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The Good Economy:
The Vitalism of Aristotle, Cervantes and Bergson
And the Economic Justice of Kant and Rawls

Edmund S. Phelps[1]

In the 1980s and 1990s the *neoclassical* view of economic performance was at the peak of its influence over economists. In that view, better performance means removing impediments – or surmounting hurdles – to economic efficiency. And achieving such efficiency is a *mechanical task*. The task would involve either increasing the rate of investment in "human capital" *or* the rate of investment in "research." Excessive tax rates were generally seen as the cause of any under-investment in human capital or in research; and selective reductions in key tax rates were the means to stimulate such investments. To what end were such improvements in efficiency? Reducing inefficiencies would boost the nations' wealth. And with an increase of wealth, the population could have more leisure and more consumption.

In the early part of my career this neoclassical theory seemed incomplete to me and I was happy when I had an idea that was a departure from it – such as the Nelson-Phelps concept of firms whose managers at first *do not know* the value of a new product or method. But even as late as 1990, I was a long way from having a different view that could stand as an alternative.

By the middle of the 1990s, though, I began to see failings of the neoclassical view – after long observation of the economies in continental western Europe. Labor productivity levels in Germany, France and Italy may have caught up to the levels in Canada and the U.S. by that time – though the Continental economies have lost ground again in the past dozen years. Yet big problems had emerged: high unemployment, low participation and very little innovation. I argued that these problems would *not* be cured by an increase of *human capital* – on top of its already high level. A major new investment in human capital might very well fail to repay the cost if the economic system did not provide more commercial work for human capital *to do* – if there were no reforms stimulating start-up or existing companies to create a new demand for labor input in developing and marketing *innovations*. (Phelps 2000, 2005)

I further argued that these problems would not be cured by an increase in *research*. The Continent was – and still – not the preferred launch site for innovations. The reason

1 McVickar Professor of Political Economy, Columbia University, and Director, Center on Capitalism and Society, Earth Institute at Columbia University. The author is the winner of the 2006 Nobel Prize in Economic Science.

was that the base of people with a *wide* education in the *liberal arts* was so narrow that there were comparatively few managers who had the broad sophistication required to evaluate a new product or method and relatively few consumers who had the venturesomeness needed to try them and to master them.[2] Recently I have referred to this as a deficiency of *vibrancy* among managers, employees and consumers.

Another severe limitation of the *research view* is that, in any reasonably enterprising market economy, it is *ordinary business people* who are the *conceivers* and *developers* of the bulk of the innovations – not the research agencies of the state or the big industrial labs of the established corporations. It follows that, while the allocation of resources to measurable research activity in corporations undoubtedly has some usefulness up to a point, it is dwarfed by the amorphous mass of informal observation and reflection of business people in the course of their daily work. A large increase of formal research thus might not have a proportionate effect. It might even reduce innovation if it diverted resources away from research of the informal kind.

It has to be concluded from this commentary – if it is at all close to the mark – that neoclassical theory fails to understand that the readings of the standard performance indicators heavily depend on the effectiveness and the latitude of actors in the economy who are unseen in neoclassical theory. What, then, is the *modern* theory that *does* comprehend (to a degree at any rate) the mechanisms generating high innovation, high employment and high participation?

THE NATURE OF ENTERPRISING ECONOMIES: MODERN THEORY

In such an economy, Friedrich Hayek observed in the 1930s, there is a "division of knowledge" among employees and managers – not merely dispersed information ("knowledge of current prices") but, crucially, dispersed *know-how* about "how commodities can be obtained and used."[3] (Hayek 1937). In Hayek's world, business people constantly strive to expand their knowledge into areas where knowledge is scarce or non-existent in order to see whether they might conceive and develop a commercial idea that no one else has conceived and developed before. This is *creativity* – having ideas that no one else has (or likely will have without doing the necessary exploration). In his sixties, he sketched a model of how the Hayekian innovator has to launch the innovation on the market to "discover" its value, if any.[4] (Hayek 1961, 1968)

One cannot think in this vein about market economies until going back to neoclassical thinking becomes impossible. So I have continued in this direction. In the theoretical framework I have built up in my mind the fundamental activity of a highly enterprising economy, which Hayek had in mind, is all about *commercial ideas* – their

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2 How then did the Continent latch on to the American things during its Glorious Years? My answer is that those things had existed sufficiently long that they were not very novel.

3 Intertemporal equilibrium, he adds, probably unnecessarily, entails that the expectations inevitably formed by firms be consistent, but does not entail that all valuable knowledge has been obtained.

4 To embroider a little a remark by Amar Bhidé, the Schumpeterian chef works away in his kitchen to zero in on the exact recipe that fills the bill while the Hayekian chef, having little idea of what diners would like, experiments on his customers. See Hayek (1961 and 1968 lecture).

birth, development and, finally, their "discovery," or adoption, in the marketplace. By the *dynamism* of an economy I will mean the significance of this activity in the economy – both its scale and the value of its directions. The generation of dynamism is a function of three factors: 1st, the *creativity* and *abundance* of the new ideas conceived and available for development; 2nd, the *diversity* of views among the canny financiers who select which entrepreneurs to back and to support through the development stages; and, 3rd, the *vibrancy* of managers and consumers in grasping and acting on the new ideas made available in the marketplace. Of course the openness of the market where entrepreneurs and financiers come together and the openness of the product market where innovators enter to seek users have impacts on the effectiveness of this process. More broadly, a country's economic institutions – not just the rule of law and private property rights but also financial institutions and labor law – impact on the actors in the innovation process and thus contribute or detract from an economy's dynamism. The economic culture is also important. (I will say something about that at the end.)

According to this modern framework, work in the business economy is good while wealth is bad – just the opposite from the neoclassical theory, in which work is bad and wealth is good! Let me explain:

A theme in my book *Rewarding Work* published in 1997 and my introduction to the conference volume *Designing Inclusion* published in 2003 is that dynamism has valuable effects on the workplace experience – benefits consisting of the personal, or intellectual, development of employees and entrepreneurs. My thesis is that, in an advanced economy at any rate, the mechanisms of innovation and of discovery largely shape the experience, such as the degree to which employees feel engaged in their jobs, and the rewards, such as job satisfaction, of participating in the workplace.

One might wonder whether these attributes of the workplace *differ* from economy to economy. Recent researchers on "happiness" – Bruno Frey, Richard Layard and Andrew Oswald among others – have stumbled on a seeming regularity: the average level of reported happinesss does not tend to be *higher* the higher is per capita income – as long as per capita income is above some some adequate level. However, it is certainly *not* true that the economic systems in the various high-income economies are *all alike* in the degree to which the work available there *engages*, or *involves*, the employees; and in the degree to which the work offers *job satisfaction* – or that the differences observed in these respects are no more than can be plausibly accounted for by random sampling differences from country to country. Data gathered from international surveys made by the University of Michigan in 1991-93 indicate that *countries differ* in the engagingness of the jobs. On a scale from 1 to 10, jobs in France received an average rating of 5.7, in Germany a rating to 6.0, in Canada 9.0 and in Great Britain 9.3. Using data in the Michigan surveys I estimate (in a crude calculation) that only 46% of French respondents were "satisfied" with *life outside the home*, 63% in Great Britain, 66% in Germany and 79% in Canada. (Of course, countries may have different standards about what is required for "satisfaction." Maybe the French are simply very demanding about work life and home life too. So it is of interest to find that in France, of every 100 respondents, 26 *more* were dissatisfied with their *work* life than were dissatisfied with their home life; in

Britain, 22 more; in Germany 10 more and Canada also 10 more. Handling these data is tricky, since life at home may be adversely affected by life at work.)

Such a wide range of performance indicators in enterprising economies – and the poor performance in economies that are not very enterprising – looks troublesome. Which performance indicators are the most important – is it productivity? employee involvement? And are there not some other indicators not mentioned here that are also important, such as the amplitude of secular swings? We need some ordering device, such as might be derived from a philosophy of "the good economy"! So I want to share with you my thinking about the meaning of the good economy.

THE GOOD ECONOMY: THE JUSTICE OF DYNAMISM AND INCLUSION

My interest in the modern economy and my exposure familiarity with some existing wisdom on human fulfillment have drawn me in the past couple of decades to the question of the *good economy*. This was not entirely new territory for me. In showing that "statistical discrimination," which deprives individuals of opportunities and weakens their incentives to prepare and to excel, is all too natural in the presence of information costs, I was suggesting that it is hard to prevent stereotyping and that an *ideal* economy is out of reach. (Phelps 1972c) In some work on morality in markets I argued that a little altruism inhibits various antisocial acts that, owing to asymmetric information, the market mechanism and legislation cannot prevent. (Phelps, 1973). The book by Rawls (1971) stimulated me to expound to economists his conception of "economic justice" (Phelps 1973b; Phelps, 1985) and to apply (he preferred "test") that conception in imperfect-information models of taxation (Phelps 1973a; Ordover and Phelps, 1975). Yet all of these models and, for that matter, Rawls's model of the economy took an austere view of the *sources of human satisfaction*, a view inherited from neoclassical economics. These models left us without conceptions of the good economy suitable to modern possibilities.

It is axiomatic that one's conception of the *good economy* depends upon one's conception of the *good life*. For Calvin (1536) the good life consisted of hard work and wealth accumulation. For Hayek (1944) and Friedman (1962) the good life was a life of freedom. The appeal of work and of freedom are that they are necessary for a good life.[5] But what is substance of a good life, its essence?

In a 2003 conference I proposed that a career of *challenge* and *personal development* is the essence of the good life. (Phelps 2007) It was commented that this is a "very American" view. In replying I began to remember that this view is the *classical theory* of the good life, a theory that originated in Europe. It gives me pleasure to recall for you the classical (and modern) literature on this special occasion.

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5 In any case, these conceptions of the good economy are not rich enough to provide a political economy for our times. Calvinism appears consistent with a property-owning market socialism. Aside from Friedman's negative income tax and middle-Hayek's several exceptions, both of them appeared more enthusiastic about a free market economy – small government and atomistic competition -- than the speculative swings and gleeful commercialism of today's capitalism (in those places where it thrives).

The classical theory of the good life originated with the writings of Aristotle in his *Nicomachean Ethics*. “Man desires knowledge,” he declared in his one of his most famous apothegms. People everywhere want to expand their horizons and “discover their talents.” For that purpose, people “go to the city.” He evidently understood that intellectual development cannot go very far in a solitary environment. Cities offer hope of interchange, teams, collective knowledge and memory.

I don’t know of any expressions of Aristotle’s view in medieval times but parallel themes are sounded after the Middle Ages. The Renaissance figure Benvenuto Cellini described the joys of creativity and of “making it” in his *Autobiography*. In Baroque times, Cervantes and Shakespeare dramatize the individual’s quest – a moral view Barzun and Bloom call *vitalism*. As I read Cervantes’ *Don Quixote*, it says that a life of challenge and adventure is necessary for human fulfillment and if the barren economy of the Spanish desert does not supply these necessities one must somehow create them by one’s self – imagining them, if need be.

Such a view is reflected by some, though not all, of the key figures in the 18th century Enlightenment: David Hume, disputing the *rationalism* of the French, gives huge emphasis to the “passions” and to “imagination.” The moral drawn by Voltaire in *Candide* is to look for satisfaction in individual pursuits, to “grow your own garden.” Jefferson wrote of the “pursuit of happiness” and commented that people came to America “to make their fortune” – the suggestion being that the opportunity *to pursue* happiness and *to make* a fortune are more engaging and thus more valuable than *having* happiness and fortune.

What of the age of modernism? The great French thinker Henri Bergson, reflecting on this classical thought and at the same time a witness to the dawning decades of the modern era, was – in his day and perhaps for all time – the main interpreter and philosopher of vitalism.[6] His book affirms “becoming” over “being,” advocates that we hitch ourselves to the *élan vital*, and understands that the very idea of creativity would not make sense if we lived in a world of *determinism* rather than “free will.” (Of course, on free will Nietzsche preceded Bergson.)

In the United States the pragmatist philosopher William James, a friend of Bergson’s, expressed around the same time a similar outlook and extolled the excitement of encountering fresh problems and new experiences. (If Walt Whitman is the poet of the American culture James is its philosopher.) The stress laid by the American philosopher John Dewey (1925) on “problem-solving,” the concept of “self-actualization” by the American psychologist Abraham Maslow (196x), with its emphasis on the satisfactions

[6] Bergson rose to fame in the years just before the Great War with his 1907 book *Creative Evolution* and the wide audience for its later English translation *Creative Evolution* (New York: Henry Holt, 1911). He was appointed to the College de France and won the Nobel Peace Prize in 1925. (Incidentally, Henrik Ibsen’s dramatic poem *Peer Gynt* (1867) anticipates Bergson’s theme when the Button Moulder says,”*To be yourself is to slay yourself./ But on you, that answer's sure to fail;/ So let's say: To make your life evolve/ From the Master's meaning to the last detail.”*)

of "mastery," and the emphasis by Amartya Sen (1995) on "capabilities" and "doing things" all constituted further developments and reformulations of Aristotle's seminal idea. The role that "self-realization" plays in the work of John Rawls (1971) brought greatly increased attention to the Aristotelian theory of the good life.

The *neoclassical* theory of happiness, according to which current happiness is "current utility" – a function only of current consumption and current leisure – is a far cry from the rich vision of human satisfactions in the Aristotelian theory. Raising human capital and physical capital onto a higher growth path can always push up income per head but it cannot push up happiness, or "utility per head" beyond the Golden Rule level. The recent happiness research appears to find empirical support to that proposition. But the Aristotelean theory leaves open and, indeed, *points* to the possibility that, in countries where there is room for it, *more dynamism* could have huge benefits for happiness – both in high-income countries and for medium-income countries.

The Aristotelian theory is also more sophisticated than the neoclassical theory. It does not look suggest that people will be forever smiling more broadly if placed in an economy of dynamism. It is understood that the happiness that come from solving a problem, having a big idea, or a discovery – or winning a prize – are the culmination of an episode of intense activity and are all momentary. Furthermore, these moments are not the objective of the good life. The Aristotelian theory says there are deep satisfactions from a career of learning, creation and discovery – which does not mean that people having such careers will consistently smile more than others or in any other way look happier.

If this kind of *vitality* is the substance of a *good life* and if it is axiomatic that a good *economy* promotes a good *life* for its participants, it follows that a good *economy* promotes *lives of vitality*. An economy cannot be good that does not produce the stimulation, challenge, engagement, mastery, discovery and development that constitute the good life. But there is more to it than that.

There are also the claims of justice. The disadvantaged have a right to *inclusion* in the economy and thus also in society. In the model of the economy used by Rawls (1971) inclusion means that the least advantaged toil in the formal economy under terms affording them prospects of self-realization – their pay good enough (and their joblessness infrequent enough) to permit them to function as spouses, parents, citizens and community members. Rawls's economics, being largely neoclassical, left no room for self-realization obtained from business life. In my discussion I say that many and perhaps most people draw deep satisfaction from taking part in what is the central institution of an economically advanced society, namely its business economy, and that for minorities such employment is the spine of social integration. (Phelps, 1997). Moreover, in a society having a vitalist work culture, thus a culture that values mental challenge, organizational responsibility and individual initiative, it is not impossible that even low-end employment contributes to self-realization; so a high degree of inclusion may be all the more valuable in an economy that offers vitalist careers. (What I say below does not hinge on that.) In short, a good economy also promotes inclusion.

A country can promote both vitality and inclusion by fitting its economy with the right mechanisms. Our theoretical understanding of modern economies, its rudimentary state notwithstanding, and the bulk of empirical evidence strongly suggest that careers of vitality require an economy generating change and a generally forward motion; and such dynamism is served by economic institutions and mechanisms that facilitate and encourage a supply of creative entrepreneurs, access to a diversity of financiers and like *capitalism* – regulated and de-regulated as required in order to provide a high rate of commercially successful innovation of non-coordinated entrepreneurs, financiers and consumers. Our theoretical understanding of incentive design and empirical observation strongly suggest that inclusion is most effectively served by fiscal incentives – a system of public low-wage employment subsidies as well as classical education subsidies in order to attract marginalized workers to the business sector, shrink their unemployment rates and boost their pay.[7]

Are vitality and inclusion competing goods, gains in the one undoing gains in the other? Two fallacies here have gotten in the way of consensus for action. In the West, it is believed by many, with no foundation I know of, that a fiscal policy aimed at broad economic inclusion would substantially preclude ample economic dynamism and thus a vitalist society. I have argued that, on the contrary, well-designed employment subsidies would restore the bourgeois culture, revive the ethic of self-support and increase prosperity in low-wage communities. That would boost a country's dynamism, not weaken it, and also strengthen popular support for capitalist institutions. (Phelps, 1997)

It is believed by a many others that the dynamism of an entrepreneurial economy harms disadvantaged workers. I argue that economic dynamism works to raise inclusion. Heightened entrepreneurial activity indirectly lifts up *both* those already enjoying much of the good life and – up to a point, at any rate – disadvantaged workers too, taken as a group. The resulting dynamism, the stepped-up rate of commercially successful innovation, creates jobs in new activities and in so doing it draws the disadvantaged into better work and higher pay. A look at the experience around us in the present decade suggests that the disadvantaged have suffered an acute failure of inclusion in economies that are resistant to innovation. Heightened entrepreneurship also tends to serve the disadvantaged directly by making their jobs less burdensome and dangerous – and perhaps also more engaging. Innovation is not unjust if it tends to heighten the life prospects of the disadvantaged (alongside those of the advantaged).(Phelps, 2007)

My conclusion is that a morally acceptable economy must have enough dynamism to make work amply engaging and rewarding; and have enough justice, if dynamism alone cannot do the job, to secure ample inclusion.

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7 Rawls (1971) argues for going in this direction to the greatest possible extent. I would inject here that Rawlsian justice in a modern economy must consider the prospects for self-realization of entrepreneurial types as well as the lowest-wage workers. But I will not defend that here.

DEVELOPING AN ECONOMY OF DYNAMISM: EUROPE AND LATIN AMERICA

I have already pointed out the fiscal technique by which greatly increased inclusion can be achieved. How is dynamism to be achieved? Finding ways to create more dynamism is at the heart of genuine economic development. Mistakes are apt to be made along the way and the journey is never-ending. But there is no reason why, barring very bad luck, some good results will be evident fairly soon.

Now, in Europe, a great many countries are searching for a route to greater general prosperity and greater economic inclusion of disadvantaged groups. There is a debate in the making between, on the one hand, those *neoclassicals* who would put the emphasis on *pushing* more resources into the economy – more technology or more human capital – as a way of raising output and employment; and, on the other hand, those *modernizers* who favor a strategy of *pulling* existing resources into innovative activity and general business activity through reforms of labor law, company law and the financial sector.

This cannot help but remind me of the ideological battle between *corporatism* and *capitalism* in the Interwar years of the 1920s and the 1930s. The theoreticians of capitalism, such as Hayek, said that innovations – and production decisions generally – were best conceived and developed by business people unhampered and undiverted by government intervention. The theoreticians of corporatism disdained the petit bourgeoisie as lacking in vision and scope, so that innovation is best made the joint responsibility of business, labor and the government. A company might be taken over by the state if it stagnated. In the view of most economists today, the case for corporatism was generally wrong-headed. What the European continent needs today is more capitalism, not less.

As you know, I am not a Latin Americanist. So I would not trust my judgment about the direction in which *Latin America* should go. But, if I had to guess, my guess would be that Latin America is still *too much under the influence of continental Europe's corporatism*, which is still influential there. I mentioned just a moment ago the *scientism* that was one of the three pillars of corporatism. I was only mildly surprised, therefore, when I saw last night on an Argentine television station the statement – spelled out in a box – that the *private sector* should be made responsible for producing "value" (I suppose this means reducing costs by raising output per unit of input) while the role of the *state* was *coordinative*. This is just like an element of Mussolini's doctrine and just like the *indicative planning* of the French in the 1950s.

Another strand of corporatist think is the submerged hostility to commerce and to profits – call it *anti-materialism* or *anti-ambition*. It is all right to be born at the top (it is not your fault) but *not* all right to scratch your way to the top. I was fascinated to hear an Argentine businessman say that one reason companies do not innovate when they are already profitable – so they are not compelled to in order to survive – is the jeopardy that a big increase in profits would place them in.

The third strand of corporatism is its *solidarism* – the protection of the "social partners" and the "stakeholders." This current of thought dictates that no new initiatives are undertaken at a company without employees' consent – as if they were the owners. In extreme cases this view can lead employees to regard the company as a sort of social club in which the persons hired have "connections" – they are a friend or the relative of a friend of one or more employees. This is an aspect of *crony capitalism*, not capitalism. In the latter, managers are very well paid and their tenure is at risk; so they hold employees accountable for poor performance and new employees are chosen on the basis of promise. Furthermore, employees take pride in the collective effort being the company's success.

Are such cultural phenomena really present and do they matter? In a recent paper (Phelps, 2006) I hypothesized that an ideological "divide" between the more corporatist countries on the western European continent and the more capitalist countries – Canada and the U.S. but also Ireland and to some extent Britain – has created a difference in economic culture, in particular, significant differences in several workplace attitudes. I also hypothesized that an inter-country difference in several of those attitudes makes a difference have an effect on the corresponding inter-country differences in this or that indicator of economic performance. The results confirm that, for example, differences in the number of persons expressing a desire to take Individual Initiative at work, the number expressing a willingness to Follow Orders coupled with the number willing to Take Responsibility (thus to *give orders*) and the number expressing Acceptance of Competition *do significantly affect* a country's productivity relative to U.S. productivity – a country's "distance from the frontier" (in Aghion's terminology). Moreover, there are *significant differences* in the numbers expressing these attitudes in France and Italy, on the one hand, and those in Canada and the U.S., on the other.

What exactly is to be done? Clearly, *it depends on the country*. Each country has its own deficiencies or defects in the economic institutions and its economic culture. The United States pays its lowest-wage workers very badly; it has not yet introduced comprehensive subsidies to companies for their ongoing employment of the low-paid. So America gets bad marks on this score – though at least it employs them, which Europe does not. The United States also has notoriously bad corporate governance. Recently it has been induced to evolve *private equity firms* whose main function is to take over a *publicly held firm* and convert it to a *privately held* firm so that it becomes feasible to get rid of high costs that the management of the publicly held firm was unwilling to tackle in the glare of publicity that tends to surround publicly held firms.

In Argentina, I would suggest the country engage in an examination of the institutional structure of the economy in order to identify all obstacles and impediments to the entry of start-up firms and innovation general. The credit market institutions need to be examined, for example. Why do the global private equity firms come to Germany but not to Argentina? The country's economic culture must also be examined. Is Argentina a pro-business, pro-innovation country? Does it honor its start-up entrepreneurs? What kind of image does Argentina present to the world's financial centers?

If such a sweeping reexamination were undertaken, there might be large payoffs in increased dynamism and, as a result, a more rewarding business life.

Thank you very much.

References

Aghion, Philippe, Roman Frydman, Joseph E. Stiglitz and Michael Woodford (eds.) *Knowledge, Information and Expectations in Modern Economics.* Princeton, N. J.: Princeton University Press, 2003.

Aghion, Philippe, and Howitt, Peter. *Endogenous Growth Theory*. Cambridge, Mass.: MIT Press, 1998.

Barro, Robert J. and Sala-i-Martin, Xavier. "Technological Diffusion, Convergence, and Growth," *Journal of Economic Growth*, 1997, *2*(1), pp. 1-26.

Barzun, Jacques. "From the Nineteenth Century to the Twentieth," pages 441-64, Contemporary Civilization Staff of Columbia College (eds), *Chapters in Western Civilization, Vol. II*, 3rd edition, New York: Columbia Univ. Press, 1962.

Barzun, Jacques. *From Dawn to Decadence: 500 Years of Western Cultural Life*. New York: HarperCollins, 2000.

Benhabib, Jess and Spiegel, Mark M. "The Role of Human Capital in Economic Development: Evidence from Aggregate Cross-Country Data," *Journal of Monetary Economics*, 1994, *34*(2), pp. 143-73.

Bergson, Henri. *Creative Evolution*, NY: Henry Holt & Co., 1911. Trans. Arthur Mitchell from *L'Evolution créatice*, Paris, 1907.

Bhidé, Amar and Phelps, Edmund S. "A Dynamic Theory of China-U.S. Trade," Center on Capitalism and Society, Working Paper No. 4, July, 2005.

Bloom, Harold. *The Western Canon: The Books and School of the Ages*. New York: Harcourt Brace, 1994.

Bloom, Harold. *Genius: A Mosaic of One Hundred Creative Minds*. New York, Warner Books, 2002.

Calvin, John. *Institutes of the Christian Religion.* English trans.by Henry Beveridge. Grand Rapids: W.B. Eerdmans Pub. Co., 1975. (Orig. pub. 1536.)

Calvo, Guillermo and Edmund S. Phelps. "Employment Contingent Wage Contracts," appendix to Edmund S. Phelps, "Indexation Issues," *Carnegie-Rochester Conference Series on Public Policy*, 1977, *5*, pp. 160-8. Repr. in Edmund S. Phelps, *Studies in Macroeconomic Theory*, Vol. 1: *Employment and Inflation*. New York: Academic Press, 1979.

Calvo, Guillermo and Phelps, Edmund S. "A Model of Non-Walrasian General Equilibrium: Its Pareto Inoptimality and Pareto Improvement," in James Tobin, ed., *Macroeconomics, Prices and Quantities: Essays in Memory of Arthur M. Okun.* Washington, D.C.: Brookings Institution, 1983.

Dewald, William G. and Johnson, Harry G. "An Objective Analysis of the Objectives of American Monetary Policy, 1952-61," in Deane Carson, ed., *Banking and Monetary Studies*, Homewood, Ill.: Richard Irwin, 1963, 171-189.

Ellsberg, Daniel. "Risk, Ambiguity and the Savage Axioms." *Quarterly Journal of Economics*, 1961, *75*(4), pp. 643-69.

Fellner, William J. "Distortion of Subjective Probabilities as a Reaction to Uncertainty." *Quarterly Journal of Economics*, 1961, *75*(4), pp. 670-89.

Fitoussi, Jean-Paul, and Edmund Phelps. "Causes of the 1980s Slump in Europe," *Brookings Papers on Economic Activity*, 1986, *1*(2), pp. 487-520.

Fitoussi, Jean-Paul, and Edmund Phelps. *The Slump in Europe: Open Economy Theory Reconstructed.* Oxford: Basil Blackwell, 1988.

Fitoussi, Jean-Paul, David Jestaz, Edmund S. Phelps and Gylfi Zoega. "Roots of the Recent Recoveries: Labor Market Reforms or Private Sector Forces?" *Brookings Papers on Economic Activity*, 2000, *1*, pp. 237-311.

Friedman, Milton. "The Role of Monetary Policy," *American Economic Review*, 1968, *58* (1), pp. 1-17.

Friedman, Milton. *Capitalism and Freedom*. Chicago: University of Chicago Press, 1962.

Frydman, Roman, and Edmund Phelps. "Introduction," in R. Frydman and E. S. Phelps (eds), *Individual Forecasting and Aggregate Outcomes: 'Rational Expectations' Examined*, New York, Cambridge University Press, 1983.

Frydman, Roman and Michael D. Goldberg. *Imperfect Knowledge Economics: Exchange Rates and Risk*, Princeton, NJ: Princeton University Press, forthcoming.

Hayek, Friedrich. "Economics and Knowledge," *Economica*, 1937, *4*(13), pp. 43-54. Repr. in Friedrich Hayek, *Individualism and Economic Order.* Chicago: University of Chicago Press, 1948.

Hayek, Friedrich. *The Road to Serfdom*. London: Routledge and Sons, 1944.

Hayek, Friedrich. "The Use of Knowledge in Society," *American Economic Review*, 1945, *35*(4), pp. 519-30. Repr. in Friedrich Hayek, *Individualism and Economic Order.* Chicago: University of Chicago Press, 1948.

Hayek, Friedrich. "The *Non Sequitur* of the 'Dependence Effect,'" *Southern Economic Journal*, 1961, *27* (4), April, pp. 346-8. Repr. E. S. Phelps, ed., *Private Wants and Public Needs*, W.W. Norton & Co., 1962.

Hayek, Friedrich A. "Competition as a Discovery Procedure." Repr. in Friedrich Hayek, *New Studies in Philosophy, Economics and the History of Ideas*. Chicago: University of Chicago Press, 1978. (Orig. pub. 1968.)

Hoon, Hian Teck. "Payroll Taxes, Wealth and Employment in Neoclassical Theory: Neutrality or Non-neutrality," CESifo-CCS Conference, San Servolo (Venice), 21-22 July, 2006.

Hoon, Hian Teck and Phelps, Edmund S. "Macroeconomic Shocks in a Dynamized Model of the Natural Rate of Unemployment," *American Economic Review*, 1992, *82*(4), pp. 889-900.

Hoon, Hian Teck and Phelps, Edmund S. "Payroll Taxes and VAT in a Labor-Turnover Model of the 'Natural Rate,'" *International Tax and Public Finance*, 1996, *3*(3), July, pp. 367-81.

Hoon, Hian Teck and Phelps, Edmund S. "Growth, Wealth and the Natural Rate: Is the Jobs Crisis a Growth Crisis?" *European Economic Review*, 1997 (*Papers and Proceedings*), *41*(3-5), pp. 549-557.

Hoon, Hian Teck and Phelps, Edmund S. "Future Fiscal and Budgetary Shocks," *Journal of Economic Theory*, forthcoming.

Inglehart, Roland. *World Values Surveys* 1981-2004. Ann Arbor: University of Michigan, 2006.

Keynes, John Maynard. *A Treatise on Probability*. London: Macmillan, 1921.

Keynes, John Maynard. *The General Theory of Employment, Interest and Money*. London: Macmillan, 1936.

Keynes, John Maynard. "The General Theory of Employment," *Quarterly Journal of Economics*, 1937, *51* (?).

Keynes, John Maynard. *The Collected Works of John Maynard Keynes*. London: Macmillan for the Royal Economic Society. 1983.

Knight, Frank H. *Risk, Uncertainty and Profit*, Boston: Houghton Mifflin, 1921.

Krueger, Alan B. and Lindahl, Mikael. "Education for Growth: Why and for Whom?" *Journal of Economic Literature*, 2001, *39* (4), pp. 1101-36.

Laibson, David. “Golden Eggs and Hyperbolic Discounting,” *Quarterly Journal of Economics*, 62, (2), May 1997, 443-478.

Lucas, Jr., Robert E. “Expectations and the Neutrality of Money,” *Journal of Economic Theory*, 1972, *4*(2), pp. 103-24.

Lucas, Jr., Robert E. “Econometric Policy Evaluation: A Critique,” in K. Brunner and A. H. Meltzer (eds.), *The Phillips Curve and Labor Markets*, Carnegie-Rochester Conference Series on Public Policy, 1, Amsterdam: North-Holland, 1976, 19-46.

Lucas, Jr., Robert E., and Leonard A. Rapping. “Employment and Real Interest,” *Journal of Political Economy*, 1969, Vol(number), pp. 103-24.

Marshall, Alfred. *Elements of Economics*. London: Macmillan and Co., 1892.

Merton, Robert K. "The Unanticipated Consequences of Purposive Social Action." *American Sociological Review*, 1936, *1*(6), pp. 894-904.

Myrdal, Gunnar. *The Political Element in the Development of Economic Theory*. Trans. by Paul Streeten from the 1932 German ed., London: Routledge and K. Paul, 1953. (Orig. pub. 1932.)

Nelson, Richard R. and Phelps, Edmund S. “Investment in Humans, Technological Diffusion, and Economic Growth,” *American Economic Review*, 1966 (*Papers and Proceedings*), *56*(2), pp. 69-75. Repr. in Ronald A. Wykstra, ed., *Human Capital Formation and Manpower Development.* New York: Free Press, 1971.

Okun, Arthur M. *The Battle Against Unemployment*. Ed. with Introduction by A. M. Okun. New York: W. W. Norton, 1965.

Ordover, Janusz A., and Edmund S. Phelps. “Linear Taxation of Wealth and Wages for Intragenerational Lifetime Justice,” *American Economic Review*, 1975 *65* (4), 660-73.

Phelps, Edmund S. “The Golden Rule of Accumulation: A Fable for Growthmen,” *American Economic Review*, 1961, 51 (4), September 1961. pp. 638-43.

Phelps, Edmund S. “The Accumulation of Risky Capital: A Sequential Utility Analysis,” *Econometrica*, 1962, *30*(4), pp. 729-43.

Phelps, Edmund S. *Fiscal Neutrality toward Economic Growth*. New York: McGraw-Hill, 1965.

Phelps, Edmund S. “Optimal Employment and Inflation Over Times,” Cowles Foundation Discussion Paper No. 214, August 1966a.

Phelps, Edmund S. "Models of Technical Progress and the Golden Rule of Research," *Review of Economic Studies,* 1966b, *33*(2), pp. 133-45.

Phelps, Edmund S. *Golden Rules of Economic Growth*. New York: W.W. Norton and Co., 1966c.

Phelps, Edmund S. "Inflation Expectations and Optimal Unemployment over Time," *Economica*, 1967, *34*(135), pp. 254-81.

Phelps, Edmund S. "Money Wage Dynamics and Labor Market Equilibrium." *Journal of Political Economy,* 1968a, *76*(4), Part 2, pp. 687-711. Repr. in Panayotis G. Korliras and Richard S. Thorn, eds., *Modern Macroeconomic: Major Contributions to Contemporary Thought.* New York: Harper and Row, 1979.

Phelps, Edmund S. "Population Increase," *Canadian Journal of Economics*, 1968b, *1*(3), pp. 497-518.

Phelps, Edmund S. *Inflation Policy and Unemployment Theory.* New York: W. W. Norton and Co. and London: Macmillan, 1972a.

Phelps, Edmund S. "Money, Wealth, and Labor Supply," *Journal of Economic Theory*, 1972b, *5*(1), pp. 69-78.

Phelps, Edmund S. "The Statistical Theory of Racism and Sexism," *American Economic Review*, 1972c, *62* (?), pp. 000-00.

Phelps, Edmund S. "Taxation of Wage Income for Economic Justice," *Quarterly Journal of Economics*, 1973a, *87*(3), pp. 331-54.

Phelps, Edmund S. "Introduction," in Phelps (ed.) *Economic Justice.* Harmonsworth: Penguin Books, 1973b.

Phelps, Edmund S. "Disinflation Without Recession: Adaptive Guideposts and Monetary Policy," *Weltwirtschaftliches Archiv*, 1978, *100*(2). Repr. in Edmund S. Phelps, *Studies in Macroeconomic Theory*. Vol. 1: *Employment and Inflation*. New York: Academic Press, 1979, pp. 239-65.

Phelps, Edmund S. "Introduction: Developments in Non-Walrasian Theory," *Studies in Macroeconomic Theory*. Vol. 1: *Employment and Inflation*. New York: Academic Press, 1979.

Phelps, Edmund S. "The Trouble with Rational Expectations and the Problem of Inflation Stabilization," in Roman Frydman and Edmund S. Phelps, eds., *Individual Forecasting and Aggregate Outcomes: 'Rational Expectations' Examined.* Cambridge: Cambridge University Press, 1983.

Phelps, Edmund S. *Political Economy: An Introductory Text*. New York: W. W. Norton and Co., 1985.

Phelps, Edmund S. "Consumer Demand and Equilibrium Unemployment in a Working Model of the Customer-Market Incentive-Wage Economy," *Quarterly Journal of Economics*, 1992, *107*(3), pp. 1003-32.

Phelps, Edmund S. *Structural Slumps: The Modern-Equilibrium Theory of Unemployment, Interest and Assets.* Cambridge, Mass.: Harvard University Press, 1994.

Phelps, Edmund S. *Rewarding Work: How to Restore Participation and Self-Support to Free Enterprise*. Cambridge, Mass.: Harvard University Press, 1997.

Phelps, Edmund S. "Europe's Stony Grounds for the Seeds of Growth," *Financial Times*, August 9, 2000.

Phelps, Edmund S. "Understanding the Great Changes in the World: Gaining Ground and Losing Ground since World War II," Lecture, International Economic Association World Congress, Marrakech, August 28-September 2, 2005. *Capitalism and Society*, *1*(2), 2006. Electronic journal of the Center on Capitalism and Society, BE Press.

Phelps, Edmund S. "Prospective Shifts, Speculative Swings: 'Macro' for the Twenty-First Century in the Tradition Championed by Paul Samuelson," in Michael Szenberg, Lall Ramrattan and Aron A. Gottesman, eds., *Samuelsonian Economics and the Twenty-First Century*. Oxford: Oxford University Press, 2006a.

Phelps, Edmund S. "Toward a Model of Innovation and Performance: Along the Lines of Knight, Keynes, Hayek and M. Polanyí," Max Planck Institut-Kauffman Foundation Conference, Tegernsee (Munich) 8-9 May, 2006b.

Phelps, Edmund S. "Economic Culture and Economic Performance: What Light is Shed on the Continent's Problem?" CESifo-CCS Conference, San Servolo (Venice), 21-22 July, 2006c.

Phelps, Edmund S. "Employment, Asset Prices and Monetary Policy," Festschrift for Axel Leijonhufvud, UCLA, Los Angeles, Aug. 30-31, 2006d.

Phelps, Edmund S. "The Economic Performance of Nations: Prosperity Depends on Dynamism, Dynamism on Institutions," Conference on Entrepreneurship, Innovation and the Growth Mechanism of the Free-Market Economies (Nov. 2003). In Eytan Sheshinski, ed., *The Growth Mechanism of Free Enterprise Economies*, Princeton: Princeton University Press, 2007.

Phelps, Edmund S., et al. *Microeconomic Foundations of Employment and Inflation Theory*. New York: W. W. Norton and Co., 1970.

Phelps, Edmund S. and Pollak, Robert A. "Second-Best National Saving and Game-Equilibrium Growth." *Review of Economic Studies*, 1968, *35*(2), pp. 185-99.

Phelps, Edmund S. and Taylor, John B. "Stabilizing Powers of Monetary Policy Under Rational Expectations," *Journal of Political Economy*, 1977, *85*(1), pp. 163-90.

Phelps, Edmund S., and Winter, Jr., Sidney G. "Optimal Price Policy under Atomistic Competition," in Edmund S. Phelps et al., *Microeconomic Foundations of Employment and Inflation Theory*. New York: W. W. Norton and Co., 1970.

Phelps, Edmund S. and Zoega, Gylfi. "The Rise and Downward Trend of the Natural Rate," *American Economic Review*, 1997 (*Papers and Proceedings*), *87*(2), pp. 283-9.

Phelps, Edmund S. and Zoega, Gylfi. "Natural Rate Theory and OECD Unemployment," *Economic Journal*, 1998, *108*(448), pp. 782-801.

Phelps, Edmund S. and Zoega, Gylfi. "Structural Booms: Productivity Expectations and Asset Valuations," *Economic Policy*, 2001, *16*(32), pp. 85-126.

Phelps, Edmund S.; Hian Teck Hoon and Gylfi Zoega. "The Structuralist Perspective on Real Exchange Rate, Share Price Level and Employment Path: What Room is Left for Money?" in Willi Semmler, ed., *Monetary Policy and Unemployment: the U.S., Euro-Area and Japan.* London: Routledge, 2005, pp. 107-32.

Phillips, A. W. "The Relation Between unemployment and the Rate of Change of Money Wage Rates in the United Kingdom,1861-1957," *Economica*, *25*(100), pp. 283-99, 1958.

Pissarides, Christopher. Quoted, news story, The Independent, London, October 10, 2006.

Ramsey, Frank P. "A Mathematical Theory of Saving," *Economic Journal*, 1928, *38*(152), pp. 543-59.

Rawls, John. *A Theory of Justice*. Cambridge, Mass.: Harvard University Press, 1971.

Salop, Steven C. "A Model of the Natural Rate of Unemployment," *American Economic Review*, 1979, *69*(1), pp. 117-25.

Samuelson, Paul A. *Foundations of Economic Analysis*. Cambridge, Mass.: Harvard University Press, 1947.

Samuelson, Paul A. *Economics: An Introductory Analysis*. New York: McGraw-Hill Book Co., 1948.

Samuelson, Paul A. Quoted, news story, Chicago Sun-Times, Chicago, October 10, 2006.

Sargent, Thomas J. *The Conquest of American Inflation*. Princeton: Princeton University Press, 1999.

Sen, Amartya. *Inequality Reexamined*. New York: W. W. Norton and Co. 1995.

Shapiro, Carl and Stiglitz, Joseph E. "Equilibrium Unemployment as a Worker Discipline Device." *American Economic Review*, 1984, *74*(3), pp. 433-44.

Taylor, John B. "Discretion versus Policy Rules in Practice," *Carnegie Rochester Conference Series on Public Policy*, 1993, *39*, pp. 195-214.

Taylor, John B. *Monetary Policy Rules*. Ed., Chicago: University of Chicago Press, 1999.

Tobin, James. "Keynesian Models of Recession and Depression," *American Economic Review*, 1975 (*Papers and Proceedings*), *65*(2), pp. 195-202.

Tönnies, Ferdinand. *Gemeinschaft und Gesselschaft*. Vienna: Pub.1887.

Weber, Max. *Economy and Society*, Eng. trans. of *Wirtschaft und Gesellschaft.* Berekely: University of California Press, 1978. (Orig. pub. 1921-22.)

Zoega, Gylfi. *A Structural Model of Equilibrium Unemployment: Theory, Empirical Testing and Dynamic Simulation*, Ph.D. Dissertation, Coumbia University, 1993.

Table 1. Classical Wants, or Values, at Work
Percentage of respondents reporting each want

	Opportunities for initiative	Interesting work	Taking responsibility	Taking Orders	Competin
United States	52%	69%	61%	1.47	
Canada	54%	72%	65%	1.34	
Great Britain	45%	71%	43%	1.32	0
France	38%	59%	58%	1.19	0
Italy	47%	59%	54%	1.04	0
Germany	59%	69%	57%	1.13	
G7 ex Japan	49%	67%	56%	1.21	

Survey results from Human Beliefs and Values Survey, Inglehart et al. Taking Orders and Competing with Others are measured on a scale from 0 to 2, 2 highest.

Table 2a. Pride and Satisfaction Derived from the Job (on a scale of 1 - 10) and the Number Reported Satisfied (in per cent)

	Job involvement (pride derived from the job)	Job satisfaction	Feel satisfied with life	Feel satisfied with home life
United States	9.7	7.8	81%	87%
Canada	9.0	7.9	84%	89%
Great Britain	9.3	7.4	74%	85%
France	5.7	6.8	59%	72%
Italy	6.7	7.3	71%	81%
Germany	6.0	7.0	71%	76%
Japan	7.3	NA	53%	62%

Survey results from Human Beliefs and Values Survey, Inglehart et al

Table 2b. Circumstantial Evidence and Other Performance Indicators

	Male labor force in % of working-age men, 2003	Female labor force in % of working-age women, 2003	Employment in % of the labor force 2003	Labo compens per wor 1996
United States	85%	70%	94%	$31,99
Canada	85%	69%	92%	$23,75
Great Britain	85%	67%	95%	$22,00
France	76%	61%	90%	$24,19
Italy	76%	45%	91%	$21,82
Germany	79%	62%	91%	$23,94

Men in the labor force in % of working age men and employment in % of the labor force are computed for 2003 (OECD); labor compensation per worker is computed as the ratio of total compensation to the labor force using 1996 data (Extended Penn World Tables); market output per hour worked is for 1992 (Solow/Baily)

Table 3. Measures of the Economy's Dynamism

	Decision-making freedom at work	Turnover of listed firms	Patents granted per working age person	R&D intensity adjusted for industry structu
United States	7.4	118%	3.7	2.9
Canada	7.2	106%	1.3	1.8
Great Britain	7.0	65%	0.8	1.9
France	6.4	79%	0.9	2.2
Italy	6.7	63%	0.4	1.0
Germany	6.1	42%	1.5	2.2

Decision making freedom at work is measured on a scale from 1 to 10, 10 highest, averaged for 1990-1993 (Human Beliefs and Values, Inglehart et al); turnover of listed firms represents the number of exits from and entries into each country's MSCI National Stock Index from 2001 to 2006 as a % of the number of firms in 200 patenting data is averaged for 1990-2003 (World Intellectual Property Organization); R&D intensity adjusted fo industry structure is the average in per cent of business sector value added for 1999-2002 using the G7 indust structure (OECD).