

nomics. A system based on “productiveness,” as distinguished from “productivity,” provides a paradigm as different from modern capitalist or socialist economics, as heliocentric astronomy is from geocentric. Binary economics provides a new explanation for poverty in an industrial economy⁴ and suggests a new strategy for making all people self-sufficient *without taking property from others*.⁵

People are poor because they have not acquired the capital necessary to supplement their labor input, and they can become economically autonomous only with a private property system that enables them to acquire this capital. Rather than socializing private capital ownership, a binary system democratizes access to credit as an indispensable social means to enable everyone to acquire private capital.⁶

To correct discrepancies in income distribution, the logic of binary economics reveals that nations must revamp the traditional strategies of both capitalist and socialist economies. They must eliminate their virtually exclusive dependence on employment, welfare, and traditional growth strategies, and initiate a program to achieve universal capital ownership according to binary economic principles. Only through such an approach can the autonomy that families enjoyed in the preindustrial world be restored in the current industrial era.⁷

Binary analysis proposes that the most fundamental economic problem to be solved is how to empower every family and single individual to equip itself with a viable and adequate holding of capital. Although advancing technology (capital) has become the dominant means for producing goods and services, a tiny percent of the population owns virtually all nonresidential capital in every nation. This problem is the direct result of a misguided national economic policy founded on a defective private property system that effectively enables only those who already own capital to acquire additional capital. Traditional governmental solutions—such as stimulation of traditional investment through tax, credit, and regulatory incentives, job creation, minimum wage laws, or transfer payments—are counterproductive in the long run. The effect of such programs is the further concentration of the capital ownership base, thereby increasing people’s dependence on jobs and welfare for survival, and suppressing the true growth potential of the economy.

Binary economics shares two assumptions with classical economics:

- (1) the purpose of production is consumption, and
- (2) in a market economy real earnings must compensate only for real production.⁸

Thus the Kelsos reason that to maintain a market economy in the context of industrialization, increased productive power of capital must

be linked with increased consumer power through ownership. Relegating most people to what they can earn by selling their services in the labor markets and to what they can appropriate and redistribute through welfare legislation effectively precludes their right to acquire capital ownership on market principles. In an industrial context, some "capital-less"⁹ people may fare handsomely for a time without substantial capital ownership, but the vast majority's participation in the production of society will diminish unless the private property system provides them with an effective opportunity to participate in the capital markets to acquire on credit a share of capital wealth.

Other approaches are incomplete because they fail to deal adequately with the problem of concentrated ownership distribution caused by traditional capital financing.¹⁰ Also defective are approaches which attempt to deal with distributional problems by instituting taxes and transfer payments that redistribute income after it has been earned,¹¹ or by government appropriation and ownership of capital. Such approaches either distort or eliminate the market for capital and labor. They disassociate production from consumption and suppress growth.

Because the purpose of production is consumption, binary economics holds that to maintain a market economy, the question of appropriate distribution of consumer income must be addressed in the process of capital formation itself and in all voluntary changes in the ownership of existing capital. Further, to achieve sustained growth, productive power represented by capital must be linked through property rights to those whom society expects to purchase what it produces.

Binary economics rejects the strategies provided by traditional economic theory by which people are to acquire capital. Traditional capitalist theory suggests a simple solution: people must decrease consumption (save) and invest wisely. The Kelsos find such a strategy wholly unrealistic because most people have insufficient savings and earnings to meet their consumption needs. Dependence on current earnings and savings for capital formation ensures that almost all new capital will be acquired by existing capital owners. Convinced that the existing private property system limits to the already-wealthy the right to acquire capital, the Kelsos advocate an alternative binary private property system that democratically extends to all people the effective right to acquire capital on market principles.¹²

Therefore, the Kelsos propose a comprehensive, but wholly voluntary, legislative program of economic reform intended to make "capital credit" available to all, enabling them to buy corporate stock in productive enterprises and pay for it out of the pre-tax income it generates. With borrowed money, stock ownership trusts (or similar capital credit devices) would acquire stock on behalf of constituent

beneficiaries including employees, consumers, the unemployed and welfare recipients.¹³ Investments would be limited to self-financing capital with projected income sufficient to amortize the acquisition debt within a reasonable cost recovery period. Through a system of private “capital diffusion” insurance and government reinsurance, banks and other qualified lenders would be insured against loss on acquisition loans to the ownership trusts.¹⁴

The stock held by the trusts would be a special “full property rights” stock, paying its full net return¹⁵ as income to the trust. In turn, the trust would first repay the acquisition loan and then pay all income to the beneficiaries. Congress would effectively authorize the Federal Reserve Board (“the Fed”) to monetize new capital formation by discounting capital credit loan paper held by lenders at its administrative cost. Monetized capital credit, low interest rates, loan insurance, and benefits to employee and consumer shareholders would provide incentives for companies to adopt a binary financing program to meet their future needs for capital.

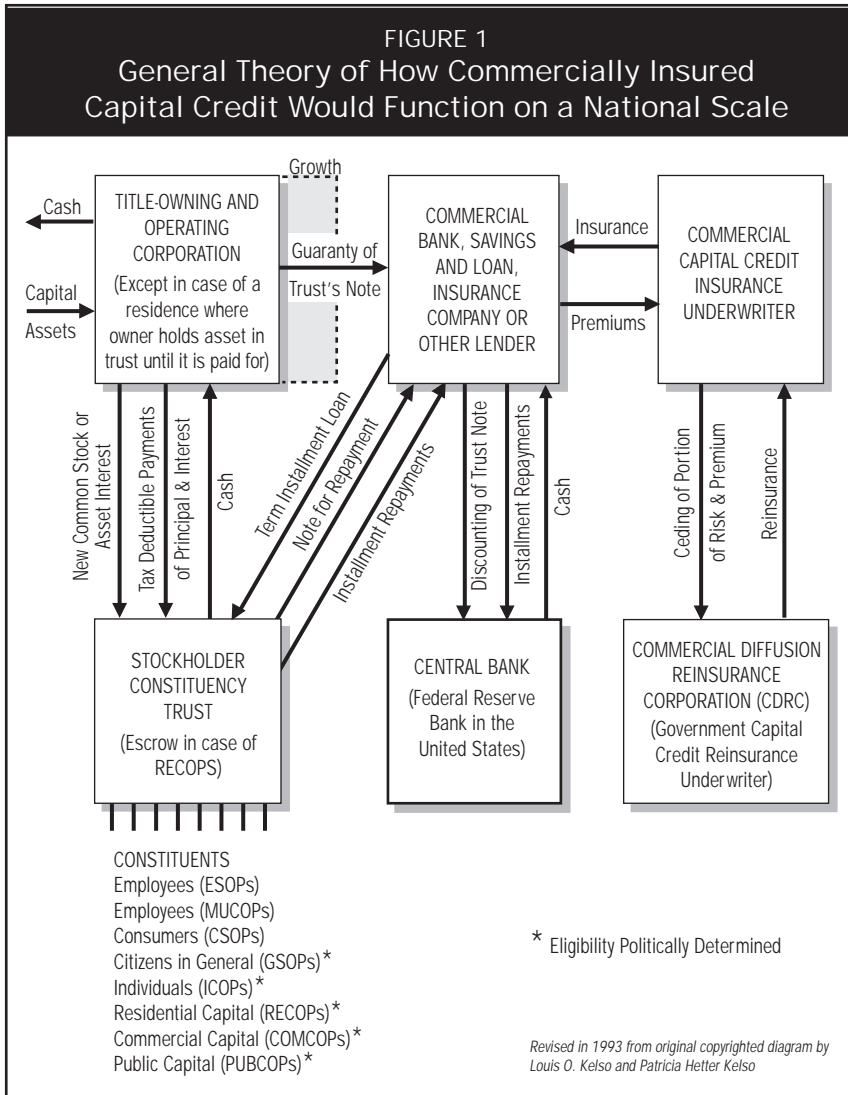
The Kelsos have illustrated the institutional infrastructure of a binary economy (Figure 1).

Although sweeping in their national scope and complicated in their detail, these proposals all derive from a few premises and principles—far fewer than those applied today by either socialist or capitalist economics to explain and predict economic behavior and to formulate national economic policy. Further, the system would operate only in a wholly voluntary manner.

The Kelsos maintain that the voluntary operation of a national binary economy will yield a number of benefits. A national financing program based on binary economic precepts will broaden the distribution of income and also produce increases in economic growth far exceeding forecasts based on traditional economic strategies. It will also tame, if not eliminate, business cycles and inflation; reduce government deficits and taxes; and restore the international competitiveness of American industry.¹⁶

The effect of these proposals is not to socialize private capital, but to democratize access to the credit needed to acquire private capital.¹⁷ By enabling people without capital to acquire capital on credit, these proposals create a different system of private property—a system that may be seen as limiting the collateralization rights of existing owners, to extend *effective* acquisition rights to all, whether or not they have wealth to place at risk. However, if the binary growth predictions based on productiveness materializes, there will be no effective limitation on the collateralization rights of existing owners. Rather, the investment opportunities of all owners will increase.

Yet many economists fear that monetization of productive credit might produce an inflation that would swamp any real growth. Un-



der traditional economic theory, monetization, preferential interest rates, and assumption of investment risk by the government do not result in new capital without savings. Rather the effect is to form new capital by appropriating or reducing the wealth of those not benefitting from the program (e.g., other investors and consumers) by reducing their claim on societal output. Many economists would therefore dispute the assertion that the Kelsonian system promotes real growth, maintaining that it merely provides an alternate means of redistributing existing wealth. They may

also argue that the binary system may reduce incentives for efficiency and productivity and thereby promote recession rather than growth. These concerns will be discussed presently. Significantly, from a binary perspective, they fail to comprehend the principle of binary growth.

The Principle of Binary Growth

The most remarkable aspect of binary analysis is the principle of binary growth. Stated perhaps oversimply, the more broadly capital ownership is acquired by individual consumers on market principles, the larger will be the resulting economy. This proposition is either a grand illusion whose underlying fallacy has eluded me and a growing number of scholars throughout the world, or it is one of the most important discoveries of the twentieth century. Stated more broadly, the theory of binary growth holds that economies grow on market principles, not only with increases in investment and worker productivity and decreases in transactions costs, but also as an independent (and much more potent) function of the distribution of capital acquisition on market principles. This proposition is exactly the opposite of the claims of traditional capitalist economic theory. In traditional capitalist theory, economic growth results from increases in productivity and investment and decreases in transactions costs; but in terms of economic growth, it makes no difference who owns the capital (absent gains in productivity resulting from motivational or other factors). "Redistributing capital," the traditional argument goes, "merely spreads around pieces of the same pie; it does not create a larger pie. And worse yet, it may distort market incentives for productivity and efficient resource allocation, and therefore may result in a smaller pie."

Yet, intuitively, the binary theory of growth seems to square better with the facts. On the individual level, it makes a big difference who owns the capital. Generally, it is the difference between being rich and poor. The more capital you own, the greater your ability to participate in the economy both as a producer (owner) and as a consumer. Likewise, on the national level, all the world's large economies are capital-rich economies. Both individually and nationally, affluence is the product of capital, whereas jobs and welfare rarely produce more than subsistence. What is true for rich people and nations is true for the poor. The more fully each individual provides productive input in the economy not only as worker but as owner, the more fully he or she can participate as a consumer, and the larger the economy will be. Furthermore, as an economy industrializes, the importance to the individual of participating in a balanced way in pro-

duction and consumption both as an owner and a worker becomes increasingly important. Likewise, as an economy industrializes, it becomes increasingly important to the economic growth of the entire society that capital is increasingly acquired on market principles by all people, not merely by existing owners, so that its incremental income may be used to purchase the incremental output.

Thus, in binary terms, it matters greatly whether capital acquired competitively on market principles is acquired increasingly by the poor and middle class rather than almost exclusively by a small percentage of the population. If capital is increasingly acquired by the many poor and middle class people (paid for by its own earnings), and if capital's income is thereafter required to be distributed to the poor and middle classes, they will spend more money on goods and services, and thereby fuel a larger economy than if the capital were acquired by the few rich. Unlike the poor and middle class who have many unsatisfied needs and wants, the rich will seek to invest their capital earnings, but in an economy characterized by comparatively less consumer demand.

In short, sustained economic growth on market principles requires that incremental productive power provided by capital must be acquired broadly by the masses of people expected to purchase what it produces. If capital acquisition is restricted by a closed private property system for the benefit of existing owners, the distribution of capital income will be insufficient to support consumption, and growth will be suppressed.

Binary economics thus provides a conceptually distinct alternative to traditional capitalism and socialism, worthy of serious consideration in its own terms. As such it should be explored, not ignored, as a theory of law and economics.

Binary Economics and Employee Stock Ownership Plans

Although Louis Kelso has gone generally unrecognized by modern economists in influential positions, he had remarkable success with the United States Congress in fashioning a legislative program for the Employee Stock Ownership Plan ("ESOP"), the vanguard of his system of ownership trusts. The essential Kelsonian feature of the ESOP is its ability to acquire in trust for employees stock in their companies on nonrecourse credit, and to pay for it with the stock's pretax income.¹⁸

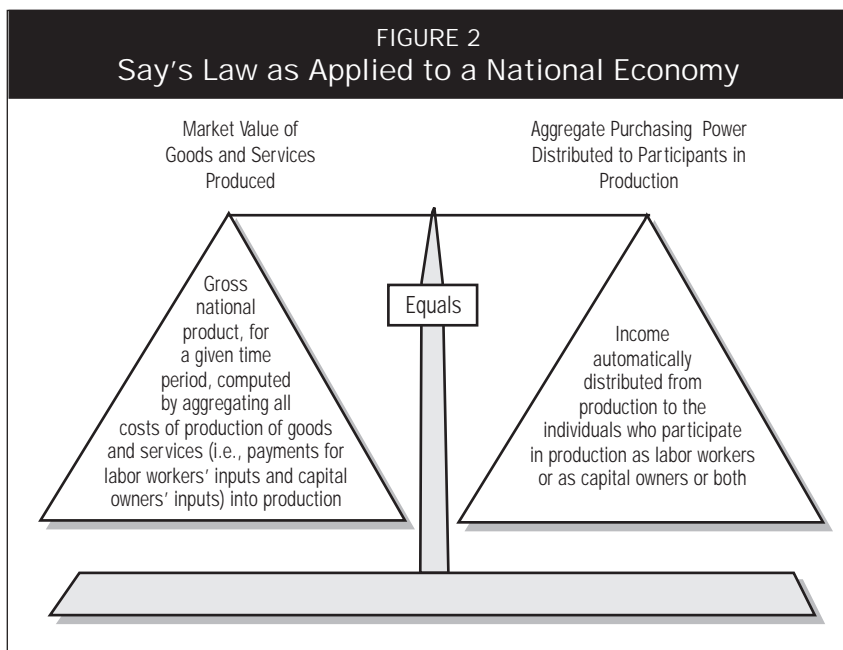
In response to Congressional encouragement, the number of ESOPs has increased substantially in the last decade. The General Accounting Office estimated that there were approximately 4,800

active ESOPs in 4,700 companies in 1986, covering approximately 7.1 million employees and \$13 billion in assets.¹⁹ According to the National Center for Employee Ownership, in 1993 there were between 9,000 and 10,000 active ESOPs covering approximately 11 million workers with over \$60 billion in assets.²⁰

However, studying ESOPs in the present economic environment is somewhat like studying the first horseless carriages before systems of roads and service were established. Inferences to be drawn from current studies may not be applicable within the context of a binary economy. Analyzing the full potential of ESOPs and other binary financing proposals requires a calculus that adequately reflects the economic infrastructure designed to support them and the alternative private property rights system on which they are predicted.

Say's Law in an Industrial Economy

Central to the Kelsos' binary analysis is a highly controversial law of classical economics known as Say's Law of Markets ("Say's Law").²¹ Say's Law holds that in a private-property, free-market economy, the production of a given output necessarily generates aggregate income sufficient to purchase that output.²²



For the last two centuries, economists have debated whether Say's Law establishes a principle on which, on an economy-wide basis, supply will create its own demand,²³ and demand its own supply. The Kelsos acknowledge this controversy:

Economists have been at loggerheads over Say's Law ever since its promulgation in 1803. One of its implications is that the phenomena variously known as depressions, panics, and recessions cannot occur. But they have occurred, and with ever deepening severity, from the inception of the Industrial Revolution. Say's Law has remained a riddle to conventional economists because they approach it with a wrong assumption: that there is only one way that individuals can make productive input and earn income—through labor.²⁴

Unlike anyone before them, however, the Kelsos apply their concepts of productiveness and private property rights to Say's Law to derive several conclusions not found in traditional economic analysis.

"Supply-side" or "trickle down" economists accept Say's Law and recommend government policies to stimulate investment, with the expectation that increased capital investment will create a larger economy, a greater pool of jobs and a larger tax base for welfare distribution.²⁵ Keynesian economists, on the other hand, reject Say's Law,²⁶ claiming that demand is demonstrably insufficient to clear supplies at market prices.

Contrary to classical and neoclassical theory, Keynesians support their contention by citing endemic unemployment, unsold inventories, and unutilized production capacity which manifestly would not persist if supply had created its own demand.²⁷ Many Keynesians advocate a "trickle-up" policy: one that stimulates demand largely through jobs and welfare.

In its embrace of Say's Law, binary economics takes exception to both approaches, maintaining that questions of consumer supply and demand must be addressed simultaneously in the very process of capital formation and capital transfers.²⁸

Underlying binary economics, Say's Law provides the fundamental economic restraint and basic logic in a market economy: production must be financed to generate the consumer income to purchase the consumer goods produced. Say's Law also provides the formula and requirements for a steady-growth, noninflationary economy that increasingly matches unsatisfied needs and wants with the productive means to satisfy them.²⁹ If mass production is not financed to generate mass consumer purchasing power, vast inflationary and redistributionary measures, accompanied by recurrent booms and busts, must follow, as indeed they have.

Given binary economic suppositions and logic, a number of propositions follow from Say's law:

- (1) An industrial economy must not limit workers' participation in the economy to their productive labor input alone; they must participate through both their labor and ownership of capital.
- (2) As technology advances, increased productive input of capital must be linked with increased consumer income from capital ownership.³⁰
- (3) In an industrial economy, only through broadening capital ownership may consumers "participate in production [on market principles] to an extent sufficient to provide them automatically with adequate purchasing power"³¹ to consume what the economy produces.³²
- (4) More economic growth will result if capital formation and transfers are financed on market principles to broaden the ownership base, so as to generate the consumer income necessary to purchase the consumer goods produced. (This proposition is a restatement of the principle of binary growth.)

Economists ignore these imperatives, which in binary economics follow inescapably from Say's Law. Furthermore, whatever they think of Say's Law, most economists would contest the idea that alternative financing designed to produce alternate ownership distribution will, of itself, create growth. The question of whether broader capital ownership, financed according to binary principles, will promote substantial economic growth, impede growth or leave it unaffected is thus crucial to an evaluation of binary economics.

Say's Law is important as one of the few points of common reference between Kelsonian and traditional economics. However, before understanding the binary application of Say's Law and the objections that might be premised on traditional economic theory, one must consider concepts of independent productiveness, ownership, insured capital credit and other aspects of binary theory in greater detail.

The Concept of Independent Productiveness

Both socialist and traditional capitalist theories make a foundational error in their analyses of the productive input of capital and labor. In the last two hundred years, in physical terms, the economies of western nations have grown many hundredfold, vastly outstripping previous per capita economic growth. The increasing capacity to produce has been accompanied by an increasing reliance on capital in the productive pro-

cess. However, when people interact with capital to form an inseparable product or service, how should its market value—the return on production—be allocated to the capital and the labor inputs?

The neoclassical economic approach looks at what labor and capital earn and conclude that their relative returns are a function of the marginal value of their inputs. This approach assumes a more or less competitive market for capital and labor. Yet it is doubtful—given the multiplicity of worldwide political barriers to, and interferences with, the free operation of the laws of supply and demand—whether existing markets are competitive.³³ In traditional economics, the generally accepted conditions for competitive markets include:

- (1) barrier-free market entry;
- (2) a sufficient number of buyers and sellers so that no single participant can substantially affect the market prices; and
- (3) freedom from collusion among market participants.³⁴

Consistent with these conditions, the binary view is that markets for capital and labor cannot be competitive so long as people without capital are effectively restricted from acquiring capital.³⁵ Traditional economic theory, on the other hand, ignores the consequences of the substantial barrier that stands between most people and effective participation in the capital markets, and rather frequently assumes (inconsistent with these limitations) that capital markets are efficient.

Traditional economic theory assumes that the most important productive relationship between capital and labor is the one described by the concept of “productivity.” Productivity is output per unit of input.³⁶ Economists calculate labor productivity by combining production of labor and capital with respect to per-hour or per-dollar input of labor alone.³⁷ Capital productivity, more usually expressed as the rate of return on investment, may be similarly calculated.³⁸ “Marginal productivity,” the first derivative of productivity, expresses the marginal increase in output per additional unit of input. According to neoclassical economic theory, marginal productivity signals to managers how much capital and labor to employ in the productive process and thereby to optimize output for any level of available inputs.³⁹ In judging the relationship among capital, labor and production, traditional economists agree that capital increases labor productivity.⁴⁰ Although productivity stands at the foundation of traditional economics, there are serious “productivity measurement problems”⁴¹ which burden the effectiveness of traditional economic analysis.

In binary terms, the concept of “productivity” as applied in traditional macro-economic analysis is incoherent. It ignores and obscures a more important relationship among labor, capital and production:

productiveness. Productiveness can be thought of as the quantification of “independent factor input” of each factor as a percentage of total output of both factors.

An example will help quantify the conceptual differences between traditional economic productivity and Kelsonian productiveness: A person can dig a hole in four hours by hand. After the invention of the shovel, he can dig the same hole in one hour. In traditional economic terms, labor has four times the productivity because four times as much work can be performed in the same time period. In binary economic terms, the productiveness has changed from 100% labor before the invention of the shovel, to 25% labor and 75% capital input with the shovel. Thus the Kelso system views the laborer as having only one fourth the productiveness rather than four times the productivity. Capital has not “amplified labor productivity,” which would be the view of traditional economics, but has “replaced labor productiveness” per hole, and therefore requires a reduction in labor’s claim on the income earned from each unit of output.

In traditional economics, productivity is the foundational mathematical concept for organizing, analyzing and explaining growth and participation in that growth. In binary economics, productiveness is the fundamental concept, and productivity plays only a second-order role. The productivity concept in traditional economics induces the worker—or the government or labor union acting on his behalf—to compensate for the threatened erosion in his income by demanding more pay for less productive labor input. The productiveness concept, however, highlights the worker’s need to acquire the capital that has replaced his labor productiveness, in order to preserve and enhance his earned claim on the increased aggregate output.

Consider now the example of a company that owns a building with ten manual elevators and employs ten elevator operators to run them. On a trial basis, the company replaces five of the ten manual elevators with automatic elevators and all operators are put on half-time to operate the remaining manual elevators. Operators must input only half as many operator labor hours to maintain the same output of ten elevators available for service. Yet few, if any, economists would conclude, as they might in the shovel example, that the elevator operators are twice as productive. Rather a traditional economic analysis would consider the elevator operators’ productivity to be unchanged because the output of each has not changed with respect to the labor input of each.

If half the operators are retained full-time and half are fired, the theoretical productivity of the remaining operators does not change. However, the discharged operators, who retain the same potential productivity as those still on the job, cannot earn a living on this “potential productivity” if they remain unemployed. Their former labor

productiveness has been replaced by capital productiveness. In binary terms the productiveness of “capital workers” (i.e., capital owners) has replaced the productiveness of labor workers.⁴²

When all the operators are replaced by automatic elevators, labor input has been reduced to zero, and the productivity of labor, in traditional economic terms, is infinite. (Productivity is measured by dividing output by input; as the denominator approaches zero, the value of the fraction becomes immeasurably large.) In Kelsonian terms, the important conclusion is that capital worker input has totally replaced labor worker input. For that task, labor productiveness is zero; capital productiveness is 100 percent.

As new labor-saving technology is implemented within a Kelsonian framework, workers' percentage claim on total output arising from labor's productiveness is reduced because the productiveness of the workers' capital has replaced correspondingly the productiveness of their labor in aggregate production. Demands for higher wages based on “increased productivity” do not obviate the need for workers to participate legitimately in the acquisition of capital that has replaced and supplemented their labor productiveness in today's high technology world.

While increased capital productiveness may spawn a larger economy and create more jobs, the invariable effect of new capital formation is to replace labor productiveness with capital productiveness. Consequently, as technology advances, labor workers can legitimately claim from their aggregate labor only a decreasing percentage of total output.

In terms of independent productiveness, there is no difference in principle between the shovel and the elevator. Each replaces and supplements labor productiveness in the same way. The only difference is that automated capital generally replaces and supplements vastly more labor productiveness than manual capital. In binary economics, a shovel, though physically dependent on human labor to realize its productive input, is as independent a wealth producer as the person who digs a hole, with or without the shovel. The shovel is also as economically independent of the human factor as the automatic elevator. The economic independence of capital productiveness exists without regard to the person-hours needed to maintain or operate the capital.⁴³

To illustrate productiveness over time, the Kelsos use Figures 3A and 3B.

These charts show increasing capital productiveness and decreasing labor productiveness as a percentage of total output. As a result of our closed private property system, which limits capital acquisition to existing owners, Say's Law requires a redistribution of capital income illustrated in Figure 4.

Thus according to binary economics, capital now accounts for eighty to ninety percent of the total productiveness of any of today's

FIGURE 3A
Changing Participation of Labor and Capital in
Production of U.S. Goods and Services

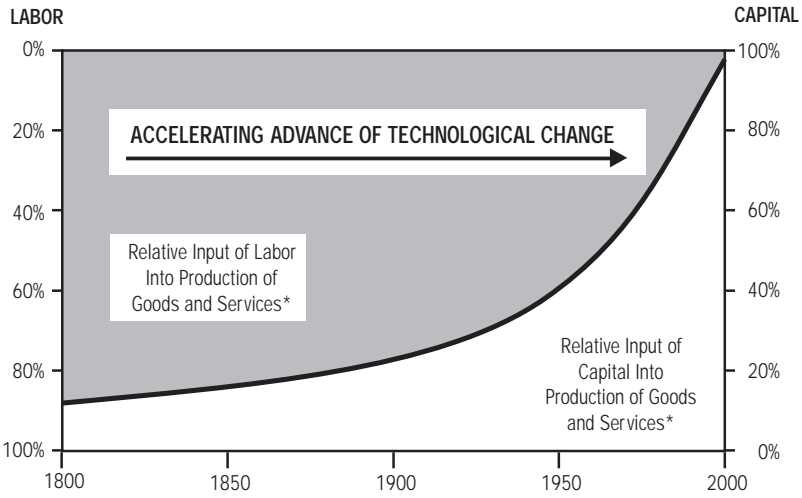
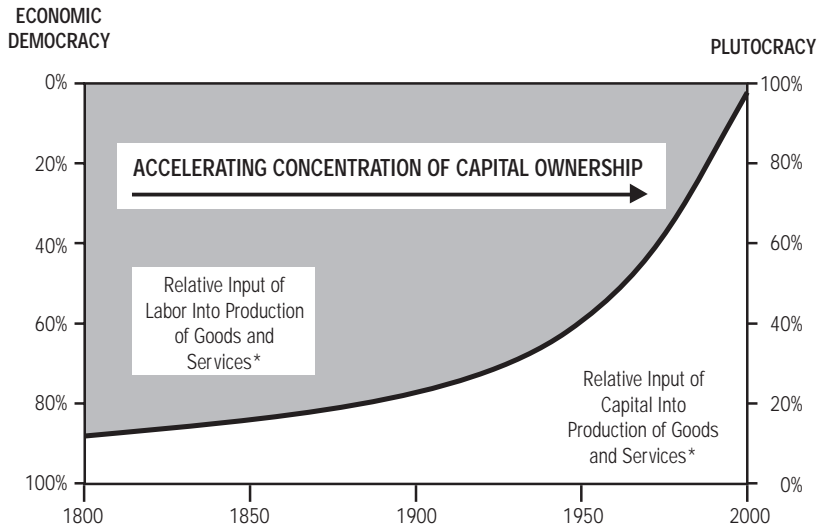
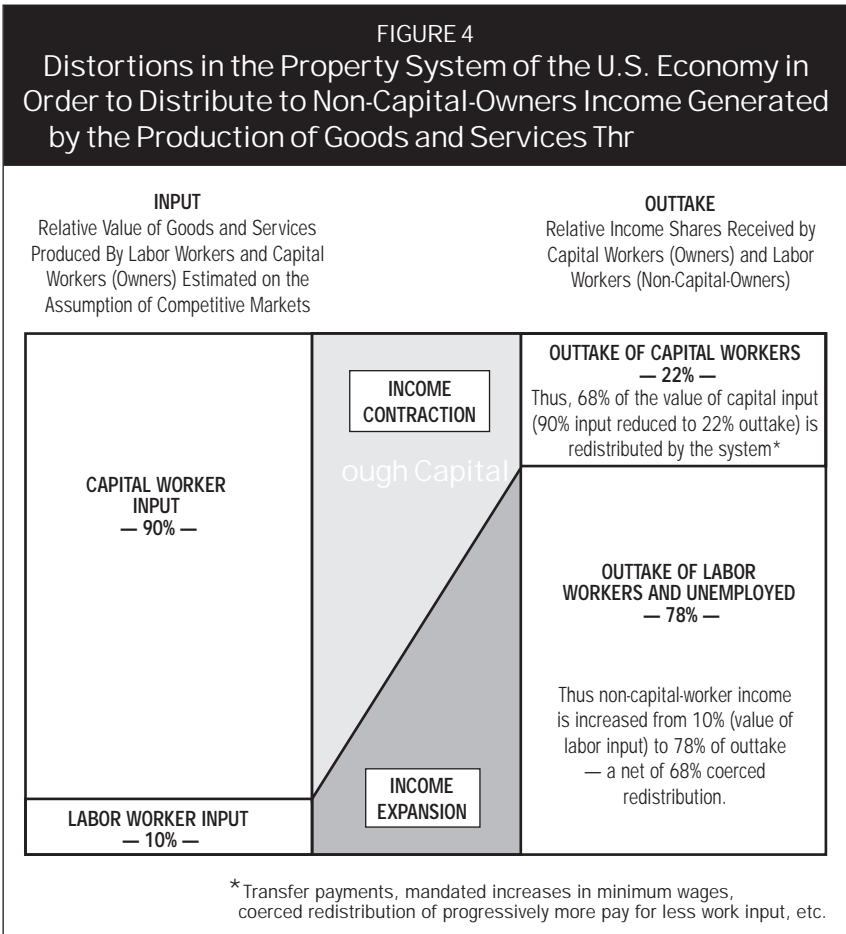


FIGURE 3B
Changing Distribution of Economic Power
Among U.S. Citizens



* Estimated on the assumption that the value of productive inputs is measured in reasonably competitive markets.

(Revised in 1993 from original copyrighted diagram by Louis O. Kelso and Patricia Hetter Kelso.)



modern industrialized economies; but much of that income is necessarily distributed to people through inflated wages or welfare payments to maintain consumer demand, as required by Say's Law.

People Are Poor Because They Do Not Own Enough Capital

Productiveness and its relationship to labor, capital and technological advance provide a different, more fundamentally helpful explanation of why most people are poor in an industrialized economy. People are poor not because their labor wages are low or nonexistent, but because they cannot acquire the capital that has replaced their labor productiveness and the additional capital necessary to earn an income that will allow them to consume at a level that amounts to living well.⁴⁴

Simple logic tells us that as the production of goods and services changes from labor-intensive to capital-intensive, as it has been doing since the beginning of the industrial revolution, the way in which every consumer in a free, democratic society participates in production . . . must synchronously change from labor-intensive to capital-intensive.⁴⁵

The Kelsos note, "If under free-market conditions 90 percent of the goods and services are produced by capital input, then 90 percent of the earnings of working people must flow to them as wages of their capital and the remainder as wages of their labor work."⁴⁶

If the reader accepts the alternative foundation that productiveness offers for analyzing the productive input of capital and labor, then to improve the lot of the poor and to provide an alternative to demanding more pay for less work or welfare payments, society must afford a practical means of acquiring the capital whose productiveness produces an ever-increasing percentage of total societal output.

Apart from inheritance and gift, traditional economic theory provides one principal means of legitimately acquiring capital: work hard to earn enough from labor to withhold from current consumption, and invest wisely. Binary economics posits that this solution is irrational and ineffective; the solution is simple but impossible for most people.⁴⁷ Those without capital already have too little consumer income because capital productiveness has overtaken their labor productiveness. Further withholding by the poor from their consumption will worsen the growth-stifling consumption deficit that results from the concentration of capital ownership. For sustained growth, Say's Law requires a private-property system that enables people lacking appreciable productive capital to acquire it on market principles without reducing their already inadequate consumer income. To solve this problem, binary economics turns to another discipline: corporate finance.

A Democratic System of Corporate Finance

One cardinal principle of business finance, sometimes referred to as the "feasibility principle," is to invest only in capital that pays for its own acquisition cost in a comparatively short period of time, generally under five years.⁴⁸ Included within the projected income necessary to meet the feasibility requirement is an amount sufficient to provide reserves for depreciation, research and development so that worn or obsolete capital can be replaced with new capital.⁴⁹ Thus capital both pays for its acquisition and generates a perpetual, self-financing return.⁵⁰

To acquire new capital, corporate managers retain earnings, issue stock, or borrow money. As traditionally structured, each technique's primary effect is to finance new ownership into existing owners. Of the three techniques, only debt financing has the systemic potential of enabling people to acquire capital without prior ownership of capital.

To meet their capital needs, large corporations rely most heavily, if not primarily, on borrowed money. Under traditional financing approaches, however, the growth potential of corporate debt is ultimately available only to existing stockholders: the people with savings to place at risk in the event of business failure. In effect, the binary approach extends the corporate advantages of debt financing to people who have no savings to place at risk. It creates an open, democratic system of corporate finance.

Universal Collateralization Requirement Keeps Most People Poor

To insure against business failure, commercial lenders require not only that the proposed financing meet the feasibility requirement; they also require some satisfactory form of collateral or guarantee with which the loan may be satisfied to protect the lender against the borrower's failure to meet the feasibility requirement. This almost universal collateralization requirement explains why, to confirm the old adage, it takes money to make money.

Because existing owners of capital already earn more than they consume, the purpose of their incremental production is no longer consumption. Rather, "income *in excess* of that used for consumption . . . can and will be used only to acquire additional capital productive power, which in turn will produce further excess income, which in turn will be used to acquire further excess capital productive power, etc., *ad infinitum*," causing a progressive distributional variance with the balance between producer input and consumer income required by Say's Law.⁵¹ Exclusive reliance on the financing practices that promote this imbalance thwart the goals of economic growth and equal opportunity.

Satisfying Collateral Requirements With Capital Credit Insurance

To satisfy the security requirements that stand as a barrier between most people and the ownership of capital, binary economics proposes a system of commercially insured, and governmentally reinsured, capital credit. To initiate the system, the government would

establish the Capital Diffusion Reinsurance Corporation (CDRC) to facilitate the provision of private capital insurance and to stand as the insurer of last resort. In effect, it approaches the problem of business failure as a casualty loss problem and therefore seeks to insure the business risk at competitive prices. The success of binary proposals depends on the proposition, yet to be fully explored, that the risk of business failure customarily borne by equity investment can be competitively priced and included in the cost of borrowed capital. If this is feasible, then effective acquisition rights need not be essentially restricted to those who already own substantial assets, but can be extended democratically to all.

Binary economics' recourse to capital credit is not a facile or naive reliance on a pyramid scheme of easy credit policies associated with subsidized financing for consumption or for any particular business purpose. On the contrary, credit is available for any capital needs, as determined by private firms, but only for self-financing investment that meets standards of market discipline required for all financially sound capital investment.⁵² If the investment fails, there is no income for the beneficiaries.

Nor is the binary approach an attempt to undermine incentives to encourage efficiency, industry, cooperation, competitiveness and inventiveness. On the contrary, binary economics would extend capital credit to reinforce incentives for all such human input. But even operating optimally such incentives cannot inspire human input or yield labor earnings beyond the limits of its economically productive input. Thus given the import of productiveness, insured capital credit is simply the only means yet proposed to enable people without capital to acquire capital on market principles so that within a binary time frame,⁵³ increasing consumer income is distributed to balance increasing capital productiveness as required by Say's Law.

Because binary financing does not resort to traditional equity investment, it cannot require such investment to assume any of the risk of business failure associated with binary financing. Thus the practical efficacy of binary financing programs depends on the proposition that the risk of business failure, customarily borne by traditional equity investment, can be commercially insured. To facilitate the provision of private insurance, the specifically established Capital Diffusion Reinsurance Corporation (CDRC) would stand as a reinsurer and the insurer of last resort. In answer to objections to such a governmental assumption of responsibility, the Kelsos have argued that with reference to the financial well-being of the top two thousand or so United States companies, since the New Deal, the federal government has already assumed the risk of their aggregate failure. Witness the governmental response in bailing out two such "too big to fail" companies": Chrysler Corpo-

ration and Continental Bank. The major differences are that the risk is presently indirectly mediated politically by monetary, taxing and fiscal policies rather than explicitly as a market decision under the binary approach, while the government promotes the financing of new productive capacity so that it is owned by people with few, if any, unsatisfied needs and wants. The binary proposal does no more than capitalize the risk already assumed by the government, and facilitate its pricing and financing on market principles, for the productive and consumption needs of all.

In 1986, the Kelsos estimated the insurance costs in the range of two percent. Shortly before his death, by reason of the deteriorating economic conditions, he increased this estimate to the range of five percent. Any particular estimate is of course debatable, and the question is worthy of serious study. As a corollary to the binary growth effect, however, binary logic suggests that much capital formation fails to proceed on a self-financing basis because of a systemic failure to distribute to consumers enough earnings from capital. Thus the financial feasibility of capital credit insurance must be judged consistently with the prospects for binary growth.

Binary Growth in Binary Time Frame

To explore the long-term dynamics of binary growth, it is helpful first to focus on a time horizon of ten years and to assume a competitive capital cost recovery period of five years. The ten-year horizon may then be bifurcated into a "binary time frame" consisting of two five-year segments. Because the beneficiaries of binary financing cannot begin to spend their binary income until after the capital has paid for its acquisition cost, new capital financed in the first year will not produce spendable capital income for its beneficial owners until the sixth year; but thereafter, it will produce that income indefinitely.⁵⁴ The new capital formation of the second year will produce an additional increment to the beneficiaries' income in the seventh year, and so forth. By the tenth year, five full years of binary financing will be providing the full payout of the equity return to the beneficiaries. By reason of their higher marginal spending rate, more of the additional income earned by the new owners (who have many unsatisfied consumer needs and wants) will be spent on consumption than if the income had been earned by existing owners (who have few, if any, such needs and wants).

This broad-based incremental consumption will fuel a demand for greater investment, and therefore a larger economy, than would be financially feasible if capital had been traditionally financed. If traditionally financed, the capital would have earned its income for

people with few, if any, unsatisfied consumer needs and wants, who would thus seek more investment opportunities, but in the context of weaker consumer demand. Viewed from a ten-year perspective, more consumer demand and therefore more growth will materialize over the ten-year period to the extent that new capital formation and capital transfers are financed on binary principles rather than with traditional collateralization requirements. In binary terms, the incremental consumer demand giving rise to the growth is not inflationary because it is linked through property rights to the production of goods and services of equal value. Consumer income for the binary beneficiaries is limited at all points by the antecedent earnings of the underlying capital.⁵⁵

If one extends the time horizon to twenty and fifty years, one sees a basis for sustained, non-cyclical economic growth.⁵⁶ This basis for growth continues to increase indefinitely as more capital is financed on binary principles. This is a growth connection that is not the result of the increased productivity of any particular workers, nor of increased investment or technological gains, nor of reduced transactions costs, nor of any other traditionally advanced basis for growth. *It is a long-run self-sustaining connection between production, ownership, consumption and growth that exists in a binary time frame. It is unique to binary financing, and is at the heart of the binary private property solution for the economic well-being of the poor and middle class, without taking from the rich.*

Viewed in a binary time frame, the effect of the program is to finance the basis for both increased supply and demand. In this sense, binary economics offers an economic strategy fundamentally distinct from both the right-wing, supply-side, trickle-down strategies and the left-wing, demand-driven, Keynesian governmental approaches of taxing, fiscal, and monetary policy. Binary economics is neither a right-wing nor a left-wing theory. It rejects both approaches because, in their long-run analyses, they make the fatal error of disassociating production and consumption. To achieve sustained economic growth, the basis for production and consumption must be simultaneously financed within an appropriate binary time-frame for economic planning.

Thus, in utter conflict with traditional economic thinking, according to binary economics, in the long run, it matters greatly whether capital bought competitively on market principles is acquired increasingly by the poor and middle class rather than almost exclusively by a small percentage of the population. Therefore, one important message of binary theory to those concerned with the welfare of all people, is that it may matter greatly whether our private property system restricts acquisition rights to the existing owners or extends them universally to all people.

Binary Growth Is Not Traditional Redistribution

When exploring the implications of binary growth, one should note a number of remarkable features regarding binary growth and binary income. First, in an economic sense, if it exists, binary growth is not redistribution, at least not in any traditional sense. In comprehending the binary long-run approach to growth, one must understand the source of the incremental consumer demand. It only exists if the underlying capital has paid for its acquisition costs and then produces additional income. In any year, binary income is paid as dividends to its beneficiaries only if in that year the underlying capital has produced goods and services equal in value to the income distributed. To the extent of aggregate binary growth in any year, binary income is not compensation for labor, including human capital; and it is not income redistributed from the productive input of others (either as workers or owners). Further, to the extent of aggregate binary growth in any year, it cannot be fairly said that the provision of insured capital credit for binary beneficiaries has crowded out existing owners of their rightful investment opportunities (which they might have enjoyed under the present closed property system) because the binary growth investment opportunities would not have materialized but for the binary property system. Moreover, all of the transactions will have occurred voluntarily by principals and agents acting on behalf of private companies and their traditional and binary shareholders. Any binary income is likewise wholly the result of voluntary transactions in response to market forces. Thus to call the benefits of binary growth, if any, "redistribution," as that term is traditionally conceived, is a fundamental misnomer.

The fact that the long-run capital-based binary income, if any, is not redistribution in any traditional economic sense has important economic, political, and jurisprudential implications. Most significantly it disposes of all the volumes of literature against traditional redistribution on grounds that it is a distortion of the efficiency of market forces. If valid, binary growth uniquely eliminates the supposed conflict between efficiency and distributive justice. The binary growth generates market-based capital income that replaces and supplements command-based traditional redistribution.⁵⁷ Further, the distributional income benefits derive from lowering the substantial barriers that now stand between most people and the capital markets in the name of trickle-down theory. Thus it creates the private property foundation for even greater market efficiency.

In other words, granted that the theoretical prospect of binary growth may yet be unproven in practice, and may be yet disputed on a number of grounds, nevertheless if it exists, binary growth is not objectionable as redistribution or as an abandonment of market prin-

ciples. If binary growth materializes, it will do so because Louis Kelso discovered a more efficient private property system that connects people more directly with market forces by providing them increasingly with the production-based capital income to purchase what society produces.⁵⁸

Capital Formation Without “Financial Savings”

Perhaps the most difficult aspect of binary growth theory from a traditional economic perspective is the explicit relationship assumed by binary economics among savings, consumption, and growth. “Sustained economic prosperity in a market economy requires that earners and their dependents devote currently earned income to current consumption.”⁵⁹ Under a binary economic system, economic growth will be great enough to allow simultaneous increases in both personal consumption and capital investment, without forcing people to choose between savings and consumption.⁶⁰

From a traditional economic perspective, these binary growth predictions are problematic because they seemingly ignore the necessity for savings to provide the capital investment deemed necessary for growth. The idea that a higher marginal spending rate for consumer-owners will provide the basis for sustained economic growth contradicts the very definition of savings. In traditional economics, savings requires a reduction in consumption. Expressed society-wide as an equation, savings (S) equals total output (O) minus consumption (C):

$$S = O - C$$

Furthermore, according to traditional economic theory, the way to promote economic growth is to increase productivity. Increases in productivity require investment, which requires savings. Growth requires incentives to save more, not spend more. Thus new capital owners’ increased marginal spending will reduce rather than increase investment and stifle rather than promote long-term growth.

In an important sense, however, this traditional analysis is static, not dynamic. It assumes the “O” is a quantity that does not grow with a broader distribution of wealth. Given the time horizon of business managers, however, “O” depends not primarily on consumer demand at the time of investment (t - 1) but on anticipated consumer demand at the projected time the investment will begin producing goods and services (t - 2).

The Kelsos do not deny that increased capital investment has historically accompanied economic growth that would not have materialized without the new capital formation. Indeed, the concept of

productiveness is an expression of that relationship. Productive capital at $t - 1$, however, is not feasible without correlative consumer demand at $t - 2$. Because binary financing produces more real consumer income at $t - 2$ than traditional financing for any given amount of capital formation, it provides greater incentives for investment than traditional “savings-based” financing.

To understand the “savings controversy,” it is important to recognize that there is in part a definitional difference, and a difference in the analysis of growth ultimately traceable to the difference between productiveness and productivity, and to their relationship to growth. Louis Kelso and Mortimer Adler distinguish between two meanings of the word “savings”: “physical savings” and “financial savings.” “In a physical sense, ‘saving’ is simply the use of goods or services to produce capital goods rather than for immediate consumption.”⁶¹ In contrast, Kelso and Adler define “financial savings” as “money or credit diverted from immediate use for consumption.”⁶²

In law, the distinction between financial and physical savings rests on the difference between “property” and “things.” Property is not things, physical or intangible, but rights with respect to those things. Financial savings are claims on physical savings. The individual allocations of financial claims on physical savings depend on the rules of the prevailing property system. A private property system with unlimited collateralization rights will produce one allocation of financial claims, whereas one based on binary financing with commercially insured capital credit will produce another.

In traditional economic terms, however, viewing the binary system as an appropriation or dilution of the property of non-benefiting investors and consumers (and therefore as a reliance on savings in the physical sense) does not negate the potential growth that binary economic theory has predicted. To the contrary, the validity of those growth predictions does not depend upon whether or not binary financing is viewed as an appropriation or dilution of existing savings of persons not commensurately benefiting from the extension of credit.

Although it has received little attention in recent times, an examination of the savings-investment-growth question by economist Harold G. Moulton corroborates the binary economic premises and supports binary growth predictions.⁶³ Moulton, then president of The Brookings Institution, published his analysis in 1935, when the United States was struggling to understand the causes of the Great Depression and discover the way to economic recovery.

The relevant portion of Moulton’s analysis is set forth below:

According to the traditional viewpoint, an expansion in the rate of capital accumulation can be accomplished only by

a reduction in the rate of output of consumption goods—because labor and materials have to be transferred from one type of activity to the other. Evidence shows conclusively, however, that consumption and capital formation do expand and contract together.⁶⁴

In considering whether consumption or investment leads the recovery-growth process, Moulton presented the conflicting theories of those who advocate stimulation of consumer demand and those who stress capital investment as the necessary starting point for growth.⁶⁵ Moulton found that rise and fall in economic growth “appear to have originated in forces affecting the output of goods destined for consumption. . . .”⁶⁶

The motivating force in all economic activity, under a system of private initiative, is the wants and demands of people. The base of the economic pyramid is the production of consumption goods—primary necessities, first and comforts and luxuries later. In the ascending scale of goods that are relatively indispensable we find new plant and equipment at the top. This is simply because the demand for plant and equipment is derived from the demand for the consumption goods which such plant and equipment can produce.⁶⁷

Foreshadowing binary financing theory, Moulton later concluded:

. . . the best hope of success in stimulating a strong recovery movement through concerted action would be to operate on both the consumption side and the capital side simultaneously, for each might be expected to reinforce the other.⁶⁸

To operate on both the consumption and capital sides, Moulton would resort to the banking system to expand credit, but, unlike Kelso, he did not focus on the concept of productiveness or the need for restructuring private property rights. Nevertheless, his defense of the use of such credit is instructive:

. . . it is possible to increase the supply of capital goods without an antecedent or concurrent restriction of consumption. The truth is that the accelerated capital expansion and increased productivity result in an increased output of both capital goods and consumer goods. Thus real wages are increased. The history of capital expansion and wage and price trends in the United States affords no support for the theory that bank credit expansion merely means *involuntary* sav-

ings. Nor do the facts support the thesis that savings in the sense of positively reducing consumption is essential to the formation of capital.⁶⁹

Several points deserve emphasis. First, when the Kelsos and Adler maintain that individuals and society need not choose between consumption and investment, they do not claim that the same item of resource or human service may simultaneously be expended in providing a consumer and a producer good or service. Their growth theory does hold, however, that an alternative property system based on binary economics would produce a broader distribution of ownership, which will in turn create noninflationary real market demand for more resources and services that would not be feasible for investment without the broader distribution of capital ownership. Second, the fact that the institution of the binary alternative system may be viewed in traditional economic terms as an appropriation or dilution of the property of non-benefiting investors and consumers (and therefore a reliance on a redistribution of their savings for the investment benefit of the new binary owners) does not negate the predicted binary economic growth potential resulting from a broader distribution of ownership. To the contrary, nothing in the savings-investment-growth controversy undermines the prospect of binary growth or, therefore, the reality of the economic choice offered by the Kelsonian economic and private property system, which up to now has been virtually ignored by traditional economic scholarship.⁷⁰

Choosing Among Paradigms

The Kelsonian conception of economics and property rights provides a foundational challenge to the traditional paradigm for the analysis of economic behavior.⁷¹ The organizing vision of productivity-based economic analysis is not congruent with traditional productivity-based economics. There are important differences between the two in terms of the meanings of important variables and the mathematical relationships among those variables.⁷²

Beyond the formal discipline of economics, the conception of what is theoretically possible and the expectation of what is reasonably achievable are both bounded by the limitations and experiences of the traditional approach to economics. To evaluate binary economics fairly, one must consider it in a context that neither excludes it theoretically from the realm of the possible, nor dismisses its predictions because they far exceed the boundaries set by predictions based on traditional theory or on experience in an economy structured on pre-

vailing private property rights.

Pursuing an inquiry consistent with traditional economic theory, however enhanced it may be by other disciplines, may not prove anything to a Kelsonian. Conversely, such an inquiry, if it is consistent with binary theory, may be equally fruitless to a traditional economist. Because proof is itself paradigm-specific, the preference for one paradigm over another may result from judging a newly presented paradigm against one generally accepted as true, rather than evaluating both from neutral principles. The shift in preference from one paradigm to another may be more likely the result of an inductive leap than a proof.

Over time, however, society does make foundation-altering choices regarding paradigms as dramatic as the one characterized by the shift from geocentrism to heliocentrism, known as the “Copernican Revolution.”⁷³ Thus the history of ideas may inform an exploration of binary proposals from competing frames of reference.⁷⁴

In retrospect, replacing one paradigm with another may be explained in part by the operation of three principles of preference that *may* be capable of prospective application in a paradigm-neutral, albeit subjective, way:

- (1) *Utility*. Which paradigm accomplishes more of what is desired by description, prediction, and control of the environment?
- (2) *Facility*. Though the same events might be described or predicted—and the same results achieved—with the application of different paradigms, which one is easier to apply to achieve the desired ends?
- (3) *Simplicity*. To achieve description, prediction, and control, which paradigm requires fewer foundational assumptions and corrective exceptions not implicit in the assumptions?⁷⁵

Although these principles of preference may not be susceptible to easy application, they may provide helpful guidance in evaluating supposedly objective information that alternative models offer to describe and shape our perception of reality. The principles may also have the virtue of being paradigm-neutral, as well as the vice of being ill-defined within the terms of competing paradigms. For these qualities to be embraced and advanced as comparative advantages of any particular paradigm, their necessary definition for the purposes of argument will serve to highlight any paradigmatic bias.

Values beyond the theoretical and empirical operation of the paradigms may be decisive for different evaluators as they apply these

principles, particularly the “utility” standard, to paradigms for describing economic behavior.⁷⁶ Moreover, when paradigms conflict, empirical measurements designed to “verify” one or another approach may require adjustment for paradigm bias to the extent they are grounded in a methodology favoring one paradigm over another.

For example, Keynesian Paul Samuelson offers as proof that binary theory is an “amateur and cranky fad,” the discrepancy between “productiveness” and “productivity” generally reflected in the divergent percentages of productive input assigned to capital and labor.⁷⁷ Notwithstanding its “empirical content,” this “scientific evidence” of Kelso’s so-called “error” merely begs the question because it is premised entirely on the validity of the productivity paradigm that binary economics has drawn into question, and on the present closed private property system rather than the open, democratic private property system that a binary economy would establish.

The relative utility of competing paradigms, particularly new ones offered to challenge existing ones, is not always immediately discernible. The superiority of the Copernican system⁷⁸ to the geocentric alternative, in terms of utility, could not have been fully understood for at least 140 years after it was advanced. It set the stage for the work of Johannes Kepler,⁷⁹ and, ultimately, to the formulation by Sir Isaac Newton of his general laws of motion for both celestial and earthly bodies.⁸⁰ These laws could not have been inferred from the “reality” of an earth-centered solar system.

Thus in evaluating competing paradigms with regard to their social utility, one must counteract the inherent prejudice of accepted paradigms. One must suspend adherence to preconceptions and “avoid mistaking an organizing construct for a structural reality that, by defining the possible, limits vision and deadens will.”⁸¹

Conclusion

The Kelsos thus maintain that a democratic private property system structured to achieve universal capital ownership on free market principles should be our national goal. The Kelsos’ binary vision offers the prospect of general affluence, leisure, and individual economic independence in an increasingly democratic, privatized, and capital-rich economy. All of the old seemingly insolvable problems that have pitted left against right are swept away. Dedicated scholars should not dismiss binary theory without giving it a careful, rigorous consideration.

For a fair consideration, it is necessary to understand binary theory in its own terms, in a paradigm-neutral context, before judging it, and to evaluate binary proposals not only with respect to traditional

economic suppositions based on productivity, but also with respect to binary suppositions based on productiveness.

For years, binary economics has been shut out of an economics discipline that has proven unable to solve persistent problems of poverty and cycles of depression and unwilling to examine an alternative promise to do so. But given a binary property rights system, an alternate theory of economic production and distribution, and the altered institutional and decisional environment, there is much in the proposals and theory of binary economics to be explored by people of good will from all disciplines and callings.

Notes:

¹The theory of binary economics, originated by Louis O. Kelso, was first published in L. Kelso & M. Adler, *The Capitalist Manifesto* (1958). Since then it has been developed and explicated in L. Kelso & M. Adler, *The New Capitalists* (1961); L. Kelso & P. Hetter, *Two-Factor Theory* (1967); L. Kelso & P. Kelso, *Democracy and Economic Power: Extending the ESOP Revolution Through Binary Economics* (1990), recommended by Kelso as his most definitive statement of binary economics. For a more complete statement of the author's views see "The Binary Economics of Louis Kelso: The Promise of Universal Capitalism," published in *Rutgers Law Journal* 22: 3, (1990) and "Louis Kelso's Binary Economic Democracy," presented to the Fourth Annual Conference of the Society for the Advancement of Socioeconomics (1991).

Binary economics has also been referred to as "two-factor theory," *Two-Factor Theory*, 3; "social capitalism," Kelso & Hetter, "The Right to Be Productive," (pts. 1 & 2), *Financial Planner*, August 1982, 50, 51 (part 1); *Financial Planner*, September 1982, 86 (part 2); and "universal capitalism," *Two-Factor Theory*, 3-8. "In the phrase 'universal capitalism' the word 'universal' means approximately what it does in the phrase 'universal suffrage'" (Ibid. 7).

²The Kelsos, Louis and Patricia, take exception not only to Marxist theory, as originally proposed by Karl Marx, but also to all of its revisions and applications of socialism around the world. Likewise, they reject all forms of modern capitalist economic theory including laissez-faire classical economics, Keynesianism, monetarism, and supply-side economics. They embrace Adam Smith and his contemporary, Jean-Baptiste Say, but maintain that *The Wealth of Nations* must be purged of a factual error which became apparent only after the full bloom of the Industrial Revolution. Specifically, traditional economic theory fails to comprehend and properly account for the increasing productive input of capital.

³Smith assumed that the only way people can engage in production is to perform labor work. "The real price of every thing, what every thing really costs to the man who wants to acquire it, is the toil and trouble in acquiring it" (A. Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* [E. Cannan ed. 1937] 30). His writings evidence no anticipation of how extensively people could engage in production through the ownership of private capital. This assumption permeates the socialist and capitalist economic literature, (Kelso & Kelso, "Afterword: The ESOP as a First Step in New Age Economics," *Employee Stock Ownership Plans* [R. Smiley, Jr. & R. Gilbert eds. 1989] AF-2; *Accord Dictionary of Business and Economics* 259 [C. Ammer & D. Ammer eds. 1984]. The binary concept of productiveness belies Smith's assumption.

⁴People are poor because they have not acquired the capital needed to supplement their labor productiveness.

⁵Whether the proposals based on binary economics involve the taking of existing property is subject to controversy and depends upon one's analysis of growth and upon the definition of private property.

⁶This approach should not be confused, however, with those advanced in the social credit movement of Major Douglas. See note 17.

⁷"The theory of universal capitalism challenges the classicists, the Marxians, . . . the Keynesians, [the monetarists, and the supply siders] precisely on the point on which they all agree: the goal of full employment. Universal Capitalism rejects this goal as (1) humanly repugnant, (2) functionally inadequate, and (3) socially perilous" (L. Kelso & P. Hetter, *Two-Factor Theory* [1967] 31). Such a goal elevates work to an end in itself, rather than as a means to enjoy consumption, and thereby promotes unnecessary toil and suffering (Ibid.). Indeed, in an Aristotelian sense, full employment is a formula for enslavement of the citizenry (L. Kelso & M. Adler, *The Capitalist Manifesto* [1958] 13-29). Rather, the goal of the economy should be universal capital ownership (Ibid.). "A capitalist society would cast out the irrational doctrine of full employment. As more and more of its wealth is produced by capital and less by labor, more households would participate in the production of wealth as owners of capital and fewer as owners of labor" (L. Kelso & M. Adler, *The New Capitalists* [1961] 87). For an increasing number of the population, employment through capital ownership and "[u]nemployment . . . [as a laborer] is natural and desirable in technically advanced economies" (Ibid.) 4).

⁸A. Smith, op. cit. 30-33.

⁹L. Kelso, "Poverty's Other Exit," *41 North Dakota Law Review* 147 (1965) 152.

¹⁰In assessing economic proposals, "universal capitalism . . . asks *whose* private ownership? *whose* free enterprise?" L. Kelso & P. Hetter, *Two-Factor Theory*, 4 (emphasis in original).

¹¹See, e.g., L. Thurow, *Generating Inequality: Mechanisms of Distribution in the U.S. Economy* (1975) 196-202, explaining Dean Thurow's taxation strategies for "Altering the Distribution of Physical Wealth"; Gramlich, "Economists' View of the Welfare System," *Am. Econ. Rev.: Papers & Proc., May 1989* 191, including references to works by, inter alia, Alan S. Blinder, Milton Friedman, Arthur M. Okun and James Tobin.

¹²*Democracy and Economic Power*, 11-47.

¹³The best known of these trusts is the Employee Stock Ownership Plan (ESOP).

¹⁴*Democracy and Economic Power*, 108-109, 111.

¹⁵Here "net return" is income net of reserves for depreciation and research and development, but no additional retention of earning for new capital formation.

¹⁶At the heart of these predications is the premise that binary financing will effect a broader distribution of capital ownership, as compared with traditional financing, and that this broader distribution will produce a larger economy. Given binary premises, traditional economic strategies continually fail to exploit the full growth potential of the economy by failing to apply financing techniques that promote a broader distribution of capital ownership. However, the idea that broader distribution of capital ownership will, in itself, generate a larger economy conflicts with the dominant approaches of traditional economic theory, and provides perhaps the most difficult conceptual problem for those relying on traditional theory to judge binary theory and proposals. This subject is developed further, *infra*, at notes 7, 43, 46, 52, and accompanying text.

¹⁷To avoid confusion with the analysis of Major Clifford Douglas (which they reject) the Kelsos do not use the term "social credit," but rather "commercially insured capital credit." See, e.g., L. Kelso & P. Kelso, *Democracy and Economic Power* (1986) 105. See generally C. Douglas, *Credit-Power and Democracy* (1921); C. Douglas, *Economic Democracy* (1920); C. Douglas, *The Monopoly of Credit* (1931); C. Douglas, *The Nature of Democracy* (1934); W. Hiskett, *Social Credits or Socialism: An Analysis of the Douglas Credit Scheme* (1935); E. Holter, *The ABC of Social Credit* (1934).

¹⁸For a description of the ESOP and a practitioners handbook, see R. Smiley and R. Gilbert, *Employee Stock Ownership Plans*.

¹⁹General Accounting Office, *Employee Stock Ownership Plans: Benefits and Costs of ESOP Tax Incentives for Broadening Stock Ownership* (1986) 18-19. The GAO estimated that "the cost of ESOP tax incentives averaged between \$1.7 billion and \$1.9 billion per year during the period from 1977-1983, for a total of \$12.1 billion to \$13.3 billion over that period" (Ibid. 5).

²⁰As verified via telephone communication with the National Center for Employee Ownership.

²¹*Democracy and Economic Power*, 31. French political economist Jean-Baptiste Say (1767-1832) developed the principle.

²²Say's Law "holds that in a market economy the aggregate market value of the wealth produced is equal to the aggregate purchasing power created by the process of production" (*Two-Factor Theory*, 10).

²³T. Sowell, *Say's Law: An Historical Analysis* (1972) 3-4. Accord T. Sowell, *Classical Economics Reconsidered* (1974) 37-45. Professor Sowell has described the controversy:

"The idea that supply creates its own demand—Say's Law—appears on the surface to be one of the simplest propositions in economics, and one which should be readily proved or disproved. Yet this doctrine has produced two of the most sweeping, bitter, and long-lasting controversies in the history of economics—first in the early nineteenth century and then erupting again a hundred years later in the Keynesian revolution of the 1930's. Each of these outbursts of controversy lasted more than twenty years, involved almost every noted economist of the time, and had repercussions on basic economic theory, methodology, and sociopolitical policy. The shock waves from these controversies were felt well beyond the confines of economics, and evoked powerful emotions among people unacquainted with the technical issues involved or even with economics in general. In retrospect it is clear that the history of Say's law is an important part of intellectual history generally, and has important implications for the dynamics of controversy, the nature of intellectual orthodoxy and insurgency, and the complex relationships among ideology, concepts, and policies.

... [T]he two great controversies over Say's law which shook the foundations of economics were ... different in one crucial respect: the supporters of Say's law won a resounding victory in the nineteenth century, while its opponents triumphed in the twentieth century. In each case the victory was followed by intellectual guerrilla warfare. The most prominent of the later nineteenth century opponents of Say's law was Karl Marx. The Keynesian ascendancy, after dethroning Say's Law in the 1930's and 1940's, has been challenged even more effectively—to a point approaching a counterrevolution, in which the most prominent name has been Milton Friedman."

²⁴*Democracy and Economic Power*, 34. Others have recognized the controversy: "Historically, Say's Law emerged in the wake of the industrial revolution, when the two striking new economic phenomena of vastly increased output and the economy's cyclical inability to maintain sales and employment led some to fear that there was some inherent limit to the growth of production—some point beyond which there would be no means of purchasing it all" (*The New Palgrave, A Dictionary of Economics* 249 [J. Eatwell, M. Milgate & P. Newman eds. 1987]). But see *Dictionary of Business and Economics* op. cit. 415 acknowledging the controversy but denying the validity of Say's Law.

²⁵See, e.g., I. Magaziner & R. Reich, *Minding America's Business* 2-3 (1982); *Dictionary of Business and Economics*, 451.

²⁶In his break with classical economics, John Maynard Keynes rejected Say's Law. T. Sowell, *Say's Law*, 201-07. Accord Power, "The Economics of Keynes," *Economics and Human Welfare* [M. Boskin ed. 1979] 321, 331). According to the Kelsos, the idea that Keynes was free to reject Say's Law "is as naive and groundless as asserting that the National Aeronautics and Space Administration has repealed the law of gravity" (*Two-Factor Theory*, 187-88 n.10).

²⁷Markets are not efficiently able to facilitate a drop in prices to clear supplies according to Keynesian theory, largely because money supply prices, particularly money wages, are "sticky" downward (Wells, "Money and the Money Wage Rate," in *Economics and Human Welfare*, 393-98; see also *The New Palgrave*, 4: 251, explaining post-Keynesian criticism of Say's Law).

²⁸L. Kelso & P. Hetter, "The Right to be Productive," *Financial Planner*, (August 1982) 31-38.

²⁹*Democracy and Economic Power*, 31-38.

³⁰*Ibid.* As a result of this linkage, the Kelsos frequently refer to binary financing as "simulfinancing" (*Ibid* 47, 61-62, 130-31, 151, 157-58, 169-70).

³¹*Two-Factor Theory*, 62.

³²Ibid. See also 10, 60-61.

³³*The New Palgrave*, 3: 831, 837-38. Accord *Dictionary of Business and Economics*, 383. Reliance placed by traditional economics on competitive market theory is probably best explained by the perceived weakness of analyses based on imperfect competition rather than on the inherent strength of competitive market theory (*The New Palgrave*, 3: 837-38).

³⁴*The New Palgrave*, 3: 838.

³⁵See, e.g., *Democracy and Economic Power*, 17.

³⁶*Dictionary of Business and Economics*, 369.

³⁷Ibid.

³⁸Ibid.

³⁹Ibid. 286; Accord, *The New Palgrave*, 3: 323.

⁴⁰"Labor productivity increases because of improved technology, improvements in labor skills, or capital deepening" (P. Samuelson & W. Nordhaus, *Economics* [12th ed. 1985] 912).

⁴¹*The New Palgrave*, 3: 1010-13.

⁴²"The Right to Be Productive," 54.

⁴³In understanding the binary vision of capital as an independent instrument of production, like labor power, one might imagine every piece of capital as an unattended robot, regardless of the degree or kind of human input required to create, operate, maintain it, or otherwise make it continually productive. In this sense, one can see productiveness as a complete rejection of the labor theory of value.

⁴⁴"The Right to Be Productive," 93. Poverty is a relative concept. A middle class home may seem sparse to the rich and opulent to the poorest among us. According to the Kelsos, people are poor in an industrial economy if they do not receive a substantial portion of their consumer income through their capital ownership.

⁴⁵L. Kelso & P. Hetter, "Recommendations by Louis Kelso and Kelso & Company to the U.S. Department of Labor Concerning the Governance of the Corporation" (Jan. 15, 1985) 5-6, unpublished, emphasis in original.

⁴⁶*Democracy and Economic Power*, 138-39. Kelso's claim that capital accounts for 80-90% of societal productiveness seems to contradict consistent empirical findings, based on modern economic theory premised on marginal productivity, that labor claims between 70% and 80% of the income. Binary economics does not dispute those findings, but takes issue with the premise that the market for capital and labor can competitively value the respective inputs when most people are effectively barred from acquiring capital. In the binary view, much modern economic theory disregards the redistribution inherent in the legal and social structure which is designed to give more pay in return for less work from laborers. As industry changes from labor-intensive to capital-intensive, traditional financing does not provide an effective way for most people to acquire a viable share of the capital that produces an increasing proportion of total societal output.

⁴⁷If one defines a capitalist as one who earns least one-half his or her consumer income from capital ownership, then in even the largest and most successful of capitalist economies, the traditional approach has produced many workers and welfare dependents, but few capitalists. See *Two-Factor Theory*, 5; *The New Capitalists*, 10. Studies on the distribution of wealth and income show that a disproportionately large amount of income is concentrated in the hands of a small percentage of the population.

⁴⁸It is the feasibility principle that makes binary financing practicable: "New Capital formation in well-managed businesses (e.g., the top 2,000 U.S. corporations) does not come into existence unless it will pay for itself in a reasonable short period of time—generally under five years. One of the key responsibilities of management is the enforcement of this rule. *Newly formed capital is therefore inherently financeable*" (*Two-Factor Theory*, 61, emphasis in original. The Kelsos continue: "Well-managed businesses rigidly subject the nonhuman factor to 'birth control.' The human factor, by contrast, comes into existence without reference to the economy's physical need for labor" (Ibid.).

⁴⁹The federal government taxes income from capital net of deductions for depreciation and research and development. These deductions indicate the cornerstone of national economic policy to encourage the perpetual maintenance of the capital estates of existing owners, but no comparable facilitation policy enables people without capital to acquire an estate worth preserving.

⁵⁰Managers, of course, do not always succeed in their feasibility judgments. For reasons of poor planning or management, as well as unforeseen circumstances, ventures fail. Hopefully, in a competitive environment, managers who fail do not remain managers. On the other hand, the risk of failure can be calculated and offset through the application of insurance principles. See Kelso and Hetter, "Uprooting World Poverty: A Job for Business" *Business Horizons*, Graduate School of Business, Indiana University (1964), and *Democracy and Economic Power*, 42, 44, 105, 106, 108-109, 111, 164.

⁵¹"The Right to Be Productive," 54 (emphasis in original). "Such excess productive power we call 'morbid capital,' because its nature, like that of cancer, is to grow without symbiotic relationship to the organism to which it is attached."

⁵²All proposed binary financing would be reviewed "first by corporate management, then by commercial lending institutions, then by commercial capital credit insurance underwriters, and, finally, perhaps by the CDRC and/or the [Central] Bank (*Democracy and Economic Power*, 113).

⁵³As explained more fully below, a binary time frame is the time it takes capital to pay for itself and then begin earning a spendable income for its owners. See discussion, *infra*, under the heading "Binary Growth in a Binary Timeframe."

⁵⁴Self-financing capital acquisition requires sufficient gross income for depreciation and research and development reserves to restore capital perpetually to a technologically current state.

⁵⁵Note, further, that the growth effects of Kelso's capitalization process may start before the fifth year. First, with a five-year capital planning horizon, the anticipated increase in consumption may be reflected in additional capital spending as early as the first year. Second, to the extent the return on the equity represented by the binary stock exceeds the debt-servicing requirements, income will be available for payment to the binary beneficiaries before completion of the capital recovery. Third, to the extent that consumers feel wealthier by reason of their capital ownership, their marginal savings and consumption rates will shift toward more consumption even before they begin to receive binary income.

⁵⁶In twenty years, three-fourths of the annual binary capital acquisitions will be generating an income for their new owners. In fifty years, ninety percent. In the long run, the portion of binary capital that, having repaid its acquisition cost, is generating current income for its beneficiaries approaches 100%.

⁵⁷As people derive increasing income through their capital acquisition rights, they will be less dependent on traditional welfare and make-work employment.

⁵⁸Note here the implicit distinction between efficiency and productivity. If productiveness has economic significance, it produces an efficiency (more growth) not caused by increased productivity considerations.

⁵⁹*Democracy and Economic Power*, 36.

⁶⁰"New capital formation—economic growth—has been artificially and needlessly limited by the availability of savings or existing capital ownership. . ." (*The New Capitalists*, 105). The proposition that the economy must "choose between current consumption and capital investment [is] an artificial necessity that has long depressed market demand in Western industrial societies" (*Democracy and Economic Power*, 37). "The logic of . . . insured capital credit financing eliminates institutional limits on the availability of capital credit, which are mythical except when based upon shortages of physical ingredients to production and consumption of goods and services." (*Ibid.* 113). "Only where a shortage of labor, raw materials, or know-how exists would there be any reason to choose . . . between increased consumption and new capital formation. In all other instances, new capital formation and personal consumption would normally expand simultaneously" (*The New Capitalists*, 101).

⁶¹*The New Capitalists*, 9-10.

⁶²Ibid. 9.

⁶³H. Moulton, *The Formation of Capital* (1935).

⁶⁴Ibid. 43. Moulton then offers analysis of the period from 1901 through 1932 to establish his empirical assertions. (Ibid. 43-47).

⁶⁵Ibid. 49-55.

⁶⁶Ibid. 71.

⁶⁷Ibid. 71-72.

⁶⁸Ibid. 73-74.

⁶⁹H. Moulton, G. Edwards, J. Magee & C. Lewis, *Capital Expansion, Employment, and Economic Stability* (1940) 26, emphasis in original.

⁷⁰For a survey of the meager analysis of binary theory by professional economists, see Robert Ashford, "The Binary Economics of Louis Kelso: The Promise of Universal Capitalism." *Rutgers Law Journal* 22:1 (1990), 75-96.

⁷¹See T. Kuhn, *The Structures of Scientific Revolutions* (1962). In this context, a "paradigm" is an analytical system of rules used for description, prediction, and verification. "Description" includes definition of fundamental entities, variables, and dynamic relations among them; verification includes empirical techniques and rules of proof.

⁷²As an example of an important difference in the mathematical relationships among variables, consider the concept of "underutilization." For the traditional laissez faire microeconomist, underutilization of resources is a special case because generally efficient markets operate to employ all resources to the level of their marginal product. In binary economics, underutilization is the general rule so long as savings-based financing is the dominant technique for capital acquisition because market-generated consumer purchasing power is thereby suppressed (*The New Capitalists* 114).

⁷³See J. Dreyer, *A History of Astronomy from Thales to Kepler* (2d ed. 1953) 240-344; A. Koyré, *Astronomical Revolution* (1973) 57; T. Kuhn, *The Copernican Revolution* (1957) 74-75.

⁷⁴The analogy to epicyclic revision in astronomy may offer insight regarding the current state of economics. For least the last decade, popular print media have offered a steady stream of articles, essays, and editorials decrying the failure of predictive accuracy of economics. See, e.g., Gelman, "What Good Are Economists?," *Newsweek* (Feb. 4, 1984) 60. "Within the profession, the unifying Keynesian consensus has given way to a fractious squabble, as old theories and established models seem to square less and less with reality. Respected theorists line up on opposite sides of central questions, such as whether budget deficits affect interest rates" The article emphasizes the inability of professional forecasting firms, independent consultants and university professors to predict quarterly economic results with consistent accuracy. See also Brock, "Seeing the Economy's Future with a Shattered Crystal Ball," *Insight* (June 30, 1986) 42, 43: "Macroeconomic theory is in absolute shambles" says William A. Niskanen, Jr., former chairman of President Reagan's Council of Economic Advisors. . . . "The standard models, used to predict the economy for decades have been discredited. . . ."; Van Dyke, "Why Economists make Mistakes," *Bankers Mag.* (May-June 1986) 69, 69: "Lately it is difficult to pick up a newspaper or magazine without an article on economists' inability to forecast." Silk, "Economic Scene: Where did We Go Wrong?," *N.Y. Times*, (Jan. 1, 1982) 36, describing economists' concern about the failure of modern economics to address contemporary problems.

⁷⁵See Eichner, "Can Economics Become a Science?," *Challenge*, (Nov.-Dec. 1986) 4, 5-6, offering "coherence," "correspondence," "comprehensiveness," and "parsimony" as four factors by which economics and alternative paradigms might be judged in terms of scientific rigor.

⁷⁶Thus an economic approach that creates a smaller pie might still be preferred if it achieves a larger real distribution to those most needy, or makes good character by providing more equal property acquisition rights.

⁷⁷118 *Cong. Rec.* 20,207 (1972): statement of Paul Samuelson, read into the record by Sen. Harris.

⁷⁸See generally Copernicus, *The Revolution of Heavenly Bodies* (1543).

⁷⁹Johannes Kepler (1571—1630), after twenty years' observations of the sun and planets, crystallized his observations into three laws. The first placed the earth and other planets in elliptical paths around the sun, with the sun one focus; the second held that if a line were drawn between each planet and the sun, the line sweeps equal areas in equal time intervals; and the third stated that the square of the period of each planet's revolution around the sun is proportional to the cube of its distance from the sun (T. Ashford, *The Physical Sciences: From Atoms to Stars*, [2d ed. 1967] 54-55).

⁸⁰"[I]n a single law, Newton synthesized all the motions and regularities of the solar system[.]" and "showed that the heavenly bodies obey the same laws as here on earth" (Ibid. 56). See I. Newton, *Philosophiae Naturalis Principia Mathematica* (1687).

⁸¹Michaelman, "Reflections on Professional Education, Legal Scholarship, and the Law-and-Economics Movement," *Journal of Legal Education*, 3: (1983) 201.