Mussa, pp. 1,12].

Why Do We Need a New Economics?

We need a new economics, a new description and understanding of contemporary economic affairs, because economic affairs are conducted differently today as compared with the past. Most important in this regard are the changing roles of economic agents such as consumer and merchant, worker and producer, entrepreneur and financial agent in the new economy. Further, the new roles which they are acquiring significantly change their awareness of other economic agents, notably the ones with whom they interact, and as a consequence also change their self-awareness. The need for a new economics is best demonstrated in the deficiencies of the four premises of the old economics: the individual, the law of nature, certainty, and instrumental value.[4]

The most important premise of the old economics is that the central unit of economic analysis is the individual economic agent. Of course, institutions and business enterprises can also be regarded as economic agents but it will be helpful, in the first instance, to concentrate on the individual and, for the new economics, we need a broader definition of the basic individual economic agent

[3] The sum of both exports and imports.

[4] Waters identifies not only these four premises of the old economics but the four corresponding premises of the new economics [Waters 1988, pp.115-117].

Under the old economics, the economic agent exhibits, particularly, inward directedness, autonomy, and awareness of self and self-interest. The economic agent is represented as intelligent, thoroughly rational, utility-calculating and maximizing, and free to choose in all economic decision making; competitive, making use of his/her disposition to undertake certain tasks individually for the individual reward or gain. The economic agent of the old economics, though changing and evolving, behaves consistently and predictably -- a great convenience for economic analysis -- and behaves in a manner completely detached from community or cultural influence, being essentially solitary; indeed, in the limit, this economic agent is regarded as a machine [see, for example, Blinder, p.18].

For the old economics, emphasis on the individual economic agent has proved useful for more than two centuries, and has been, in a sense, validated most recently by the demise of soviet communism and the collectivist philosophy which supported a radically different characterization of economic agents. But this concept of an economic agent is not appropriate for the new economy in which economic affairs are increasingly being centralized in supra-national economic unions. The old model fits well in a world and at a time when decentralization was taking place in political affairs, notably during the transition from royalty to free citizenry, from privilege to merit. If, however, the actual roles and characteristics of economic agents have changed in the new economy, it follows that a new economics begins with a re-thinking of the concept of the economic agent.

The new economics demands the addition of important characteristics and dimensions not included in the old concept of the economic agent. The new economics demands recognition of the social role of the individual. It could be argued of course that the absence of this recognition was always a weakness of the old economics. However, it is the rise of the new economy that has widened the gap between the old economic and current economic reality, and has thus made more urgent the re-thinking we propose. The new economic agent is both inward-directed and outward-reaching, autonomous and dependent, aware of self and self-interested but, at the same time, aware of others and concerned for their well-being. The new economic agent is intelligent, thoroughly rational, utility-calculating and maximizing, and free to choose, yet also intuitive, emotional, and ethically instructed and governed. In all economic affairs the new economic agent is not only competitive but cooperative, making use of his/her disposition to undertake certain tasks collectively for the reward or gain which cannot be achieved or achieved so well when those tasks are undertaken by the individual alone.

The economy may be compared to a twin-engine aircraft which is built through the efforts of human economic activities such as working, saving, innovating, trading and the like, and is powered by the engines of competition and cooperation. As with the aircraft, the economy performs better when both engines are synchronized in flight though it can operate on just one alone. We add to this analogy as we proceed further into this article.

The old economic agent is constant and therefore predictable, and even though changing and evolving with the passage of time, changing and evolving in ways which are quantifiable as indicated conceptually by human capital and which therefore can be incorporated in the mathematical models of the old economics. The new economic agent is unique, one of a kind, valuing both individual and social roles, changing as an economic agent with changing economic conditions and circumstances, but essentially a holistic unified human being, not one part individual, one part social, but a fusion of the two.

The new economic agent is aware that community and a sense of belonging emerge when he participates constructively in the economic lives of others, that economic communities, as for example in the form of private companies which produce the goods and services vital to human existence, require positive contributions from the economic agents who form those communities, that all existence is co-existence, and that some degree of altruism, benevolence, and generosity are duties within the three central economic activities of work, consumption, and leisure. For the old economic agent, these are praiseworthy but nonessential personality traits.

Adam Smith's *Moral Sentiments* calls attention to these duties, and Marshall rejects competition as the fundamental characteristic of modern economic systems, affirming instead the importance of neighbourhoods and collective action, of honesty, fidelity, unselfishness, and sympathy [Marshall 1948, pp.5-7]. But the old economic agent was derived not from Marshall's *Principles* or Smith's *Moral Sentiments* but from *Wealth of Nations*. In that sense, the new economics and the economic agent re-approach the fullness of Smith's and Marshall's original ideas about economic agency.

The new economics sees culture as playing an important role in economic affairs. A helpful definition of culture, in this context, is provided by Dulles.

> Culture ... is a pervasive atmosphere ... a social force that encompasses individuals and welds them into communities. It shapes their prejudices, ideas, values, habits, attitudes, taste and priorities ... it inquires into what we are as human being, and what reality is in its most comprehensive dimensions [Dulles 1999, p.2].

To embrace culture the old economics would have to admit that economic agents exist within communities. Culture relates to the specific, customary ways in which needs and wants are addressed. To illustrate, at a traditional Cajun wedding reception it is customary for a guest who would like to dance with the bride to pin paper currency to her dress. Across Europe the month of August is set aside for vacations, and it is not uncommon for businesses to close for the entire month. In the U.S. work itself is so highly valued that many Americans are workaholics, and related to that addiction many Americans experience a sleep deficit, and at times fall asleep on the job.

To extend our analogy of the economy to a twin-engine aircraft, culture relates to the economy much as weather influences the aircraft. When human beings are not totally self-absorbed and at least from time to time care about one another in economic affairs, the performance of the economy improves, just as the aircraft performs better in good weather. On the other hand, for well over one hundred years, we have witnessed the devastating effects, on developed and developing economies, of the "bad weather" of genocide, ethnic cleansing, civil war, terrorism, drugs, slavery and other social evils. The old economics denies that weather has any role to play in the operation of the aircraft. The new economics affirms what is obvious even to the casual observer: weather has a powerful effect on the aircraft's performance.

As to work, most normal people desire a job which affords opportunities to use creative talents and energies, and scorns the "dead-end" job. Further, people desire acceptance by others on the job, and it is normal for a person to be distressed whenever he/she is not fully accepted as a member of the work group.

As to consumption, people use goods and services for their physical and mental well-being, but more than that often is called for. They seek truth, beauty and stimulation in various forms such as music, art, drama, nature, literature, dance, and sports. In searching for these it is almost always necessary to purchase goods and services. To attend a concert, it is necessary to pay an admission fee. To enjoy the beauty of seashore or the mountains, certain travel expenses are necessary. In other words, one can purchase these extras by paying for certain goods and services, and thus an important dimension of consumption is to meet these desires.

Human beings are marvelously and mysteriously different in countless ways. What may satisfy one person may be of no interest or value to another. Some are drawn to opera, others to rap. One family member may find the beach the perfect place to vacation, another may strongly prefer the mountains. A well-pitched baseball game may excite some people who, however, are bored by a low-scoring soccer game. The new economics characterizes the purchase and use of goods and services in this manner as leisure, a third kind of economic activity distinct from work and consumption. The old economics, on the other hand, defines leisure in a negative sense: time spent not working.

By the "law of nature" the old economics means that product markets, resource markets, and financial markets provide a forum for the interaction of economic agents and those markets by their very nature function efficiently and effectively. The law of nature presumes that every economic agent is capable of representing his/her own best interest without assistance, and that the agreements which agents reach freely with other agents automatically fulfil the duties of both agents to the group(s) to which they belong. However, individual freedom to act in markets does not justify bringing harm to others. There is no need for any intervention on the part of private groups or public bodies unless the prohibition on hurting others is breached. For some, the law of nature says that community does not matter in economic affairs because it is simply a way of referring to a collection of individuals. Community, in other words, is just a manner of speaking. For others, the law of nature means that community can be maintained and supported without the direct contributions of its members, that it exists entirely on its own.

The new economics admits instead that markets are, at times, dysfunctional, and institutions are needed to intervene in order to address that dysfunction. For example, some employers left to their own devices would contaminate the air, soil, or water with their waste discharge. Therefore it is necessary to limit the amount of waste which they are allowed to discharge legally and to fine them and shut them down whenever they exceed that limit. The limit is determined ultimately by scientific inquiry. Another limit is the legal minimum wage which forces employers to pay the legal minimum when otherwise they might take advantage of their workers and pay them less. By analogy, intervention whether by private group or public body represents the control devices of the twin-engine aircraft such as the rudder and flaps, allowing the pilot to control the economy in takeoff, during flight especially to avoid turbulence and bad weather, and to land safely at its destination. Loss of those control devices in flight makes landing the aircraft without mishap nearly impossible.

The old economics relies heavily on mathematical models and data sets to describe and predict. Within the limitations of the model, predictions can be made with certainty. This investigative methodology is grounded, of course, in the Enlightenment and the scientific method. The new economics admits that certainty is not possible in economics because economic agents are complex ever-changing human beings who remain at least in part a mystery even to themselves, and therefore impossible to represent fully in mathematical models. Thus, conclusions drawn from economic research must be couched in terms which reflect some uncertainty. The problem for the professional research economist is how to deal with uncertainty in an open and honest fashion, carefully sifting and weighing the empirical evidence to draw only those conclusions which the data will support. Reducing uncertainty is an ever greater challenge today because in the new economy economic agents are embedded in vastly different cultures and their behavior therefore is not always adequately understood and predictable. Further, what in one culture is unacceptable and illegal behavior (bribery) may be acceptable in another (facilitating payment, a cost of business). In this regard, analogy can be a powerful model, though lacking in precision. However, when it is carefully crafted, analogy can be more deeply probing and instructive of economic affairs than a mathematical model.

By “instrumental value” the old economics means that the worth of every economic agent is determined by the contract (explicit or implicit) which sets forth what payment that agent has accepted for the work he/she performs. That is, worth ultimately depends on how useful an agent is as an economic instrument. The new economics rejects that premise. Though in some cultures not all humans are accepted as equals, there is a growing consensus, notably in the west, to respect every human being because there is no ethically acceptable way to value one more highly than the other.

The new economy, and in particular the immediacy and effectiveness of modern communications, confront us daily, in our living rooms, with examples of suffering engendered by failure of governments and wealth creators to respond adequately to the basic human needs of much of the world's population, and to respond adequately to environmental concerns. A changing climate of opinion about these issues is having a positive world-wide influence on economic policies which must be taken into account in constructing a new economics.

A major deficiency in the old economics is that microeconomics and macroeconomics have not been integrated into a unified general theory. This predicament originates with its limited concept of the economic agent. There is no such problem when economics proceeds from the premise that the economic agent has a social dimension. To explain, microeconomics represents a description and understanding of economic affairs from the perspective of human individuality. Macroeconomics, on the other hand, sees economic affairs from the perspective of human sociality. An integration of the two branches of economic theory is necessary because humans are fully integrated such that it is impossible to separate the individual being from the social being. Thus the new economics can make the integration of economic theory possible by construing all economic affairs -- working, consuming, saving, investing, lending, borrowing, innovating, brokering, insuring, buying, selling, resting, hiring, dismissing, and the like -- not in terms of the impersonal, mechanical forces of the market but in terms of "the ordinary business of life" [Marshall, p. 1].

Where Do We Begin the Construction of a New Economics?

Our third question – where do we being the construction of a new economics? -- has a simple and direct answer which follows logically from our preceding remarks. We begin with the economic agent. However, in order to do that it is necessary first to begin with economic justice because the knowledge and practice of justice in economics affairs is fundamental to the differentiation of the new economic agent from the old.

Acting as economic agents, and given their free will and intelligence, people are capable of making choices. In many instances those choices in economic affairs are ethically neutral, that is they involve no ethical issue. For example, the decision to paint the outside of one's house with white paint versus some other color has no ethical content. One color is not morally right and another morally wrong. However, the decision as to what you should pay a person to work for you very likely has an ethical dimension. To illustrate, deliberately withholding the pay until the work has been completed and paying the worker less than was agreed, even though the work was done to your exact specifications, is unethical.

Are decisions regarding ethical issues in economic affairs entirely arbitrary, depending completely on the whims, fancies, feelings, opinions, attitudes, and values of the persons making those decisions? Or, are there objective standards which apply in economic affairs rendering ethical decision-making reasoned, defensible, and alike from one person to the next except in instances of specific extenuating circumstances? Our view is that certain objective ethical standards are applied in economic affairs, that ultimately those ethical standards originate in the human experience, and that the new economy is encouraging an increase in the breadth and depth of these shared standards.

Shoplifting is destructive of retail trade because clearly it is unreasonable to expect a shopkeeper to operate his/her store when customers are entirely free to take whatever they want from the shelves and leave the store without paying. Indeed, not punishing shoplifting would ensure that few if anyone would be so foolish as to become a merchant and expect to earn a living. To teach and reinforce the ban on shoplifting, it is necessary to have laws and enforcement officers to assure that shoplifting is punished. There is a growing awareness of a need for trust, on the one hand, and effective regulation, on the other, in the still newly emerging field of internet trading where economic agents conduct business without meeting face to face.

With the exception of distributive justice, the old economics has little to say about ethics in economic affairs. The new economics insists that ethics in economic affairs is necessary for building and maintaining trust between and among economic agents. Trust is the willingness to accept another agent's promise to abide by the terms of a just agreement. Without trust, economic transactions tend to break down due to the transaction costs attributable to monitoring and enforcing those transactions [*Economic Trends*, July 2002, p. 1]. The need for trust is heightened in the new economy because decision-making takes place over a shorter time span giving less time to evaluate the trustworthiness of other economic agents. Additionally, communications are less face-to-face, direct and personal, more at arm's length, indirect, and impersonal, making it more difficult to evaluate trustworthiness.

We begin with a general definition of justice. Justice is the virtue or good habit of rendering to another that which is owed. In economic affairs there are three applicable principles of justice: the principle of equivalence, the principle of distributive justice, and the principle of contributive justice. There are three principles of economic justice because there are only three main ways in which economic agents can interact: person to person, superior to subordinate, and member to group.

The principle of equivalence.

The principle of equivalence states that buyer and seller in the product market, the resource-holder (including worker) and producer in the resource market, and the creditor and borrower in the financial market have two duties which are ethically binding on both parties. First, they are to exchange things of equal value. Second, they are to impose equal burdens on one another. In many such transactions, personal experience informs us as to what equal value means. By equal burdens we mean that the burden of the seller is to give up possession of the good or service in question. For the buyer, the burden is to hand over the money necessary to take possession of that good or service. For the worker, the burden is performing the work required by the employer. For the employer, the burden is paying the worker the agreed wage. For the creditor the burden is surrendering use of the loaned funds, waiting for repayment, and taking on the risk of default. For the borrower the burden is making payments on time as agreed.

For example, we may not know precisely the price of a Rolex watch but we very likely know that it does not sell for the same price as a Timex watch. Anyone attempting to sell a watch which is represented as an authentic Rolex for, say, $49 should be suspected of (1) selling a Rolex watch which is stolen, (2) selling a watch which actually is a counterfeit or a "knockoff," or (3) selling a genuine Rolex but having no real appreciation for its true worth. The principle of equivalence means that (#1) is wrong because the seller has no right to sell what does not belong to him and the buyer has no right to buy and take possession of a watch which belongs to someone other than the seller, that (#2) is wrong because the seller is deliberately deceiving the buyer, and (#3) is wrong because the buyer has no right to exploit the seller who is unaware of the watch's true value.

There are other sources of information about what equal means in a product market, resource market, or financial market. They include information available through family members, friends, co-workers, neighbors, and persons who consult for a fee. There are published sources of information as well such as *Consumer Reports*, newspaper advertising, and electronic exchanges such as E-Bay. Where there are transactions between economic agents from different cultures, which is increasingly commonplace in the new economy, there are likely to be unequal perceptions of value and burden which may lead to misunderstanding and breakdown of trust. However, every such transaction educates and underscores the need to adopt common standards.

At times, the things exchanged are not of equal value, such as when a house is sold and the buyer makes only partial payment in cash but takes possession of the entire house at the time of closing. To simplify this example, we assume that the buyer does not obtain a mortgage from a third-party lender such as a bank. Rather, the seller offers to lend the buyer the unpaid balance by allowing the buyer to make regular payments over time until the balance is paid in full. Notice at closing, the buyer's immediate burden is to make partial payment in cash to the seller. The seller's burden is to surrender the whole house, and accept the buyer's written promise to pay the balance in the future. Under those circumstances, the seller faces the risk that the buyer may not be faithful to his/her promise to make payments in the future until the balance is paid in full. And the seller must wait until payments are made and at closing foregoes the use of that money had he/she insisted instead on payment in full. Consequently, the seller/lender is justified in requiring the buyer/borrower to repay more than the amount of money which was borrowed. Indeed, the seller/lender is justified in charging interest in order to equalize the two burdens involved. The precise amount of interest which equalizes the burden is problematical. However, we know by experience that a rate of interest of 100 percent is excessive because it imposes an undue burden on the buyer/borrower. Similarly, a 50 percent rate of interest is excessively burdensome. However, in 1981 banks across the U.S. were charging their most credit worthy customers an average of 21 percent on loans and as much as 35 percent for other higher-risk borrowers. Today, credit card companies commonly charge 18 percent annual interest and, even though some cardholders are not able to pay their credit charges, most cardholders do pay what they owe. Though we would much prefer to be certain in this matter, we cannot claim certainty with regard to the duty imposed by the principle of equivalence: the lender may not impose an undue burden on the borrower. What is undue is case-specific and must be determined by the circumstances of both parties at the time the loan is negotiated.

Some common expressions for the principle of equivalence in the product market, involving buyer and seller, are the money-back guarantee, the merchant's refusal to accept a third-party check, and the buyer's experience of getting his/her money's worth. The money-back guarantee is the seller's recognition that at times an honest mistake has been made in routine transactions, whether the fault lies with the buyer or the seller, and that the things exchanged are not of equal value. Merchants who depend on repeat business understand that the money-back guarantee is good for business even though they might not understand consciously that they are being faithful to the demands of the principle of equivalence. Shopkeepers often refuse the third-party check because they are fearful that the check has been stolen by the third party to whom it has been made payable and that the person who issued the check has put a stop payment order on that check with his/her bank, rendering it worthless. "Got my money's worth" is a common expression for a buyer who has entered an exchange with a seller and actually received more than he/she bargained for. In the resource market, the common expression "full day's *work* for a full day's *pay*" is a reminder of the worker's obligation under the principle of equivalence. Reversing the language to "full day's *pay* for a full day's *work*" underscores the employer's duty to the worker.

There are several specific ways in which the principle of equivalence may be violated in the product market. We mention only four. Shoplifting is one, and issuing a bad check is another. Loan sharking -- charging excessive interest -- and price gouging which may take place in an emergency such as a hurricane or earthquake are two more examples. In the resource market there are several ways in which the principle of equivalence may be violated. We enumerate these four: expense padding, sweatshop, embezzling, and pilfering. All violate the principle of equivalence either regarding the duty to exchange things of equal value or to impose equal burdens on one another.

The principle of distributive justice.

The second principle of justice -- distributive justice -- defines the duties of the superior to his/her subordinates. Specifically, distributive justice requires the superior to distribute the benefits and burdens of the group under his/her supervision among its members in some generally equal fashion. This does not mean strictly equal because there are likely to be significant differences among subordinates and it is entirely appropriate to take those differences into account. For example, handicapped employees appropriately may require different parking and restroom accommodation than do able-bodied employees. Distributive justice demands that the superior differentiate among subordinates only when the differences among them are real and substantial and require different accommodations. To illustrate, a superior may allow a single parent to rush to day care to tend to a sick child when the same permission might not be given to a married worker with a spouse who routinely stays at home to look after the children.

Discrimination occurs when the superior differentiates among subordinates for reasons which are insubstantial. In this regard, false stereotyping may be the device used to rationalize the difference in treatment among subordinates. For example, older workers may be treated differently because they simply have "less upside potential" than younger workers. Women may be treated differently because for them work is assumed to be of secondary importance in their lives. Immigrant workers may be treated differently because they dress differently or speak with heavy accents. Favoritism is simply the other side of the coin of discrimination. It is treating some persons better than others for reasons which are superficial or based on the false stereotyping of others. Discrimination in the U.S. along gender, race, religion, and national origin was declared illegal in the Civil Rights Act of 1964. Special legal protection has been accorded women, African Americans, Native Americans, Jews and persons of other faiths, and persons born in other countries. More recently, persons with disabilities have been included in the "protected class" along with persons 40 years of age or older. Discrimination and the government intervention required to address it is evidence that the law of nature, that is each individual economic agent in the pursuit of his/her own self interest also serves the common good through the invisible hand, is not always sufficient to resolve important conflicts in economic affairs.

"Equal pay for equal work" is a requirement under distributive justice. It means that persons doing the same work, with the same on-the-job-performance of their assigned duties, are to be paid the same wages. "Equal opportunity" too is a requirement under distributive justice. It means that persons of equal experience and qualifications are to be afforded the same chance to be hired and promoted. "Affirmative action" is controversial because some argue that it is necessary and others assert that it is reverse discrimination. The principle of the double effect, which we borrow from ethics, is instructive regarding affirmative action because affirmative action -- the hiring and promoting of persons in the protected classes over others -- has two effects, one positive and one negative. The positive effect is the good which is done for the person(s) hired or promoted. The negative effect is the bad which is experienced by those who are passed over in the hiring or promotion process. The principle of the double effect says that: (1) the good effect must be greater than the bad effect, otherwise the superior/decision maker is doing more harm than good; (2) the bad effect must not be intended. That is, the superior/decision maker must not intend to bring harm to the person(s) being passed over, but recognizes that there is no way to hire or promote one or two from an applicant pool without passing over everyone else.

The principle of distributive justice has application in the product market too, but here the issues are not nearly as serious as in the resource market. In the product market, it is the merchant or shopkeeper who is the superior because he/she is the one who must treat his/her customers with fairness. There are several ways in which this is done. A merchant who makes rain checks available to his/her customers is saying in effect that when an item is put on sale at a very favorable price, he/she will treat all customers alike even those who come to the store after the supply of that item has been exhausted. Under those circumstances, the merchant re-orders the item in such quantities to satisfy all customers who have been issued a rain check. "Limit 3 to a customer" tells all customers that everyone is entitled to purchase no more than three of a specific item on sale so that one customer will not buy the entire available supply.

The principle of contributive justice.

The third principle of economic justice is contributive justice, which lays down the obligation of the member to the group to which that person belongs. In so far as a person receives benefits from the group, that person has a duty to maintain and support the group. Paying dues -- a duty -- is the usual requirement for the persons joining and remaining active in a membership organization. Failure to pay membership dues typically reduces a person to inactive membership status enjoying fewer benefits of membership, if any, as compared to those in good standing. There are types of employment – the surgeon in the operating theatre, for example, or the teacher sharing with other teachers in the education of a child - in which the job cannot be done effectively, if at all, without cooperation between individuals. Examples could equally be drawn from the business environment. Here, team membership is a direct benefit to the individual. There are, however, marked differences across cultures as to the importance of one's duty to the team.

There are certain expectations when persons come together whether for a concert, sporting event, or to enter a flow of traffic. The queue is a temporary group of which the individual has membership. The newest arrival in a ticket line or traffic line is expected to wait his/her turn and not cut into the line. To do otherwise is disrespectful of those who have been waiting and sets an example for others to do the same in which case pushing, shoving, and cutting off other cars may become the rule rather than the exception. A general loss of civility may follow which is destructive of a sense of community.

However, when it comes to violations of the principle of contributive justice, there are several powerful examples. In the resource market, industrial spying and sabotage violate contributive justice because the person who appears to be a loyal and productive member of one business establishment actually is faithful to a rival organization and seeks to undermine the effectiveness of that establishment by stealing secrets and disrupting the work of that establishment. Is it a violation to hire a person from a rival establishment and then pick his/her brain for whatever information he/she might be able to share with the new employer? It certainly does violate contributive justice if proprietary information[5] is surrendered.

Computer tampering violates contributive justice because those who use a common resource such as the internet are expected to respect the work and files of others using that resource. Otherwise, confusion and destruction reign, and the internet becomes a less effective tool for all who use it. Product tampering is the moral equivalent of computer tampering. Tampering with a product is harmful to everyone who uses that product, because it makes buyers fearful that the product is unsafe to use. That, in turn, can have a powerful negative effect on the company which makes that product. Insurance fraud violates contributive justice because if a fraudulent claim is not detected by the insurance company, payment is made to the insured party which drives up the costs of the insurer who then may pass those additional costs on to all policy holders in the form of higher premiums.

Insider trading is the practice of persons inside a public corporation using information which is confidential and not available to the trading public in order to buy or sell shares in that corporation for personal gain. Insider trading is morally the same as playing cards with a marked deck. The gains achieved by the insiders come at the expense of other traders who do not have access to that confidential information and therefore are buying shares which soon afterward will fall in value or are selling shares which later will rise in value. In the U.S. the federal Securities and Exchange Commission is charged with the responsibility of monitoring trades made by senior corporate executives involving shares of stock in their own corporation in order to detect and punish insider trading. Unrestrained insider trading undermines the effectiveness of a stock exchange because in effect the big fish are eating the little fish. Finally, tax evasion[6] -- the deliberate effort to not pay the taxes owed under tax code -- violates the principle of contributive justice because when evasion is successful other taxpayers are required to pay more in order to make up for the taxes lost through evasion.

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[5] Information to which the former employer can claim a clear property right such as a secret formula for making a product.

[6] Tax avoidance is an entirely different matter. Avoidance means arranging one's income in a way which conforms to the tax code but reduces the amount owed in taxes.

The old economics asserts that all ethical problems in economic affairs are sorted out by the law of nature and the "invisible hand" of the market. All that is required is that economic agents pursue their own self-interest. The new economics insists that pursuing self-interest alone is insufficient to establish the trust necessary for routine economic transactions. Minimally, economic agents have some awareness of their duties in justice to others and have a disposition to execute those duties. Ideally, the new economic agent indeed is trustworthy precisely because he/she accepts the duty to respect and protect the dignity of the others involved in a transaction and rejects any practice which reduces them to mere instrumental value.

Returning to the analogy of the economy to a twin-engine aircraft, justice functions in two modalities, one activating and one limiting. In the activating modality, justice affirms what economic agents owe one another, and in that sense it functions like the oil in the aircraft's engines, providing the necessary lubricant for "the ordinary business of life." In the limiting modality, justice condemns certain harmful business practices such as discrimination and exploitation, and in that sense functions like the oil filter removing impurities in the oil so that the aircraft's engines perform more efficiently. Just as any oil filter needs replacing, justice needs renewing in order to deal with abuses arising from new technologies such as planting a virus or a worm in a computer network or stealing credit card and cell phone numbers.

Re-thinking Economic Agency

For many years Nobel laureates Joseph Stiglitz and George Akerlof have been addressing our third and final question from the perspective of asymmetric information. Stiglitz [pp. 460-501] most recently has attacked the neoclassical paradigm along several fronts: the "seemingly precise models" which leave out information concerns; the impossibility of involuntary unemployment; the separation of equity and efficiency; continuous market clearing and equilibrium; the reduction of economics to engineering; Pareto-efficient markets; the failure to differentiate types of markets; the information efficiency of markets; the separation of action, information, and behaviour; the invisible hand leading to Pareto-efficient allocation of resources; privatization as welfare enhancing; supply and demand constituting the whole of economic analysis. Akerloff's indictment which overlaps Stiglitz's [Akerloff, pp. 411-433] is considerably shorter: all economic behaviour is maximizing; the failure of credit markets and underdevelopment; the insistence on strict rationality as opposed to near rationality; the ready acceptance of the natural rate of unemployment hypothesis; the impossibility of saving too much or too little; the exclusion of "reciprocity, fairness, identity, money illusion, loss aversion, herding, and procrastination" from the mainstream way of thinking about real-world economic affairs.

The problem, as Stiglitz [p. 488] makes explicit, is that "the economists' traditional model of the individual is too narrow." That charge strongly suggests that he too rejects the individualism which is foundational to conventional economic theory. However, neither he nor Akerlof offer a replacement philosophy.[7]

Another Nobel laureate -- Gary Becker -- criticizes economists for not listening to anthropologists and sociologists who argue that culture, norms, and social structure are important factors in understanding economic affairs. At the same time he is critical of social scientists for not developing the techniques necessary to analyze how these factors influence personal behaviour. He finesses his way around this problem by incorporating these social factors into the utility-maximizing, thoroughly rational individual of neoclassical economics [Becker and Murphy, pp. 3-5]. But he too still clings to the philosophy of individualism which shapes his thinking about the individual economic agent, and elsewhere admits of the challenge of reconciling addictive behaviour with the neoclassical theory of rational behaviour [Becker, pp. 70-71].

The construction of a new economics begins with the economic agent, who is the center of economic affairs and therefore the central focus of economic theory. In the following, we address three important pairs of economic agents: the consumer and the merchant, the worker and the producer, and the entrepreneur and the financial agent.

The consumer and the merchant.

All consumers have to deal with two limits regarding the utility or satisfaction which derives from the act of consuming. Putting the concept of the limit at the center of our understanding of consumer behavior in effect acknowledges the importance of moderation in order to assure that the goods and services sought after remain the means to satisfying human wants and meeting human needs and do not become ends in themselves [Danner 2002, pp. 124-125].

Limit 1 refers to the one unit consumed which produces the largest increase in utility or satisfaction. We reference Limit 1 as maximum marginal utility. Limit 2 refers to the last unit consumed which offers some increase in utility but beyond which disutility sets in. We refer to Limit 2 as the point of maximum total utility. “Pigging out” is a common reference to having exceeded Limit 2 in consuming an especially enticing product and afterward having some regrets for having over indulged. Why do consumers at times exceed Limit 2? Peer pressure may be one reason. The availability of the product free of charge may be another. Another reason may be that the consumer is willing to challenge his/her own limit, thinking that perhaps that limit is higher than it actually turns out to be. Truth to tell, we do not always know the reason because at times even the consumer does not know. The limits are not the same for every consumer. As regards eating, this is partly because each one of us has his/her own metabolism and tolerances. And as we age, our limits tend to change as well. The hyperactive body of the teenager or athlete requires more calories than the

[7] In his presidential address to the History of Economics Society, John Davis [pp. 141-154] asserts that mainstream economics no longer has a theory of the human individual.

sedentary body of the same person much later in life.

The reason consumers buy more when the price is lower is that as they consume more they eventually reach Limit 1 beyond which each additional unit consumed offers a smaller increase in utility than the preceding unit and they are willing to purchase those smaller increments beyond Limit 1 only when the price is lower. The consumer as economic agent, under the old economics, is thus characterized by behavior depicted in terms of the principle of diminishing marginal utility.

Following the old economics, the consumer is unique, solitary, autonomous, self-centered, and self-made, traits which accent the consumer's individuality. For example, the practice of power dressing and the popularity of health foods give evidence of the consumer who is self-made. Self-centered and self-interested consumers can purchase goods and services for their own use, without becoming selfish, whenever those items are necessary for their well-being.

The consumer behaves predictably in ways which are described as utility-maximizing, privacy-protecting, and commodity-acquiring. In Western culture, acquiring and accumulating goods are perceived as a sign of success. The consumer is free to choose whatever he/she is able to afford, makes those choices informed strictly by reason for the purpose of satisfying some want, and takes into account not only experiences in the past (is hind sighted) but also hopes and plans for the future (is foresighted). Adults typically plan years ahead for their retirement, carefully budgeting -- rationally planning income and expenses -- to achieve that goal. Need is entirely rejected by the old economics as a central determinant of consumer behavior because it is a value-laden concept. In other words, how need is defined depends importantly on the person who uses the concept.

Comparisons are made but they are rigorously intra-personal or inward-looking, wherein consumers evaluate their own wants over time without any regard for others. Our language points to specific instances of the consumer acting mainly according to human individuality. The trendsetter and the traditionalist are consumers with much individuality. The conformist is one with little individuality.

Even so, there is more to the consumer than even this expanded perspective from the old economics. The consumer is a social being as well as an individual being, and as such is both unique and alike, solitary and communal, autonomous and dependent, self-centered and other-centered, self-made and culture bound. In America, soul food and Cajun cuisine originate in specific cultures and appeal especially to persons born and raised in those cultural environments. Pre-teens are persons who are dependent on their parents for the things they need and want. Similarly, the elderly may become dependent on their children because of a debilitating condition.

Additionally, the consumer behaves in ways which are described as at once utility-maximizing and utility-satisficing, privacy-protecting and company-seeking, commodity-acquiring and gift-giving. At times, a person will take less in terms of the maximum utility available at the moment so that a friend might have more. Or both may decide to share what they have, each one taking less than the maximum available if he/she were to exclude the other, in order that the other might have more, thereby affirming and strengthening their friendship.

In our new model of the economic agent, the consumer is free to choose whatever he/she is able to afford, but is morally accountable for the choices made, makes those choices informed by reason and emotion, by mind and heart, for the purpose of satisfying some want or meeting some need. Fear drives some consumer choices, as at times with handguns and security systems. Some persons known as compulsive consumers or shopaholics are addicted to shopping. Their choices are not rationally determined, nor are they freely made. O. Henry's "The Gift of the Magi," is a short story of a young married couple too poor to buy one another a present for Christmas: the husband buys a comb for his wife's beautiful long hair by selling his gold watch and she buys a chain for his watch by cutting and selling her hair. This story is enchanting because it exemplifies the gift-giving behavior of a husband and wife in love. As with the old model, our new economic agent, as consumer, is not only hind sighted but also foresighted as when parents have to reduce their current consumption for years in order to set aside sufficient funds for their children's future education. Even though it is a value-laden concept, need is embraced by the new economics because self-evidently it is a central determinant of consumer behavior. Simply put, the consumer is an economic agent with needs to be met and wants to be satisfied.

Our language informs us about the consumer whose behavior reflects social responsibility. The free-rider or deadbeat is a person with little sociality. The caring neighbor and the philanthropist are consumers with much social responsibility. So too was the man who at the site of the collapsed World Trade Center towers gave away shoe insoles to help protect and comfort the feet of the rescue workers climbing over the jagged rubble [Gould 2002, p.153].

Most of the world's population living in the southern hemisphere is poor. Using the World Bank's criterion of poverty – income of less than $1.00 per day – more than 1.2 billion persons are poor. In sub-Saharan Africa, about one-half of the population is poor. The old economics examines poverty as a macroeconomic issue. The new economics recognizes poverty as primarily a microeconomic issue, not a matter of scarcity that an unrestrained market addresses through the price mechanism which automatically eliminates shortages and surpluses but a problem of unmet needs which calls for intervention.

The social question raises a corollary question: What is the merchant or retailer to do in dealing with poor customers? The old economics which follows a libertarian philosophy argues that even the poor should be free to make their own decisions with regard to their own consumption spending, and no one should intervene in such matters because the poor better than anyone else know what is best for them. And, if a specific consumer is wronged, it is a small price to pay for liberty. In any case, let the buyer beware (*caveat emptor*).

The new economics asserts that merchants have some recognition of a set of duties originating in the three principles of justice. First, merchants recognize some obligation to refrain from marketing and selling activities which worsen the unmet need of their customers. Second, under the principle of equivalence, retailers recognize some obligation not to impose an unequal burden on their customers which derives from the customers' poverty-stricken status such as powerlessness in the face of a large, intimidating or indifferent firm. Third, contributive justice informs retailers that they should not force additional assistance costs on taxpayers who are required by law to come to the aid of needy persons even when those person's unmet needs have been made even worse by merchants whose only interest is profits. Fourth, and last, in distributive justice retailers are instructed to treat all of their customers as equals. That is, a merchant with multiple locations including some in the suburbs and others in the inner city, should not charge inner-city customers a higher price than suburban customers unless there are higher operating costs in the inner city.

The old economics values liberty above all else. It asserts that customers and merchants alike should be free to see and use one another primarily if not exclusively as the means by which self-interest is served. The new economics, while respecting liberty, admits that the new economic agent as consumer recognizes a right to be protected from unscrupulous merchants. Further, the new economics admits that merchants recognize a degree of duty to respect that right even when it adversely affects their profits. The new economics also admits some recognition that it is not in single-mindedly serving self that the merchant achieves success as an economic agent. Rather it is through respecting suppliers, employees, and customers appropriately, that they are transformed into the means to (instruments of) the merchant's success.

In terms of our analogy of the economy to a twin-engine aircraft, consumers are the aircraft's passengers who board the aircraft in the expectation that it will carrying them safely to their destination of a better standard of living both in terms of meeting their needs and satisfying their wants.

The worker and the producer.

Work has two principal effects: on the goods and services which are produced and on those who do the work. The new economic agent, as worker, is two-dimensional, at once an individual being and a social being, capable of competing with co-workers and cooperating with them. The worker is actively engaged in economic affairs and not merely a resource to be used in the production process.

A major part of the worker's reason for working is to earn the income to purchase the goods and services which meet physical, mental, and other needs and wants. The amount of income earned through work is likely to depend in principle on the significance of the worker's total contribution to the production of goods and services. Thus, earnings are linked to the first main effect of work, and therefore are an implicit affirmation of the principle of private property which asserts that whatever is produced belongs to the person(s) who produces it. For the new economics, the problem is that while an unrestrained labour market automatically eliminates shortages and surpluses it does not necessarily meet the needs of workers. Intervention at times is required in order to address those needs through measures such as a mandated minimum wage, a limit to the length of the workday, a ban on child labour, and inspections to assure the health and safety of the workers.

Critics argue that this notion of linking pay to contribution is not always faithfully followed in a market system wherein some persons have more power and influence in economic and political affairs than others. Over the years, for example, there has been some condemnation of the chief executive officers of public corporations in the U.S. for using their influence to get their friends elected to the boards which govern those corporations on grounds that it is the board which ultimately hires and sets the compensation of the chief executive officer.

Work itself helps meet the human needs and satisfy the human wants which derive from the worker's own nature as an individual being and a social being. As an individual being, the worker has a need for job which provides on-the-job opportunities for the utilization of his/her own special gifts and talents. This is done by incorporating into the worker's job description specific tasks which require the use of those gifts and talents. The uniqueness of the worker is underscored here.

As a social being, the worker has a ned for a job which makes him/her a respected partner in the work he/she is called upon to do. A real sense of belonging follows when the company has made an effective effort to integrate the worker into the organization such that whenever the worker is absent he/she is genuinely missed by colleagues. The worker's need for acceptance and inclusion is underscored here.

It follows that work is an opportunity for personal development through (1) meeting a need for self-expression through individual contributions; and (2) meeting a need to belong to the work team. Self-expression proceeds from and enhances the individual contribution of the worker which flows from authentic self-interest. Attachment to the work group proceeds from and enhances teamwork which flows from the ability to sense the needs of others.

Understanding producer behavior begins with the principle of supply: the higher the price, the greater the quantity supplied. However, this principle, as in the case of the principle of demand relating to consumer behavior, is strictly descriptive. It does not probe deeply into the behavior of the producer, it merely describes it in terms of price. And as with the principle of demand another principle is required to help explain producer behavior. That principle is the principle of diminishing returns. And as with the role of principle of diminishing marginal utility in explaining consumer behavior, the principle of diminishing returns explains producer behavior in terms of two limits: Limit 3 or maximum returns and Limit 4 or capacity. The limits applying to producer behavior originate in the human nature of the economic agent just as we observed regarding the two limits applying to consumer behavior.

Limit 4 refers to the maximum output possible in a day by one worker. Before Limit 4 is reached each additional hour of work adds to total cost. Beyond that limit, however, the worker's total output drops due to physical or mental exhaustion, because at that point he/she makes mistakes which in turn lead to re-work or accidents. We see this kind of limit displayed very dramatically on the highway where from time to time exhausted truck drivers fall asleep, wreck their trucks, destroy some of the goods which they are carrying, or worse yet injure or kill. Limit 4 or capacity applies to everyone who works because everyone who works requires rest on a daily basis.

Limit 3 refers to the single hour of work in which the worker produces more than in any other and is called maximum returns. Before Limit 3 is reached, returns are increasing; after Limit 3 is attained, returns are diminishing. Beyond Limit 4 or when capacity is reached, returns are negative. Limit 3 or the point of maximum returns pinpoints the single hour of work in which the worker is most productive. Diminishing returns reflects our own experience with work. Normally, exhaustion does not suddenly overtake us. Rather, we tire little by little as the workday unfolds, with hourly output declining as the work itself saps our strength, until full exhaustion sets in and mistakes take over.

The machines used in the production process are like human workers in the sense that both are material in nature, the one animate the other inanimate. Both wear out under use and both require maintenance. Human maintenance means time away from work, in the form of a coffee break, lunch hour, over night rest, weekends and holidays off, and vacations to provide for even longer periods of rest and relaxation. Machines cannot run indefinitely. They too require downtime which the careful producer does not want to happen when the machines are most needed in the production process. For that reason, producers often schedule maintenance ahead of time in order to assure that the equipment is ready when it is called into use. The scheduling of maintenance is called preventive maintenance and though it can be costly is undertaken for fear that in the absence of such procedures the cost would be even greater. Clearly, the new economics dismisses neither the principle of diminishing returns of the old economics nor the production function which represents that principle diagrammatically. However, the new economics represents the production function in terms of two limits for two related reasons: machines and humans wear down with use and that wearing down effectively limits production and matters critically as regards the cost of production and profitability.

With one possible exception, the new economics represents the cost of production no differently than the old economics. Unit cost and marginal cost are driven by the production function, and as production increases average fixed costs tend to decline. However, the new economics interprets the sharp increase in average fixed costs at capacity in human terms rather than simply in financial terms.

The observant production manager knows that capacity has been reached at the point where average fixed costs are rising. Once production has been pushed beyond Limit 4, mistakes take hold and workers are exposed to greater risk of injury or worse, and defective units are produced which require costly re-work. The new economic agent, charged with the responsibility for supervising production, subordinates output to the safety of the work force because the workers' value as human beings is more significant than their instrumental value as resources in the production process. Additionally, reducing the re-work that attends pushing production beyond Limit 4 and assuring the safety of the workforce have the effect of cutting the cost of production and enhancing the company's competitiveness and profitability, outcomes of considerable interest to the company's customers and owners. Putting the concept of the limit at the center of our understanding of worker behavior acknowledges the need for restraint in the production process to avoid re-work and protect workers just as earlier we observed that moderation is required in consumer behavior to assure that the goods and services sought after remain the means to satisfying human wants and meeting human needs and do not become ends in themselves.

One of the most important responsibilities of the employer/producer is wage and salary administration which involves two main tasks: evaluating performance and linking pay to performance. In this regard, there are three central questions which must be addressed. First, how much does he/she contribute as an individual to the assigned tasks, and how much is that work worth? Second, how much are others being paid for the same work? Third, how much does he/she contribute to the success of the group or team to which he/she is assigned, and how much is that contribution worth?

Performance evaluation involves the careful, honest, and comprehensive evaluation of the amount and quality of the assigned work which the subordinate has carried out over a given period of time -- the last week, month, quarter, year. Supervisors are expected to conduct performance evaluations of those who report directly to that supervisor. To the extent possible, evaluation should be quantifiable but for many professional workers the nature of their work does not always lend itself well to strict quantification. Inevitably, therefore, performance evaluation involves judgment on the part of the supervisor. There are two procedures which help reduce the arbitrariness in making judgments. First, the subordinate prepares his/her own performance evaluation and submits it to the superior for review and approval. Second, the performance evaluations conducted by the supervisor are subject to review by the person to whom the supervisor reports.

The best way to assure that performance evaluation is done properly is to select the right people to serve in supervisory positions and train them well for the difficult task at hand. The mere fact that a supervisor may have done the very same assigned tasks as the person he/she is evaluating is no assurance that performance evaluation will be conducted carefully, honestly, and comprehensively. Ultimately, the supervisor must have integrity. The new economic agent, in the form of supervisor, understands that wages and salaries are not simply reducible to the forces supply and demand in the labor market and that the duty of the supervisor is not fully served by the old economics and the law of nature.

As to the problem of linking pay to performance, it is necessary to address the problem first from the perspective of the employer/supervisor and then from the perspective of the employee. The employer/supervisor has two obligations drawn from the principle of equivalence and the principle of distributive justice. Under the principle of equivalence the employer/supervisor has a duty to the employee for "a full day's pay for a full day's work." Under the principle of distributive justice, the employer/supervisor has an obligation for "equal pay for equal work." Failing with regard to the first duty is in effect to break the employment contract and to renege on the wages and work agreed to in that contract. Failing with the regard to the second duty is discriminatory.

The employee also has two obligations, one drawn from the principle of equivalence and the other from contributive justice. "Full day's work for a full day's pay" is what the employee owes the employer/supervisor under the principle of equivalence, and as with the employer/supervisor, any failure effectively breaks the employment contract. The employee's second duty is to "do his/her fair share," "pay his/her dues," that is to contribute positively to the success of the group or team to which he/she has been assigned. This duty is less sharply defined than the first. Much depends on the circumstances at the moment in the workplace and the marketplace. More may be required of a person as a member of the team when the company is facing a very difficult deadline in making delivery to a customer, or when the necessary supplies for production are not readily available, or when someone on the team is sick or otherwise absent from work. Further, more may be required when the company is on the brink of financial failure. In that sense, the principle of contributive justice requires a member of the group or team to do all that is required for group success provided what is required is reasonable. Thus, judgment is inevitably a part of any decision as to one's duty under the principle of contributive justice. Here too a new economic agent is required in that the employment contract imposes duties on the worker which cannot be shirked without some economic loss to fellow workers and to the company's customers, owners, and suppliers. These duties cannot be left to the old economics and the law of nature because duty involves an intensely personal commitment to what is owed to others whereas the old economics and the law of nature assert that what one owes to others is sorted out by the impersonal forces of the market which are driven strictly by the self-interest of economic agents and guided by the "invisible hand."

Returning once more to the analogy of the economy to the twin-engine aircraft, the workers are the ground crews, maintenance crews, flight crews, air-traffic controllers, and regulatory agencies such as the U.S. Federal Trade Commission and the Anti-Trust Division of the U.S. Department of Justice who assure that the aircraft is safe to fly, that the passengers are safely attended during flight, and that the aircraft maintains a safe distance from other traffic while in flight.

The entrepreneur and the financial agent.

The entrepreneur is the key agent in economic affairs because the entrepreneur precipitates change in the workplace and in the marketplace.[8] We prefer to identify the entrepreneur with the two-dimensional new economic agent, as opposed to simply the one-dimensional economic agent of the old economics, because the entrepreneur is a real person engaged in human action in economic affairs, subject to emotions and social pressures, and not some totally self-interested, self-absorbed, completely rational calculating machine. In terms of our analogy to the twin-engine aircraft, we note that there is a profound difference between the human pilot, possessing both intelligence and emotions, and the auto-pilot for which intelligence is entirely machine-like and programmed.

Following Schumpeter, the entrepreneur triggers change in the following five ways [Schumpeter, 1950, pp. 83, 132]. In the marketplace, the entrepreneur initiates two types of change: the introduction of a new good or service and the penetration of a new market. In the workplace, the entrepreneur brings about three kinds of change: the utilization of different materials in the production process, the introduction of a new process of production, the development of a new way of organizing, managing, administering the business enterprise. At times, more than one type of change is necessary for success. For example, introducing a new product may require a change in the process of production.

Entrepreneurs are persistent. Indeed, Schumpeter identifies persistence as the key personal trait of the entrepreneur, setting him/her apart from others. The entrepreneur is dogged in the pursuit of his/her innovational ideas, and simply does not give up in the face of opposition. Entrepreneurs are visionary in the sense that they see opportunities and possibilities where others see nothing beyond the present. Large established companies resist entrepreneurial change in a way which is reminiscent of Newton's third principle of motion: for every action there is an equal and opposite

[8] In philosophical terminology, the entrepreneur is the efficient cause. Dempsey asserts that "The economic function of the entrepreneur signalizes [the] irreducible paramount importance of the human person" [Dempsey, 1958, p. 361].

reaction. Thus entrepreneurs are often associated with small companies including firms which they themselves established specifically to implement their innovational ideas. They are driven at times by the survival needs of the company, but are not always successful. However, they are more likely to accept the risk of failing and to try again in a culture where failure in business does not spell personal failure. Bankruptcy relief and “the golden parachute” are two ways in which the American culture encourages the entrepreneur to try again.

Unlike accountants, musicians, veterinarians, and other professional persons, the entrepreneur is not required to master a body of knowledge and demonstrate a certain set of skills. There is no designated educational pathway to becoming an entrepreneur, although entrepreneurial skills can be enhanced through formal education and training, and by entrepreneurial role models such as an older member of the family. There is no profession known as “entrepreneur” and no professional membership organization for entrepreneurs to join.

As we have stated previously, the entrepreneur is the pilot of the economy who decides where the economy is headed, following in general one of five flight plans, but capable of departing from that flight plan as circumstances require or allow, at times flying directly into heavy weather to reach the plane’s destination in timely fashion. By making credit available to the entrepreneur through the loan process, the private commercial banker provides the fuel necessary to power the economy’s twin engines of cooperation and competition.

To change the analogy, the typical business enterprise is like the human cell which must grow, multiply, and divide in order to survive. In order for a company to prosper and endure, someone must be entrepreneurial. Failing to innovate assures its ultimate demise.

Successful entrepreneurs engage in a dynamic process which has two major effects. First, they create new business enterprises, new jobs, new resource requirements which translate into new opportunities for workers, resource-holders, suppliers, investors, and communities. At the same time, they destroy old business enterprises, old jobs, established supplier networks which translate into financial hardship or ruin for other workers, resource-holders, investors, and communities. This process Schumpeter called “creative destruction” [Schumpeter 1950, pp.81-86].

There is some social pressure on the successful entrepreneur, if not pressure from his/her own conscience, to weigh the negative aspects of innovation against its positive aspects. In this regard, the principle of the double effect comes into play and sets limits on what the entrepreneur should do. The destructive, negative effects should not be greater than the creative, positive effects, and the entrepreneur should not intend the destructive effects as a way of singling out certain persons or organizations for punishment.

In American culture, however, the entrepreneur it seems is not held to account if his/her initiatives do not measure up to these ethical standards. Did Sam Walton regret what Wal-Mart did to Sears and to many small-town family businesses? Did the two men behind the original Apple computer -- Steve Jobs and Steve Wozniak -- shed a tear for the havoc they visited on IBM? Does Ted Turner lose sleep at night for the damage which CNN did to the 6PM network news? Entrepreneurs often act in ways that are accurately represented and rationalized by the economic agent of the old economics, even when their actions are significantly destructive. (Admittedly, successful entrepreneurs sometimes turn to philanthropy later, in effect rejecting the law of nature of the old economics.) It may be partly wishful thinking, but we would argue that the new economy is charting a new course -- look, for instance, at the astonishing success of the internet auction house E-Bay -- and that there are pressures from public opinion, and hence governmental regulatory pressures to discourage the entrepreneur from acting in ways which in practice ignore the principle of the double effect. We suggest, then, that the new economic agent, as entrepreneur, should accept some degree of philanthropic concern for others, while pursuing their innovational ideas and plans.

The new economics asserts that because firms in the same marketplace compete not just in terms of price and cost, but in terms of new products and services as well, industrial policy no longer can be grounded in the model of perfect competition from the old economics. Indeed, the new economics would remove the loaded terms "perfect" and "imperfect" from the public discourse because vigorous entrepreneurship assures that markets cannot possibly achieve perfectly competitive conditions, and for that reason the types of markets which actually characterize a market economy cannot be called perfectly competitive. The new economics encourages re-thinking of the market system in terms of functionality and dysfunctionality, according to how well the three organizing principles of competition, cooperation, and intervention ultimately satisfy human wants and meet human needs.

The private creation of credit is not the most important characteristic of capitalism, but it is its *distinguishing* characteristic [Schumpeter 1928, p.326]. No other system operates with private commercial banks making loans to commercial customers on the basis of created credit, that is without the money being saved beforehand. The entrepreneur depends on the credit made available by the banker to carry out his/her entrepreneurial schemes just as the pilot of the twin-engine aircraft depends on the supplier who provides the fuel to power the craft's engines. There are, of course, other sources of funds in which prior savings is a requirement such as pension funds, mutual funds, and venture capital funds. The central banking authority's function is to assure that there are adequate supplies of fuel for the economy and in the extreme to prevent an economic "crash." Subsidies, tax credits, and other forms of relief function like fuel additives enhancing the power of the aircraft's engines.

Under the idea of the economic agent of the old economics, by maximizing risk-adjusted returns on invested funds, financial executives also meet their public obligations. The new economics admits, on the other hand, that there is considerable divergence between the social rate of return and the private rate of return, that capital markets are not perfect. In making investment decisions, the new economic agent cannot presume that every decision to serve the private good of investors at the same time serves the common good. Instead, the new economic agent admits some duty to evaluate investment decisions in ways that take into account explicitly the difference between investments in such projects as gated communities, private jets, and cosmetic surgery for the rich, and affordable housing, public transportation, and access to health care for the poor.

This obligation derives from a shared acceptance of the equality and dignity of all human beings and a recognition of the need for certain goods and services to sustain their lives and provision their well-being at some minimally acceptable level. In other words, a recognition that the goods of this world are not for the exclusive use of those with the market power to command those goods, but for the general use of all humankind. New economic agents in the form of financial executives admit a need to include the common good in their decision-making. They do so by subordinating the law of nature to a recognition of social responsibility [Worland, 1996, pp. 59-72].

Inter-temporal exchange introduces the risk of default requiring reciprocal trust between the persons involved. This trust may be based on real reciprocal acquaintance as happens in local finance, on reputation with the resulting possible distortion of incentives on each side, or on some surrogate of trust such as contractual clauses which reinforce the borrower's incentive to honor his/her debt. In international financial contracts in particular, clauses often are introduced to make the problem of reciprocal uncertainty less difficult, but these contractual expedients often have undesired consequences. For instance, linking interest rates to the trustworthiness of the borrower or resorting in general to short-term loans may result in blocking loans for those projects where the expected return is not high enough or is too far in the future. Yet this is a very dangerous choice which could eventuate in selecting only high-risk projects or those in difficulty. International loans may be badly used, may induce governments to put off painful but necessary economic reforms, or may be available only for high-risk, high-return projects.

In the absence of trust, financial transactions can break down due to the cost of monitoring and enforcing those transactions [*Economic Trends*, July 2002, p. 1]. The faithful practice of two principles of economic justice -- the principle of equivalence and the principle of distributive justice -- can contribute powerfully to (re-)establishing trust between agents involved in financial transactions. Under the principle of equivalence, both agents are agreed without coercion as to the amount to be borrowed, the schedule for repaying the principal, and the rate of interest which equalizes the burden for the creditor who must wait for repayment subject to the risk of default. Excessively high rates of interest are condemned as usurious, and the creditor is labeled a "loan shark." Thus, there must be some upper limit to the rate of interest imposed on the borrower which equates his/her burden to the burden of the creditor. What that limit should be must be determined in general by market forces, by the specific financial conditions at the moment, and by parties who are not driven entirely by personal gain but who understand that the creditor and most especially the borrower are human beings whose dignity must be respected and who never are to be exploited. Otherwise, there is no "level playing field" in financial markets, which means that the powerful are able to dominate and exploit the weak, and that at times credit is denied to those most in need especially the poor in developing countries. Debt restructuring and debt forgiveness for nation-states as well as human persons are justified under the principle of equivalence whenever the burden to the borrower becomes unduly onerous or impossible to bear.

Further, the creditor has a duty under the principle of distributive justice to treat as equals all prospective borrowers who are in the similar financial circumstances notably as determined by risk evaluation. The principle of distributive justice demands that the lender not engage in price discrimination even when the opportunity presents itself or in "redlining," the illegal practice of excluding everyone in a specific geographic district from obtaining credit, even those who are creditworthy. This requires transparency as to the details of credit transactions which preferably is done by voluntary compliance or if necessary by some kind of private or public institutional oversight. We note that the International Monetary Fund already has affirmed two codes relating to transparency: The Code of Good Practices on Transparency in Monetary and Financial Policies and the Code of Good Practices on Fiscal Transparency [*Trade and Development Report, 2001*, pp. 81-82]. Regulatory agencies, preferably of the voluntary or self-regulatory type, are preferred for this oversight role because they necessarily function closer to the day-to-day operations of the financial institutions whose operations they are examining. Locating the oversight agency as close to the actual lending institution and therefore close to the specific conditions in which that institution extends credit helps the oversight agency avoid supporting projects which have little or no prospects for economic success and long-term survival, and other projects which otherwise might be turned to personal gain.

In daily operation in international financial systems the new economic agent should have a working knowledge of what is required in justice, and his/her supervisors may be expected to be monitoring that agent's work to assure that he/she is faithful to those demands. In other words, senior executives and officials of financial institutions may be expected to make justice an everyday priority of the institutions which they manage and direct.

However, more than justice is required to forge a true sense of trust. Justice by itself can become cold and calculating if it is not tempered by caring or charity [John Paul 1998, §1]. That is, a deep regard for the well-being of others with whom economic agents interact on a daily basis. Caring helps develop a sense of trust and solidarity by affirming that all human beings are equal and should never be used solely for the personal gain of others. Charity helps develop this sense by insisting that all human beings are precious and their well-being is more important, in the long run, than the achievement of maximum efficiency in the utilization of economic resources. In the new economics, economic systems are subordinate to human welfare.

As with justice, caring lubricates the engine so that it can function safely at high temperatures, but caring is a higher-grade oil than justice. Charity, and recognition of the innate value of every human being, works like an even higher-grade, longer-lasting oil, allowing the engine to function even more effectively and more efficiently. In real terms, caring and charity mean going beyond the demands of justice such as creditors who are willing and able to renegotiate the terms of credit to ease the burden on the troubled borrower and merchants willing to give their customers more than they bargained for. This additional value, which helps trust and solidarity grow and flourish, has a real economic component which is overlooked by the old economics. Financial agents contribute directly to the real though intangible business asset “goodwill.” Caring and charity thus become valued economic resources which are absolutely unique in two ways. First, they acquire value only in the giving and never in the hoarding. Second, they are never depleted in utilization.

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