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Cognitive dissonance, the Global Financial Crisis and the discipline of economics^{*}

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Abstract

The global financial and economic crisis has produced a powerful shock to the worldview of an influential group of economists whom I call *believers in laissez faire* (BLF). I provide evidence which suggests that the BLF responded to this shock in a manner that can best be described as irrational, ill-considered and clearly erroneous. I consider the social-psychological concept *cognitive dissonance* as the best explanatory framework for understanding this response. Cognitive dissonance theory predicts that when real-world events “disconfirm” deeply-held beliefs this creates psychological discomfort in persons and they will respond by means of distortion and denial. I test the proposition that the BLF experienced cognitive dissonance through a survey in which I asked two groups of economists what their views were on 10 possible causes of the Great Recession. One group consisted of the signers of the notorious open letter circulated by the Cato Institute opposing President Obama’s stimulus program. (I consider members of this group to be self-proclaimed BLFs.) The second group consisted of a random sample of members of the American Economics Association. One of the possible causes I listed on the survey is the U.S. Community Reinvestment Act (CRA) of 1977. The notion that the CRA is a major cause of the crisis apparently has great resonance among the BLF but is demonstrably false. Among other results, 46% of the signers of the letter believe that the CRA was one of three top causes of the crisis compared to 12% of the “other” economists. I conclude that the BLF exhibit symptoms to cognitive dissonance.

The global economic and financial crisis of 2007-2009 (?) provides a rare natural experiment for the study of the social psychology of the economics profession. The “sub-prime” crisis of 2007, the banking crisis and credit crunch of 2007-2008 and the deep global recession which started in the United States in December 2007 constitute a powerful shock to the worldview of an influential minority of economists consisting of new classical economists, real business cycle (RBC) theorists, some new Keynesians, so-called “Austrians,” the monetarist remnant, many (most?) financial economists and assorted other *believers in laissez-faire*.¹ I call them the *BLF* for short. In the words of the title of a recent working paper, they have been “Slapped in the Face by the Invisible Hand.”² (Gorton, 2009). It is important from society’s (and the profession’s) point of view to try to understand the BLF’s responses to the crisis (and to predict future responses) since they have wide influence on (and often dominate) public policy discussions, especially those involving macro policy and financial regulation. They seem to be in a position to shape the “conventional wisdom” disseminated by elements of the media, institutions such as the O.E.C.D. and G-20, a number of developed-country governments and some circles within the central banking universe.³

My aim in this paper is to apply the concept *cognitive dissonance* (CD) to illuminate the BLF’s responses to the crisis. At least since the work of Akerlof and Dickens (1982) CD has been employed by economists to study both conventional and unconventional economic

^{*} I wish to thank my colleague Evangelos Djimopoulos for help and advice during all stages of this project.

¹ For the start of the recession see <http://www.nber.org/cycles.html>

² For a recently published book with an almost identical title see Gorton (2010).

³ This can be seen in the “deficit hysteria” described in Nersisyan and Wray (2010). On the O.E.C.D. and deficits see for example Spicer and Younglay (2010). See also Trichet (2010).

topics.⁴ Akerlof and Dickens themselves apply it to a labor market “anomaly,” namely the pervasive breaking of workplace safety standards by workers in risky occupations. Of course Akerlof and Dickens and subsequent writers employ CD to examine the behavior of the usual “agents” who are the subjects of study by economists: consumers, workers, entrepreneurs, investors (and more recently, voters, bureaucrats and politicians), whereas I intend to apply it to *economists*. But I justify this by an appeal to authority: In his presidential address to the Western Economics Association, Milton Friedman (1986) said about economists, “[w]e cannot in good conscience interpret ourselves as behaving differently from those we analyze. We cannot treat ourselves as an exception.”⁵ (p.8)

I proceed as follows: In the first section I state briefly why I view the BLF as adherents of an *ideology* rather than upholders of a “paradigm” or participants in a “research program,” [i.e., the well-known concepts introduced respectively in Kuhn (1962) and Lakatos (1970)]. In the second section I argue that CD offers a useful approach to explaining why adherents of ideologies (including economic ideologies) cling to them with such tenacity and resist efforts to challenge them. I call this the “CD hypothesis.” This adherence to an ideology (or “model”, as the collection of ideas, attitudes and beliefs which constitute an ideology may loosely be called) has been well-described by Solow (2005): “It can become very difficult ever to displace an entrenched model by a better one. Clever and motivated—including ideologically motivated—people can fight a rearguard battle that would make Robert E. Lee look like an amateur....Old models never die; they just fade away.” (p. 94). In the third section I show that a series of clearly irrational responses to the crisis in public statements by prominent BLFs provide evidence in favor of the CD hypothesis. In the fourth section I discuss frequent assertions by some economists as well as non-economists in the past three years that the U.S. financial crisis can in large part (if not entirely) be blamed on the U.S. Community Reinvestment Act (CRA) of 1977 which attempted to reduce discriminatory lending practices by banks in communities where they obtained their deposits.⁶ In the fifth section I show that there is overwhelming evidence that the “CRA hypothesis” is false and that adherence to it can be viewed as an indicator of the presence of cognitive dissonance among the BLF. In the sixth section, I report on a web-based survey in which I attempted to ascertain the views of two groups of economists on the causes of the Great Recession of 2007-09: Group A consisted of the signers of the notorious Cato Institute open letter which epitomizes the views of economists opposed to the ARRA, President Obama’s fiscal stimulus program.⁷ (I consider this group to be self-proclaimed BLFs.) Group B consisted of a random sample of members of the American Economics Association (AEA). I found that there are significant differences in the views of the two groups. Members of group A are much more likely to blame the CRA for the crisis (as well as the so-called “government-sponsored enterprises” or GSEs) than are members of group B. This result suggests that cognitive dissonance can be attributed to the BLF. In the seventh section I conclude.

⁴ See the many references with the words “cognitive dissonance” in their title.

⁵ Throughout this address Friedman naturally emphasizes the role of self-interest in explaining the behavior of business people, politicians and bureaucrats as well as economists but surprisingly he interprets the term extremely broadly. He asserts that “...self-interest is not restricted to narrow material interest. It includes the desire to serve the public interest, to help other people.” (p.9)

⁶ Public Law 95-128.

⁷ American Recovery and Reinvestment Act of 2009 (Public Law 111-5)

1.

What is the nature of the response to the most severe financial and economic crisis since the Great Depression one might expect (or hope for) from a group of professionals who aspire to the title “scientist?”⁸ Ideally the response would be the one exemplified by a statement attributed to Keynes: “When the facts change, I change my mind. What do you do, sir?” (Malabre 1994, p. 220) Such an idealized (if over-simplified) view of the process of scientific inquiry is sometimes presented in science (including social science) textbooks in the form of a flow chart, which Blachowitz (2009) following Rudolph (2005) calls the step-by-step algorithm (“observe”, “hypothesize”, “test”).⁹ But it has been widely understood at least since the work of Kuhn (1962) that the development of science is not as straightforward as this picture indicates. Instead, practitioners of particular scientific disciplines or “scientific communities” cling to “constellations of beliefs, values, techniques, and so on” (i.e., Kuhn’s *paradigms*) which members of those scientific communities are reluctant to relinquish. [Kuhn (1996, Postscript 1969)] It seems clear that the BLF do not constitute a “scientific community” in the sense of Kuhn: They may share many (important) “beliefs, values...and so on,” but not techniques (or methodologies). More generally they do not necessarily share a common set of attitudes about the nature of social-economic processes and social-scientific inquiry. Thus, for example, one wing of the BLF insist that the only proper approach to macroeconomics consists of constructing DSGE models based on utility-maximizing representative agents (“micro-based macroeconomics”). [See Kocherlakota (2010) and Chari (2010)] A recent outburst along these lines appears in Athreya (2010, p. 3), who, in the course of arguing that no one who has not had at least “a year of PhD coursework in a decent economics department (and passed their PhD qualifying exams)” should publicly comment on macroeconomic issues, asserts that “[m]acroeconomics is most narrowly concerned with the tracing of individual actions into aggregate outcomes,” i.e., with the construction of representative-agent-based models (p. 3). This methodological perspective is vehemently rejected by Austrians. [See, e.g., Garrison (2009)] Similarly, adherents of new classical economics (“equilibrium macroeconomics”) and RBC theory reject the possibility of monetary policy effectiveness while new Keynesians do not. [See Lucas (1996) compared to Taylor’s (1993) eponymous rule]¹⁰

So I maintain that different groups among the BLF might go at each other hammer and tongs in seminar rooms, the pages of scholarly journals and on weblogs, but how would they interact “on the barricades?” Even the most superficial acquaintance with their writings makes it clear that in defense of “the market” the BLF are close allies, no matter what their positions on theory and methodology. Thus in the midst of a vigorous attack on Prescott on the *Mises Economics Blog*, Kraus (2009) finds it possible to say that “[i]f one just skims through the slides [of a Prescott presentation], one might notice some good points about 100 percent bank reserves, lower tax rates, the evil of stimulus packages etc.” [See Prescott (2009)] It is thus a shared outlook, i.e., a common set of attitudes and beliefs (without necessarily shared methodologies or theoretical perspectives) which strongly suggests that the BLF are the joint upholders of an *ideology*. According to Eagleton (1991, p. 2), “[n]obody

⁸ After all, the stars of our profession receive the Swedish Royal Bank’s Prize in Economic *Sciences* in Memory of Alfred Nobel. See the website Nobelprize.org.

⁹ See also NASA.

¹⁰ But for recent claims of “convergence” among macroeconomists see Woodford (2009)

has yet come up with a single adequate definition of ideology...” He then proceeds to list 16 definitions ranging from what Freedman (2003, p. 1) called the “ill-reputed,” (“false ideas which help to legitimate a dominant political power”) to the more or less neutral (“action-oriented sets of beliefs”). For my purpose in this paper a relatively neutral definition is appropriate, hence I define ideology as a more or less coherent and stable set of ideas, beliefs, and attitudes concerning some particular part of the social-economic-political world. The “set of ideas, beliefs and attitudes” of the BLF are of course well-known: they strongly believe in the virtues of markets because of their efficiency properties but also for moral-ethical reasons; they believe in the self-adjusting or self-correcting economy and therefore abhor government interventions of all sorts. Along with this core set of beliefs there goes a penumbra of vaguer attitudes with respect to private property rights, the legal system, the overarching value of (particularly) economic freedom, etc. It is this *ideology* which the BLF defend with great vehemence.

2.

Why would a group of trained professionals, practitioners of a scientific or scholarly discipline (or any educated person for that matter) adhere to an ideology and refuse to abandon it in the face of evidence undermining its tenets? In the language of social psychology such a state of affairs involves an inconsistency in “cognitions,” (i.e., “...any knowledge, opinion, or belief about the environment, about oneself, or about one’s behavior.”).¹¹ Festinger (1957, p. 3) called such inconsistencies *cognitive dissonance* and hypothesized that they cause psychological discomfort in individuals which they strive to reduce or eliminate. He added that “[w]hen dissonance is present, in addition to trying to reduce it the person will actively avoid situations and information which would likely increase the dissonance.” (p. 3) Cognitive dissonance theory has had its ups and downs over the past half century [see Aronson (1992)] but it has become the default tool for economists studying a variety of phenomena involving apparently irrational, inconsistent or self-defeating behavior or at least behavior that does not conform to the predictions of rational choice models. [See for example Goetzmann and Peles (1997), Goldsmith et al. (2004), Hosseini (1997), Konow (2000), etc.] Akerlof and Dickens have translated these propositions into language amenable to economic “modeling” as follows: “First, persons not only have preferences over states of the world, but also over their beliefs about the state of the world. Second, persons have some control over their beliefs; not only are people able to exercise some choice about beliefs given available information, they can also manipulate their own beliefs by selecting sources of information likely to confirm ‘desired’ beliefs.” (p. 307) Finally for Batson (1975, p. 176) “[c]ognitive dissonance theory assumes that man is a rationalizing animal, actively defending himself by means of distortion and denial against information which contradicts deeply held beliefs.” An obvious question is, which of his or her ideas, beliefs, or attitudes will a person most energetically defend? The broad answer clearly is that it is a function of their “importance,” to the individual, to use the word chosen by Festinger or those that are “most deeply held” in the words of Batson. (See Festinger, p. 16) Which ideas, beliefs, and attitudes are “most important” or “most deeply held?” A widely, though not universally accepted answer to this question is, those that are most closely tied to a person’s “self-concept,” i.e., a person’s view of herself or himself as competent, intelligent, moral, and so on. [Aronson (1999)] An additional useful proposition in cognitive dissonance theory is the following: Aronson and Mills (1959) found, perhaps counter-intuitively, that “...people who go through a severe initiation in order to gain admission to a group, come to like that group better than people who go through

¹¹ See Festinger (1957, p.3)

a mild initiation to get into the same group.” The relevance of these considerations to an examination of the social psychology of the economics profession was succinctly expressed in a remark by Krugman (2009a) on his blog at the *New York Times*. In response to attacks on him following his devastating assault on the “modern macro” wing of the BLF he writes about them as follows: “They’re smart! They work hard, using hard math! How dare I say such a thing!”¹² I conclude, in other words, that the ideology embraced by the BLF has become a component of their self-concept, in part at least due to the hard work required to enter the group. They will react to any threat to their core beliefs represented by events in “the real world” by means of “distortion and denial.” Given the above, I consider irrational, ill-considered, clearly erroneous responses by the BLF to the current crisis as symptoms of cognitive dissonance.

3.

In this section I present several examples of statements made by prominent BLFs dealing with the crisis of 2007-2009. In some of these examples I leave it up to the reader to decide whether they fit the description of “irrational, ill-considered or clearly erroneous responses.”

- According to John Cochrane, a prominent University of Chicago economist, “[we] *should* have a recession. People who spend their lives pounding nails in Nevada need something else to do.”¹³ (Lippert, 2008) This remark is reminiscent of a statement by Andrew Mellon, Herbert Hoover’s Secretary of the Treasury in the early stages of the Great Depression, as quoted by Hoover in his memoirs (Hoover, 1951-1952): “Liquidate labor, liquidate stocks, liquidate the farmers, liquidate real estate’. He held that even panic was not altogether a bad thing. He said: ‘It will purge the rottenness out of the system. High costs of living and high living will come down. People will work harder, live a more moral life. Values will be adjusted, and enterprising people will pick up the wrecks from less competent people.’” In other words, the notion that recessions and depressions serve a useful economic function is clearly not new; see for example the views of Schumpeter (1934, p. 16) as cited in Caballero and Hammour (2005). But it might be considered by many as an unusual viewpoint, to say the least, in the first decade of the 21st century.
- Casey Mulligan, a second prominent member of the Chicago school wrote a blog entry on the *New York Times* web site entitled “Are Employers Unwilling to Hire, or Are Some Workers Unwilling to Work?” (Mulligan, 2008) The title of the piece is self-explanatory. (Mulligan concludes that a decline in labor *supply*, not labor demand was the source of rising unemployment at least in the early stages of the 2007-2009 recession.) This view does not require elaborate analysis. A brief look at a relatively new data set can clarify the issue. The figure below shows the ratio of unemployed workers in the United States to the number of job vacancies obtained from the Bureau of Labor Statistics’ JOLTS survey.¹⁴ It shows that since the start of the 2007-

¹² See Krugman (2009b) for his views on “modern macro.”

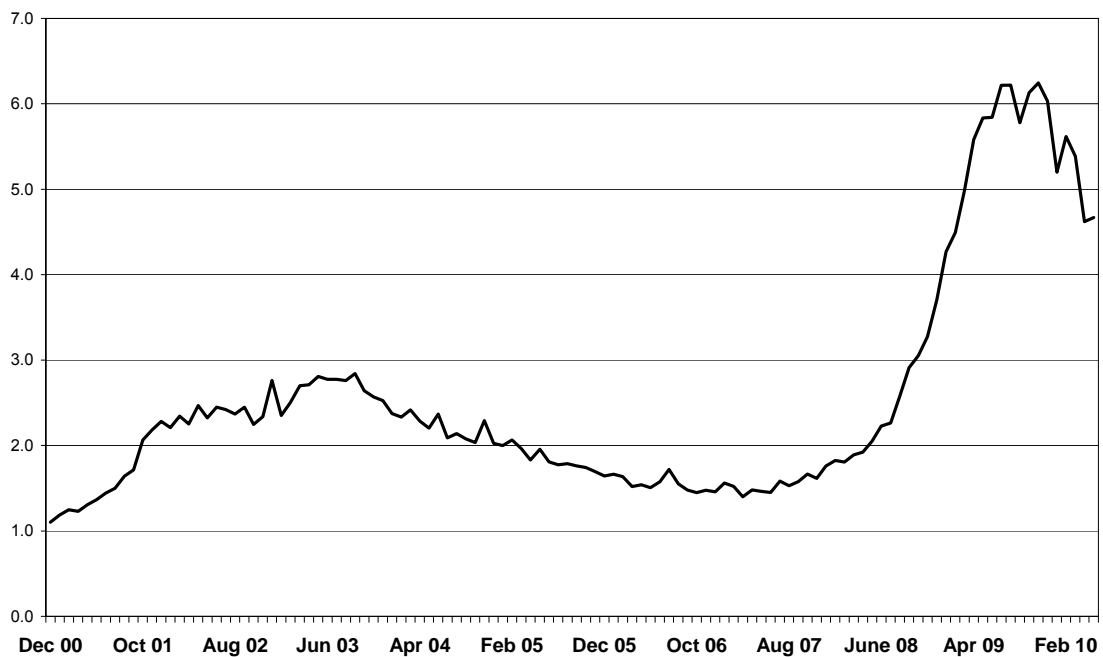
¹³ Emphasis added.

¹⁴ The ratio was calculated by the author. Data on job openings are available at <http://www.bls.gov/jlt/home.htm>

2009 recession this ratio has almost quadrupled. This should have put to rest Mulligan’s argument that the rise in unemployment in the United States can be attributed to a drop in labor supply as opposed to a drop in demand (but he has repeated it on several subsequent occasions).¹⁵

- Robert Barro, economics professor at Harvard, questions the legitimacy of standard calculations of fiscal multipliers and thus the efficacy of countercyclical fiscal policy. He uses as a counterexample the case of World War II. Since U.S. defense spending rose by \$540 billion per year (in 1996 dollars) at the peak in 1943-1944 and real GDP rose by only \$430 billion per year he concludes that the multiplier was 0.8! He ignores the fact that the multiplier concept does *not* apply in situations of (i) full employment (and during World War II the domestic U.S. economy “enjoyed” over-full employment) and (ii) through rationing and other devices spending on domestic consumption and investment was deliberately suppressed to free up resources for the war effort (Barro 2009a and 2009b). It is of course perfectly legitimate to question the effectiveness of fiscal policy as a countercyclical policy tool and to dispute the correctness of multiplier calculations; it is the use of an obviously mistaken counterexample such as the case of World War II that suggests an irrational or ill-considered response.

Ratio of Unemployed to Job Openings, 2000-2010



- Eugene Fama, also of the University of Chicago presents the national income accounting identity (“saving equals investment”) in the following form:

$$PI = PS + CS + GS \quad (1)$$
 (PI = private investment; PS = private saving; CS = corporate saving; GS = government saving) (Fama 2009). Based on this identity Fama claims that fiscal stimulus is completely ineffective since an increase in the government’s deficit (i.e., a reduction in government saving, GS) will automatically reduce private investment

¹⁵ See for example Mulligan (2010) and the response by Tim Duy (2010).

since “the money has to come from somewhere.” That is, the government’s deficit has to be financed from private sector saving (PS + CS) which will then not be available for private investment. In other words, Fama assumes complete “crowding out” of private investment. (He presents an analogous argument for the use of the revenue side of the budget for stabilization purposes.) But for approximately 60 years undergraduates at least in the English-speaking world have been taught the difference between an *equality* and an *identity* in macroeconomics. During any time period equation (1) is of course true *by definition* (i.e., *measured* saving equals *measured* investment) but this says nothing about *planned* (*ex ante*) saving and *planned* (*ex ante*) investment; hence nothing can be concluded logically about the effects of a government budget deficit (lower GS) on private sector saving or private sector investment. As several people have pointed out, what seems to be involved is an old error of the 1920s and 1930s, i.e., the so-called “Treasury view.” (See for example DeLong, 2009)

There probably would be wide (although obviously not universal) agreement that these examples exhibit “irrational, ill-considered, and clearly erroneous responses” to the crisis by prominent BLFs and this suggests the presence of cognitive dissonance. But the case for CD as an explanation is obviously not definitive since other motives may be at work, such as the one invoked by Upton Sinclair (1994, p.109): “It is difficult to get a man to understand something, when his salary depends upon his not understanding it!” Although the four examples involve tenured academics, one might still claim that benefits accrue to them from publicly upholding “free-market” ideology (and they would incur costs from weakening their public support for that ideology).¹⁶ To make the case for CD as an explanation more convincing two things are required: first, a clear example of a widely-held false belief about the causes of the crisis, second, an *anonymous* survey which would eliminate the problem created by public statements. In the next two sections I present the case for the CRA as a major cause of the crisis as a clear example of a false explanation and in the sixth section I report on survey results which strongly suggest the presence of CD among a group of self-proclaimed BLF.¹⁷

4.

The current public discourse on the origins of the global financial crisis both among economists and non-economists frequently revolves around the question, is it the fault of the “government” or the “market”? This can be seen in articles by prominent economists with titles such as “A Government Failure, Not a Market Failure,” [see Makin (2009)] and “How Government Created the Financial Crisis,” [see (Taylor (2009))] I find this question to be superficial and uninteresting. I take it for granted that the crisis is a “joint product” of the financial “industry” *and* national governments. [See Kessler (2010)] But I consider it symptomatic of the cognitive dissonance I believe to be prevalent among the BLF and I view the acceptance and promotion of one variant of the claim that “the government did it” as an

¹⁶ Of course, some outspoken BLFs who make “irrational, ill-considered or clearly erroneous statements” may be angling for a position in a future administration.

¹⁷ In my view the claim that the “government-sponsored enterprises” (GSEs) are responsible for the crisis is equally fallacious. But the GSEs are in fact so heavily involved in housing finance in the United States that to demonstrate their “innocence” requires a much more elaborate analysis than I am able to present here. Hence my concentration on the CRA.

indicator of cognitive dissonance among this large group of economists. This is the notion that a cause (or *the* cause, depending on the writer) of the current crisis can be found in the Community Reinvestment Act (CRA) of 1977, as amended in the 1990s, a law which was designed to encourage depository institutions in the United States to supply credit to low- and moderate-income communities from which they accept deposits. The more immediate stated objective was to eliminate “redlining,” the policy of discriminatory lending practices in low-income communities.¹⁸

An often-repeated narrative laying out the CRA–crisis link goes something like this: At the time of its passage the CRA’s requirements were vague and difficult to enforce. With the arrival of the Clinton administration enforcement was strengthened and the law itself was amended in 1995 and “given teeth.” As a result, banks were forced by regulators to weaken their lending standards and to extend mortgage credit to unqualified borrowers—hence the rapid expansion of the so-called “sub-prime” mortgage market between 2002 and 2006. Unsurprisingly, especially because of the slowdown in housing price increases and subsequent price declines in 2006 and 2007, sub-prime borrowers were unable to meet their obligations, hence the explosion of defaults and foreclosures in 2007 and 2008. It is widely accepted that the meltdown of the sub-prime market served as the “trigger” for a further meltdown of the real estate market as a whole which ultimately led to the current crisis. So there you have it: strengthening the CRA led to a weakening of lending standards which led to an expansion of sub-prime lending which in turn led to the collapse of the sub-prime mortgage market, and everything else follows.¹⁹ It is difficult to trace the origin of this notion but I believe it started with a provocatively titled piece by Thomas DiLorenzo (2008). Other economists, both prominent and obscure who contributed to it to one degree or another are Horwitz (2008), Meltzer (2009), Boskin (2008), Rizzo (2009), White (2008) and several others.²⁰ in the next section I discuss why it became clear fairly quickly that this is a false narrative.

5.

As we have seen, some economists (and many noneconomists) attributed the 2007-2009 crisis at least in part to the CRA’s role in encouraging (CRA-covered) institutions to lower their credit standards and to engage in risky lending practices. This in turn, it is claimed, ultimately led to the meltdown of the housing market in the United States and the related markets for mortgages and mortgage-backed securities in their various incarnations. This view has been rejected by Federal Reserve officials [see Kroszner (2008) and Yellen (2008)] and other informed individuals [see Bair (2010)] so that one can feel fairly confident in concluding that the “CRA hypothesis” is false.²¹ But since I view this notion as part of the

¹⁸ See Federal Financial Institutions Examination Council’s (FFIEC), Community Reinvestment Act, available at <http://www.ffiec.gov/cra/default.htm>

¹⁹ Wallison (2009) is typical of this style of narrative.

²⁰ Boskin does not actually mention the CRA but he uses the following phrase: “[t]he laudable efforts to expand home ownership to low-income people wound up being a prime contributor to the current economic crisis,” which is more or less equivalent to blaming the CRA.

²¹ Bair deserves to be quoted in full: “But as we go down the list of what went wrong, let me reiterate that this crisis was not caused by the Community Reinvestment Act. Bank regulators are unanimous on that point. To be sure, the CRA encourages banks to make safe and sound loans in the communities they serve. But nowhere does it tell them to make unaffordable, unsustainable loans that set people up for failure. Most of the subprime and high risk nontraditional mortgages were made by non-CRA lenders.

mythology that has emerged in the past three years (and has been stubbornly maintained) in defense of “the market” and since I consider adherence to it as a symptom of cognitive dissonance among the BLF it is worthwhile expending some effort to demonstrate its falsity. The following points are based mostly on a study by Federal Reserve staff (which to my knowledge has not been refuted by any scholar or other expert.) [See Board of Governors of the Federal Reserve System (2008)]

- Approximately 60 percent of “high-priced” (i.e., subprime and Alt-A) mortgage loans were made to middle-income and high-income borrowers or in middle- and high-income neighborhoods whose populations are *not* the targets of the CRA legislation.²²
- More than 20 percent of high-priced loans made to low- and moderate-income borrowers or to borrowers in middle- and high-income neighborhoods were extended by nonbank institutions unaffiliated with depository institutions covered by the CRA.
- Approximately 17 percent of subprime and Alt-A loans to low-income borrowers were extended by institutions that fall under the CRA umbrella but were made in areas *outside* these institutions’ “assessment areas” and thus did not contribute to their CRA performance evaluations.
- Only 6 percent of high-priced loans to low-income borrowers or in low-income neighborhoods by lending institutions that fall under the CRA legislation were made in their CRA assessments areas. (Board of Governors of the Federal Reserve System, p. 3)

As Kroszner says about the last point, “[t]his result undermines the assertion by critics of the potential role for the CRA in the subprime crisis. In other words, the very small share of all high-priced loan originations that can be reasonably attributed to the CRA makes it hard to imagine how this law could have contributed in any meaningful way to the current subprime crisis.”

Federal Reserve staff also looked at the *performance* of “CRA-related” mortgage loans in terms of delinquency (payments overdue for 90 days or longer) and foreclosure rates. They compared delinquency rates on subprime and Alt-A mortgage loans in low-income and middle- and high-income areas and found high delinquency rates on all high-priced mortgages but there was little difference among areas based on income disparities. They also studied delinquency rates in areas with median incomes just above and just below the “CRA threshold” and found no measurable differences in delinquency rates. Finally, they looked at foreclosure rates by geographic areas based on income differences and found that the majority of foreclosures took place in middle- and high-income areas and were increasing faster in those areas than in low-income neighborhoods. All in all, the Fed study can be seen as clearly rejecting the notion that the CRA was a factor in the making of the financial crisis. It

And these loans were made in large volumes because for a time they were highly profitable and because Wall Street would buy them and securitize them. It's as simple as that.

²² Alt-A mortgages have been defined as follows: They “offer more lenient application requirements than conventional mortgages... it [sic] does not require applicants to provide full documentation for their income or assets. As the result, the Alt-A mortgages are open to borrowers who can't qualify for most traditional mortgages.” (See *Financial Web* available at <http://www.finweb.com>)

concluded as follows: “[t]aken together, the available evidence to date does not lend support to the argument that the CRA is a root cause of the subprime crisis.” (p. 6)

6.

In April 2010 I conducted an e-mail survey in which two groups of economists were asked about their views on the causes of the global economic and financial crisis. Group A consisted of the signers of an open letter sponsored by the Cato Institute and published in the *New York Times* and other major newspapers in the United States opposing President Obama’s stimulus bill (ARRA).²³ The letter was signed by 256 economists, including at least one Bank of Sweden Nobel memorial prize winner. In the following weeks additional individuals signed the letter bringing the total to 335. It is clear, based on the contents of the letter and the character of the sponsor that the signers are self-proclaimed BLFs.²⁴ (The list of signers almost overlaps the list of economists who signed a newspaper advertisement supporting Senator McCain’s economic policies over Obama’s in the 2008 presidential election; only 40 individuals who were on the McCain list did not sign the Cato letter.) Group B consisted of a random sample of 1,527 members (i.e., approximately 10%) of the American Economics Association. There were 10 questions concerning factors that might have caused the crisis (which are given in the appendix). I chose the items based on views widely expressed both by economists and non-economists in the past two years on the possible causes of the crisis. For each factor respondents were asked what effect they thought it had on the crisis expressed on a scale from 1 to 10 (with 1 representing no impact and 10 representing a major impact). They were also asked to pick the top three factors they believed had the biggest impact on the making of the crisis. 115 individuals from group A responded to the survey (for a 34% response rate) and 259 individuals from group B (for a 17% response rate). The results of the survey are contained in the table below.²⁵

The results are generally what one would expect when comparing a group of BLF economists to a randomly selected group of “other” economists. Note that the null hypothesis (no statistically significant difference between the responses of the two groups) is rejected at the 0.0001 level for almost all the items. The null hypothesis is accepted for item 6 (“Borrowing by households beyond their capacity to repay was a major cause of the financial crisis of 2007-2009.”), i.e., the views of the two groups on this question are almost identical and for the “top 3 contributors” part of item 10.²⁶ Thus consider item 1 [“Misaligned incentives (‘moral hazard’) confronting executives and employees of mortgage-originating institutions were a major

²³ The letter can be accessed at http://www.cato.org/special/stimulus09/cato_stimulus.pdf The Institute describes itself as follows: The mission of the Cato Institute is to increase the understanding of public policies based on the principles of limited government, free markets, individual liberty, and peace.

²⁴ It is noteworthy that the argument made in the letter can be viewed as a *non sequitur*. The signers urge that “[t]o improve the economy, policymakers should focus on reforms that remove impediments to work, saving, investment and production. Lower tax rates and a reduction in the burden of government are the best ways of using fiscal policy to boost growth.” The implication of this is that the severe cyclical downturn happened as a result of “impediments to work, saving, investment and production;” This presumably represents a new business cycle theory.

²⁵ The response rate for group A is comparable to that reported by others who conducted surveys of economists. The response rate for group B is on the low side. See Whaples (2009)

²⁶ Of course, statistical analysis must be interpreted with caution here. (i) It is unlikely that the “other” economists, i.e., “group B” does not contain some (many?) BLFs. (ii) The Cato letter signers are a self-selected group, and thus there may be some question whether they constitute a random sample of the “BLF population.”

cause of the financial crisis of 2007-2009.”] This goes to the basic question of whether the private sector or “government” was responsible for the crisis. As one would expect, the “Cato group” assign a lower weight to this factor than the “other” economists. Or consider item 7 (“Lack of transparency in the financial sector, ‘off balance sheet entities’ and similar policies were a major cause of the financial crisis of 2007-2009.”] Again, accepting this factor as a major cause implies that the private sector is at least partly responsible for the crisis. It is therefore to be expected that the BLF group do not, on average, emphasize this factor and the difference between them and the AEA group is obvious to the naked eye. The same goes for five or six of the remaining items. All of these results can be viewed as interesting (and they seem to confirm the existence of the BLF as a distinct group among economists), but they do *not* demonstrate the presence of CD among the BLF. After all, reasonable scholars can (and do) differ about the role of most of these factors in causing the crisis. But I have demonstrated in section V that it is not reasonable to persist in the belief that the CRA wholly or partially caused the crisis and that persistence in such a belief can be viewed as a symptom of cognitive dissonance. Examination of the survey results

Views of the Economics Profession on the Global Financial Crisis—Survey Results						
Question No.	Mean Rating by Factor (Standard Deviation in Parentheses)			Percent Rating Each Factor As a Top 3 Contributor		
	Cato	AEA	t score	Cato	AEA	z score
1	7.47 (2.37)	8.41 (1.84)	-3.7778***	38%	48%	1.82*
2	9.11 (1.46)	6.98 (2.33)	10.7176***	85	25	-14.07***
3	6.33 (2.30)	8.25 (2.02)	-7.7262***	18	55	7.82***
4	5.77 (2.53)	8.11 (2.14)	-8.6405***	15	47	7.03***
5	6.10 (2.32)	7.91 (2.09)	-7.1732***	16	39	-3.63***
6	7.14 (2.45)	7.29 (2.16)	-0.5661	30	26	-0.79
7	5.48 (2.73)	7.30 (2.20)	-6.5754***	10	31	5.24***
8	6.88 (2.73)	5.83 (2.47)	3.5323***	46	12	-6.71***
9	7.85 (2.11)	5.00 (2.85)	10.7662***	37	13	-4.84***
10	3.26 (2.38)	4.57 (2.38)	-4.9120**	3	5	0.96
* significant at 0.1 level ** significant at 0.001 level *** significant at 0.0001 level						

shows that (i) on average the “Cato signers” assign a higher rating to the CRA as a cause of the crisis than the AEA group (and this result is statistically significant at the 0.0001 level) and (ii) 46% of the Cato group believe that the CRA was among the top three factors that caused

the crisis compared to 12% of the AEA group (and the results are again statistically significant at the 0.0001 level). I believe this survey result provides strong support for the hypothesis that the BLF exhibit symptoms of cognitive dissonance in their response to the global financial crisis.

7.

In a book predating publication of *A Theory of Cognitive Dissonance*, Festinger and two co-authors published a study of a cult centered on woman from an American mid-Western city who claimed to have been in contact with beings from another planet from whom she received messages that the world would end in a great flood on December 21, 1954. (Festinger, Riecken and Schachter, 1956) People who gave up their earthly possessions and joined the cult would be saved by being transported to the other planet on a spaceship. Before the prophesied event members of the cult shunned publicity and did not proselytize. All that changed once the event was “disconfirmed.” At least some members of the cult claimed that the catastrophe was averted due to their exemplary behavior and their sacrifices, and began proselytizing to attract new members. Festinger, Riecken and Schachter write the following (p. 3):

Man's resourcefulness goes beyond simply protecting a belief. Suppose an individual believes something with his whole heart, suppose further that he has a commitment to this belief and that he has taken irrevocable actions because of it, finally, suppose that he is presented with evidence, unequivocal and undeniable evidence, that his belief is wrong: what will happen? The individual will frequently emerge, not only unshaken, but even more convinced of the truth of his beliefs than ever before. Indeed, he may even show new fervor for convincing and converting other people to his view.

Nevertheless, this enthusiastic phase lasted only a month or two. (see Epilogue) In the end disconfirmation led to the breakup of the group and its dispersal throughout the United States. Unfortunately, in economics there does not appear to be permanent disconfirmation. After all, the causes of the Great Depression are still (or again?) being debated. But perhaps we can attribute this to the complexity of economic and social life: any apparent disconfirmation of a prediction made by a theory can always be attributed to some “exogenous” factor. Hence I am unable to end on a note of optimism. Unlike Solow I cannot see the ideology of the BLF “fading away,” especially since the market system seems to have survived once again, thanks perhaps to interventions which the BLF apparently despise.

Appendix—Survey Questions

Views of the Economics Profession on the Global Financial Crisis

Thank you for taking a moment to complete this brief survey. We are attempting to gauge the views of the economics profession on the causes of the global financial crisis.

1. Misaligned incentives (“moral hazard”) confronting executives and employees of mortgage-originating institutions were a major cause of the financial crisis of 2007-2009.

2. The policies pursued by government-sponsored enterprises (GSEs), such as “Fannie” and “Freddie” were a major cause of the financial crisis of 2007-2009.
3. Excessive risk-taking (“overleveraging”) by major financial institutions was a major cause of the financial crisis of 2007-2009.
4. “Regulatory failure” by the Fed and other regulatory agencies was a major cause of the financial crisis of 2007-2009.
5. The growth of complex derivative securities such as collateralized debt obligations (CDOs) and credit-default swaps (CDSs) was a major cause of the financial crisis of 2007-2009.
6. Borrowing by households beyond their capacity to repay was a major cause of the financial crisis of 2007-2009.
7. Lack of transparency in the financial sector, “off-balance sheet entities” and similar policies were a major cause of the financial crisis of 2007-2009.
8. The Community Reinvestment Act of 1977 (amended in 1995) was a major cause of the financial crisis of 2007-2009.
9. “Loose” monetary policy conducted by the fed and other central banks was a major cause of the financial crisis of 2007-2009.
10. A global “savings glut” which led to excessively low long-term interest rates was a major cause of the financial crisis of 2007-2009.

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Manifesto of the appalled economists

First signatories: Philippe Askenazy (CNRS, France) ; Thomas Coutrot (scientific council of ATTAC, France) ; André Orléan (CNRS, EHESS, president of the French Association for Political Economy) ; Henri Sterdyniak (OFCE, France).

English translation: Gilles Raveaud (Paris 8) and Dany Lang (Paris 13), September, 24th, 2010. The translators are grateful to Edward Fullbrook (Real-World Economics Review).

You may sign the manifesto at

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You may read and post comments on the manifesto at

<http://rwer.wordpress.com/2010/09/28/rwer-issue-54-manifesto-of-the-dismayed-economists>

Crisis and debt in Europe: 10 pseudo “obvious facts”, 22 measures to drive the debate out of the dead end

Introduction

The world economic recovery, permitted by a massive injection of public spending into the economy (from the United States to China), is fragile but real. One continent lags behind, Europe. Finding again the path of growth is no longer its priority policy. Europe has embarked on another path: the fight against public deficits.

In the European Union, these deficits are certainly high - 7% on average in 2010 - but this is much less than the 11% in the United States. While American states whose economic weight is greater than Greece's, such as California, are virtually bankrupt, financial markets have decided to speculate on the sovereign debt of European countries, especially those of the South. Europe is in fact caught in its own institutional trap: states must borrow from private financial institutions, which obtain cheap cash from the European Central Bank. As a consequence, the markets hold the key to the funding of the states. In this context, the lack of European solidarity gives rise to speculation, all the more so when the rating agencies' game accentuates the mistrust.

It took the downgrading, on June 15th, of the rating of Greece by the agency Moody's, to bring the European leaders to use the word “irrational” again, a word that they had used so much at the beginning of the *subprime* crisis. Similarly, we now discover that Spain is much more threatened by the fragility of its growth model and of its banking system, than by its public debt.

In order to “reassure the markets,” a stabilizing fund for the Euro has been improvised, and drastic as well as indiscriminate plans of cuts in public spending have been launched all over Europe. Civil servants are the first affected, including in France, where the increase of their pension contributions is a disguised cut of their wages. The number of civil servants falls everywhere, threatening public services. Social security benefits are severely reduced, from the Netherlands to Portugal, as well as in France, with the current pension reform. Unemployment and the lack of job security will necessarily increase in the forthcoming years. These measures are irresponsible from a political and social perspective, and even in strictly economic terms.

This policy, which has temporarily brought down speculation, has already very negative social consequences in many European countries, especially on the youth, workers and the most vulnerable people. It will eventually stir up tensions in Europe and thereby

threaten the European construction itself, which is much more than an economic project. The economy is supposed to serve the construction of a democratic continent, peaceful and united. Instead, a form of dictatorship of the market is being imposed everywhere, and especially today in Portugal, Spain and Greece, three countries that were still dictatorships in the early 1970s, only forty years ago.

Whether it is interpreted as “the desire to reassure markets” on the part of frightened governments, or as a pretext to impose choices driven by ideology, this submission to dictatorship is not acceptable, since it has proven its economic inefficiency and its destructive potential, both at the political and social levels. A real democratic debate on economic policy choices must be opened in France and Europe. Most of the economists who participate in public debates do so in order to justify or rationalize the submission of policies to the demands of financial markets. Admittedly, all governments have had to improvise Keynesian stimuli plans, and even sometimes to nationalize banks temporarily. But they want to close this parenthesis quickly. The neoliberal paradigm is still the only one that is acknowledged as legitimate, despite its obvious failures. Based on the assumption of efficient capital markets, it advocates reducing government spending, privatizing public services, flexibilising the labour market, liberalizing trade, financial services and capital markets, increase competition at all times and in all places...

As economists, we are appalled to see that these policies are still on the agenda, and that their theoretical foundations are not reconsidered. The arguments which have been used during thirty years in order to guide European economic policy choices have been undermined by the facts. The crisis has laid bare the dogmatic and unfounded nature of the alleged “obvious facts” repeated *ad nauseam* by policy makers and their advisers. Whether it is the efficiency and rationality of financial markets, or the need to cut spending to reduce debt or to strengthen the “stability pact”, these “obvious facts” have to be examined, and the plurality of choices of economic policies must be shown. Other choices are possible and desirable, provided that the financial industry’s noose on public policies is loosened.

We offer below a critical presentation of ten premises that still inspire decisions of public authorities all over Europe every day, despite the fierce denial brought by the financial crisis and its aftermath. These are pseudo “obvious facts” which are in fact unfair and ineffective measures, against which we propose twenty-two counterproposals that we would like to bring into the debate. Each of the proposals is not necessarily unanimously supported by all the people who have signed this manifesto, but they have to be considered seriously if we want to drive Europe out of the current dead end.

Pseudo “obvious fact” # 1: financial markets are efficient

Today, one fact is obvious to all observers: the crucial role played by financial markets in the functioning of the economy. This is the result of a long evolution that began in the late seventies. However it is measured, this evolution constitutes a clear break, both quantitatively and qualitatively, with previous decades. Under the pressure of financial markets, the overall regulation of capitalism has deeply changed, giving rise to a novel form of capitalism that some have called “patrimonial capitalism”, “financial capitalism” or “neoliberal capitalism”.

The theoretical justification for these mutations is the hypothesis of the informational efficiency of financial markets (or Efficient Markets Hypothesis). According to this hypothesis, it is important to develop financial markets, in order to ensure they operate as freely as possible, because they are the only mechanism allowing an efficient allocation of capital. The

policies persistently pursued over the last thirty years are consistent with this recommendation. Their purpose was to create a globally integrated financial market, in which all actors (firms, households, states, financial institutions) can exchange all types of securities (stocks, bonds, debts, derivatives, currencies) for all maturities (long term, medium term, short term). Financial markets have come to resemble the “friction free” market of textbooks: the economic discourse has succeeded in creating reality. The markets being more and more “perfect”, in the mainstream’s meaning of the term, the analysts have believed that the financial system had become much more stable than in the past. The “great moderation” - this period of economic growth without wage growth experienced by the U.S. from 1990 to 2007 - seemed to confirm this view.

Even now, the G20 still thinks that financial markets are the best mechanism for allocating capital. The primacy and integrity of financial markets remain the ultimate goals pursued by the new financial regulations. The crisis is interpreted not as an inevitable result of the logic of deregulated markets, but as the effect of the dishonesty and irresponsibility of some financial actors poorly supervised by governments.

Yet the crisis has demonstrated that markets are not efficient, and they are unable to allow an efficient allocation of capital. The consequences of this fact in terms of regulation and economic policy are tremendous. The theory of efficiency is based on the idea that investors seek and find the most reliable information on the value of projects that are competing for funding. According to this theory, the price that forms on the market reflects investors’ appraisals and synthesizes all available information: it is therefore a good estimate of the true value of the securities. This value is supposed to summarize all the information needed to guide economic activity and social life as well. Thus, the capital is invested in the most profitable projects, and leaves the least efficient ones. This is the central idea of this theory: financial competition generates fair prices, which are reliable signals to investors, and an effective guide for economic development.

But the crisis confirmed various critical works which had cast doubts on this proposition. Financial competition does not necessarily generate fair prices. Worse, financial competition is often destabilizing and leads to excessive price and irrational fluctuations, the financial bubbles.

The major flaw in the theory of efficient capital markets is that it transposes the theory used for ordinary goods and services to financial markets. On markets for goods and services, competition is partly self-regulating under what is called the “law” of supply and demand: when the price of a commodity rises, producers increase their supply, and buyers reduce their demand. As a consequence, the price decreases and goes back towards its equilibrium level. In other words, when the price of a commodity rises, restoring forces tend to impede and reverse this increase. Competition produces what is called “negative feedbacks”, i.e. restoring forces that go in the opposite direction from the initial shock. The idea of efficiency arises from a direct transposition of this mechanism to financial markets.

However, for the latter, the situation is very different. When the price increases, it is common to observe, not a decrease but an increase in demand! Indeed, the rising price means a higher return for those who own the security, because of the capital gain. The price increase thus attracts new buyers, which further reinforces the initial increase. The promise of bonuses pushes traders to further strengthen the movement. This is the case until the incident, that is unpredictable but inevitable, takes place. This causes the reversal of expectations and the crash. This herding phenomenon is a process of “positive feedbacks” which worsens the initial imbalances. This is what a speculative bubble consists of: a

cumulative increase in prices that feeds itself. Such a process does not produce fair prices, but rather inadequate prices.

As a consequence, the predominant place occupied by financial markets can not lead to any kind of efficiency. Even worse, it is a permanent source of instability, as is evident from the uninterrupted series of bubbles that we have known in the past 20 years: Japan, South-East Asia, the Internet, emerging markets, real estate and securitization. Financial instability is reflected by the huge fluctuations of exchange rates and of the stock market, which are clearly unrelated to the fundamentals of the economy. This instability, arising from the financial sector, spreads to the real economy through many mechanisms.

To reduce the inefficiency and instability of financial markets, we suggest the following four measures:

Measure 1: To separate strictly financial markets and the activities of financial actors, prohibiting banks from speculating on their own account, in order to prevent the spread of bubbles and crashes.

Measure 2: To reduce liquidity and destabilizing speculation by controls on capital movements and taxation on financial transactions.

Measure 3: To restrict financial transactions to those meeting the needs of the real economy (e.g., CDS only to holders of insured securities, etc.).

Measure 4: Capping the earnings of traders.

Pseudo “obvious fact” # 2: financial markets contribute to economic growth

Financial integration has hugely increased the power of finance because it unifies and centralizes capitalist property globally. It determines profitability standards which are required of all capital. The idea was that financial markets would replace the financing of investments by banks. But this project has failed, since today, on the whole it is firms that fund shareholders instead of the contrary. Corporate governance was nevertheless profoundly transformed to meet the standards of market profitability. With the rise of shareholder value, a new conception of the firm and its management has emerged, where the firm is being conceived as an entity at the service of the shareholder. The idea of a common interest of the different stakeholders of the firm has disappeared. The operators of publicly traded companies now have the primary and exclusive mission to satisfy the shareholders' desire to enrich themselves. Consequently, they no longer behave as wage earners, as they witness the excessive surge in their incomes. As argued by "agency" theory the aim it is to ensure that the interests of managers now converge with those of shareholders.

An ROE (Return on Equity) of 15% to 25% has now become the standard imposed by the power of finance on companies and employees. Liquidity is the instrument of that power, as it allows unsatisfied investors to go elsewhere in no time. Faced with this power, the interests of wage earners as well as political sovereignty were marginalized. This imbalance leads to unreasonable demands for profit, which then hamper economic growth and lead to a continuous increase in income inequality. Firstly, the profitability requirements greatly inhibit investment: the higher the required return, the more difficult it is to find projects that are competitive enough in order to meet these requirements. Investment rates remain historically low in Europe and the United States. Secondly, these requirements cause a constant downward pressure on wages and purchasing power, which is not favourable to demand. The simultaneous curbing of investment and consumption leads to low growth and endemic unemployment. This trend has been thwarted in the Anglo-Saxon countries by the

development of household debt, and by asset bubbles that create fictional wealth, allowing for a growth of consumption without wages, but ending up with crashes.

In order to eliminate the negative effects of financial markets on economic activity, we propose the following three measures:

Measure 5: To strengthen significantly counter-powers within firms, in order to force the management to take into account the interests of all the stakeholders.

Measure 6: To increase significantly the taxation of very high incomes to discourage the race towards unsustainable returns.

Measure 7: To reduce the dependency of firm's *vis-à-vis* financial markets, and to develop a public policy of credit (preferential rates for priority activities on the social and environmental levels).

Pseudo “obvious fact” # 3: markets assess correctly the solvency of states

According to the proponents of efficient capital markets, market operators take into account the objective situation of public finances in order to assess the risk of taking out state bonds. Take the case of Greek debt: financial operators and policy makers rely exclusively on financial assessments in order to assess the situation. Thus, when the required interest rate for Greece rose to more than 10%, everyone concluded that the risk of default was high: if investors demanded such a risk premium, this meant that the danger was extreme.

This is a profound mistake if one understands the true nature of the assessment by the financial market. As this market is not efficient, it very often produces prices disconnected from the fundamentals. In these circumstances, it is unreasonable to rely exclusively on the financial market assessments in order to assess a situation. Assessing the value of a financial security is not comparable to measuring an objective magnitude, like, for example, estimating the weight of an object. A financial security is a claim on future revenue: in order to evaluate it, one must anticipate what this future will be. It is a matter of appraisal, not of objective measure, because at the instant t , the future is by no means predetermined. In trading rooms, it is what operators imagine it will be. A financial price is the result of an assessment, a belief, a bet on the future: there is no guarantee that the assessment of markets is in any way superior to other forms of assessment.

Above all, financial evaluation is not neutral: it affects the object it is meant to measure, it initiates and builds the future it imagines. So, rating agencies play an important role in determining interest rates on bond markets by awarding grades that are highly subjective, if they are not driven by a desire to fuel instability, a source for speculative profits. When agencies degrade the rating of a state, they increase the rate of interest demanded by financial actors in order to acquire securities of the public debt of this state, and thereby increase the risk of bankruptcy they have announced.

To reduce the influence of market's psychology on the funding of the state, we propose the following two measures:

Measure 8: Rating agencies should not be allowed to influence arbitrarily interest rates on bond markets by downgrading the rating of a State. The activities of agencies should be regulated in a way that requires that their ratings result from a transparent economic calculation.

Measure 8a: States should be freed from the threat of financial markets by guaranteeing the purchase of public securities by the European Central Bank (ECB).

Pseudo “obvious fact” # 4: the soar in public debts results from excessive spending

Michel Pebereau, one of the “godfathers” of the French banking system, described in 2005, in one of those official *ad hoc* reports, France as a country stifled by debt and which is sacrificing its future generations by engaging in reckless social spending. The state running into debt as a father who drinks alcohol beyond its means: this is the vision usually propagated by most editorialists. And yet, the recent explosion of public debt in Europe and the world is due to something which is very different: the bailout plans of the financial sector, and, mainly, to the recession caused by the banking and financial crisis that began in 2008: the average public deficit in the euro area was only 0.6% of GDP in 2007, but the crisis has increased to 7% in 2010. In the same time, public debt increased from 66 % to 84% of GDP.

But the rise in public debt, in France as in many European countries, was initially moderate, and prior to that recession: it mainly comes not from an upward trend in public spending – since, on the contrary, as a proportion of GDP, public spending is stable or declining in the EU since the early 1990s - but from the erosion of public revenue, due to weak economic growth over the period, and the fiscal counter-revolution led by most governments in the past twenty-five years. In the longer run, the fiscal counter-revolution has continuously fuelled the swelling of the debt from one recession to another. Thus, in France, a recent parliamentary report estimated 100 billion Euros in 2010 as the cost of tax cuts granted between 2000 and 2010, even without including exemptions from social contributions (30 billions) and other “tax expenditures”. As tax harmonization has not taken place, European states have engaged in tax competition, lowering corporate taxes, as well as taxes on high income and assets. Even if the relative weight of its determinants varies from one country to another, the rise of government deficits and debt ratios that has taken place almost everywhere in Europe over the last thirty years does not primarily result from an increase in public spending. This diagnosis obviously opens up avenues other than the reduction of public spending mantra, repeated *ad nauseam*, in order to reduce public deficits.

To restore an informed public debate on the origin of the debt and therefore on the means to cure it, we propose the following measure:

Measure 9: To conduct a public audit of public debts, in order to determine their origin and to identify the main holders of debt securities, as well as the amounts held.

Pseudo “obvious fact” # 5: public spending must be cut in order to reduce the public debt.

Even if the increase in debt was partly due to an increase in public spending, cutting public spending would not necessarily be part of the solution. This is because the dynamics of public debt have little in common with that of a household's: macroeconomics is not reducible to the economy of the household. The dynamics of debt depends, in all generality, on several factors: the level of primary deficits, but also the spread between the interest rate and the nominal growth rate of the economy.

For, if the latter is lower than the interest rate, debt will increase mechanically because of the “snowball effect”: the amount of interests explodes, and the total deficit (including the interests of debt) as well. Thus, in the early 1990s, the “*franc fort*” policy conducted by Bereznev, and maintained despite the 1993-94 recession, resulted in an interest rate higher than the growth rate, explaining the surge in France's public debt during this period. The same mechanism caused the increase in debt in the first half of the 1980's, as a consequence of the neoliberal revolution and the high interest rates policy led by Ronald Reagan and Margaret Thatcher.

But the rate of economic growth itself is not independent from public spending: in the short run, the existence of stable public expenditures restrain the size of recessions (through “automatic stabilizers”); in the long run, public investment and expenditures (education, health, research, infrastructures...) stimulate growth. It is wrong to say that any public deficit further increases public debt, or that any reduction of the public deficit reduces debt. If reducing the deficit weighs down economic activity, this will make debt even larger. Neoliberal news analysts point out that some countries (Canada, Sweden, and Israel) have achieved very abrupt adjustments of their public accounts in the 1990s, followed by an immediate upturn in growth. But this is possible only if the adjustment regards an isolated country, which quickly regains competitiveness over its competitors. Obviously, the proponents of European structural adjustment forget that European countries are the main customers and competitors for the other European countries, the European Union being, on the whole, a rather closed economy. The only effect of a simultaneous and massive reduction of government spending in all EU countries will be a worsened recession, and thus a further increase in public debt.

To avoid public finance policies that will cause social and political disaster, we submit the following two measures for discussion:

Measure 10: The level of social protections (unemployment benefits, housing...) must be maintained, or even improved;

Measure 11: Public spending on education, research, investment in environmental conversion, etc., must be increased, in order to set up the conditions for sustainable growth and to bring about a sharp fall in unemployment.

Pseudo “obvious fact” # 6: public debt shifts the burden of our excesses on our grandchildren

There is another fallacious statement that confuses household economics with macroeconomics: that the public debt would be a transfer of wealth to the detriment of future generations. Public debt is a mechanism for transferring wealth, but mainly from ordinary taxpayers to shareholders.

Indeed, on the basis of the belief (rarely documented) that lower taxes stimulate growth and increase government revenue *in fine*, European states have, since 1980, imitated U.S.fiscal policy. Tax and social contributions cuts have proliferated (on corporate profits, on the income of the wealthiest individuals, on property, on employer contributions...), but their influence on economic growth has been very uncertain. As a consequence, these anti-redistributive tax policies have worsened cumulatively both social inequalities and public deficits.

These tax policies have forced governments to borrow from well-off households and financial markets, in order to finance the deficits created in this way. This might be called the “jackpot effect”: with the money saved on their taxes, the rich were able to acquire (interest bearing) securities of the debt issued to finance public deficits caused by tax cuts... The public debt service in France represents 40 billion Euros each year, almost as much as the revenue generated by the income tax. This *tour de force* is all the more amazing given that political leaders then succeeded in persuading the public that the employees, pensioners and the sick were responsible for the public debt.

Thus, the increase in public debt in Europe or in the USA is not the result of expansionary Keynesian policies, or expensive social policies, but, much more, of a policy in favour of the lucky few: “tax expenditures” (lowered taxes and contributions) increase the

disposable income of those who need it least, who, as a result, can further increase their investments in treasury bills, which are reimbursed, with interests, by the state with the tax revenues paid by all taxpayers. On the whole, a mechanism of upwards redistribution has been set up, from the lower to the upper classes, via public debt, the counterpart of which is always private rent.

To bring an upturn in public finances in Europe and in France, we propose the following two measures:

Measure 12: To restore the strongly redistributive nature of direct taxation on income (suppressing tax breaks, creating new steps, and increasing the rates of income tax...)

Measure 13: To suppress tax exemptions granted to companies, which have insufficient effects on employment.

Pseudo “obvious fact” # 7: we must reassure financial markets in order to fund the public debt

At the global level, rising public debt must be analyzed in parallel with the process of financialization. During the last thirty years, due to the full liberalization of capital flows, finance has increased significantly its grip on the economy. Large firms rely less on credits and increasingly on financial markets. Households also see an increasing share of their savings drained to finance for their retirement, through various investment products or in certain countries through the financing of housing (mortgage). Portfolio managers seek to diversify risk invest in government securities in addition to private equity. These public bonds were easy to find as governments were conducting similar policies leading to a surge in deficits: high interest rates, tax cuts targeted on high incomes, massive incentives to the financial savings of households for pensions funds, etc.

At EU level, the financialization of the public debt has been included in the treaties: since the Maastricht treaty, central banks are prohibited from directly funding states, which must find lenders on financial markets. This “monetary punishment” is accompanied by a process of “financial liberalization”, and is the exact opposite of the policies adopted after the Great Depression of the 1930s, which consisted of “financial repression” (i.e. severe restrictions on the freedom of action of finance) and “monetary liberation” (with the end of the gold standard). The purpose of the European treaties is to submit states, supposedly too extravagant by nature, to the discipline of financial markets, which are supposed to be by nature efficient and omniscient.

The result of this doctrinal choice is that the European Central Bank is no longer entitled to subscribe directly to the public bonds issued by European states. Deprived from the security of always being financed by the Central Bank, Southern European states have suffered from speculative attacks. Admittedly, in recent months, the ECB has bought government bonds at market interest rates to ease tensions on the European bond market, something that previously it had always refused to do, in the name of unwavering orthodoxy. But nothing says that this will suffice, if the debt crisis worsens and if market interest rates soar. That monetary orthodoxy devoid of scientific foundations may then be difficult to maintain.

To address the problem of the debt we propose the following two measures:

Measure 14: To authorize the European Central Bank to directly fund European states at low interest rates, thus loosening the straitjacket of financial markets (or to require commercial banks to subscribe to the issue of government bonds).

Measure 15: If necessary, to restructure the public debt, for example by capping the service of public debt to a certain percentage of GDP, and by discriminating between creditors according to the volume of shares they hold. In fact, very large stockholders (individuals or institutions) must accept a substantial lengthening of the debt profile, and even partial or total cancellation. We must also renegotiate the exorbitant interest rates paid on bonds issued by countries in trouble since the crisis.

Pseudo “obvious fact” # 8: the European union protects the European social model

The European experience is ambiguous. Two visions of Europe coexist, without daring to compete openly. For Social Democrats, Europe should promote the European social model, which resulted from the post World War II social compromise, with its welfare states, its public services and industrial policies. Europe should have been a bulwark against liberal globalization, a way to protect, sustain and advance this model. Europe should have defended a certain vision of the organization of the world economy, i.e. a globalization regulated by agencies of global governance. Europe should have allowed member countries to maintain a high level of public spending and redistribution, by protecting their ability to finance spending through the harmonization of taxes on individuals, businesses, and capital.

But Europe does not want to admit and promote its specificity. The currently prevailing view in Brussels and in most national governments is rather that of a liberal Europe, whose objective is to “adapt” European economies to the needs of globalization. According to this view, European integration is an opportunity to undermine the European social model and to deregulate economies. This is evident through the domination, within the Single Market, of the rule of competition law over domestic regulations and social rights, which introduces more competition in markets for products and services, diminishes the importance of public services and organizes competition among European workers. Social and fiscal competition has reduced taxes, notably on capital income and companies (the “mobile bases” of taxation, opposed to the “fixed base” of labour), and has put pressure on social spending. The treaties guarantee the so-called “four freedoms”: free movement of people, goods, services and capital. But far from being limited to the internal market, the freedom of movement of capital has been granted to worldwide investors, thereby subjecting the European productive structure to the exploitation of international capital. European integration thus appears as a way to impose neoliberal reforms on the peoples of Europe.

The organization of the macroeconomic policy (i.e. the independence of the European Central Bank from political powers and the Stability and Growth Pact) is marked by distrust of democratically elected governments. This deprives European countries of their autonomy in monetary and budgetary policies. As fiscal balance must be achieved and discretionary stimuli are banished, only “automatic stabilizers” are allowed to play. No common countercyclical economic policy is implemented in the area, and no common goal is defined in terms of growth or employment. The differences between the situations of the different countries are not taken into account, as the Pact does not deal with national interest rates or current accounts deficits. Last, the EU goals for public deficits and debt do not account for national economic circumstances.

The European authorities have tried to give impetus to “structural reforms” (through the Broad Economic Policy Guidelines (BEPGs), the open method of coordination, and the Lisbon Agenda), with a very uneven success. These orientations were adopted in a way that is neither democratic nor susceptible to grant adherence and their neo-liberal orientation did not necessarily correspond to policies implemented at national levels, given the balance of forces existing in each country. These orientations did not immediately result in the kind of

brilliant successes which would have legitimized them. The movement towards greater economic liberalization has been questioned (see the failure of the Bolkestein Directive). Some countries have been tempted to nationalize their industrial policy, while most remained opposed to the Europeanization of their fiscal or social policies. Social Europe has remained an empty word, and only the Europe of competition and finance has actually affirmed itself.

For Europe to truly promote a European social model, we propose a discussion based on the following two measures:

Measure 16: To call into question the free movement of capital and goods between the EU and the rest of the world, by negotiating bilateral or multilateral agreements if necessary.

Measure 17: To make “harmonization in progress” the guiding principle of European construction, instead of competition policy. To establish binding common goals in the social and macro-economic areas (with the creation of Broad Social Policy Guidelines, or BSPGs).

Pseudo “obvious fact” # 9: the euro is a shield against the crisis

The Euro should be a protection against the global financial crisis. After all, the removal of exchange rates uncertainty between European currencies has suppressed a major element of instability. Yet, the Euro did not protect us: Europe is more profoundly, and for a longer period of time, affected by the crisis than the rest of the world. This is due to the way the monetary union has been created.

Since 1999, the Euro area has experienced relatively poor growth and increased divergence between Member States in terms of growth, inflation, unemployment and external imbalances. The economic policy framework of the Euro area, which tends to impose similar macroeconomic policies on countries which happen to be in different situations, has widened the disparity in growth between the Member States. In most countries, especially the larger ones, the introduction of the Euro did not stimulate growth, contrarily to what had been promised. For other countries, growth did take place, but it came at a price of imbalances which prove difficult to sustain. Monetary and fiscal orthodoxy, which has been reinforced by the euro, has shifted the entire burden of adjustment on labour. All in all, labour flexibility and wage moderation have been promoted, the share of wages in total income has been reduced, and inequalities have widened.

This race to the bottom has been won by Germany, which has been able to draw large trade surpluses at the expense of its neighbours, especially its own employees. Germany has established a low cost of labour and social benefits, which has given a commercial advantage to this country over its neighbours, who have not been able to treat their own workers so badly. The German trade surplus is detrimental to growth in other countries. Budget and trade deficits of some countries are only the inevitable counterpart of the surpluses of other Member States. Generally speaking, the Member States have not been able to develop a coordinated strategy.

The Euro zone should have been less affected by the financial crisis than the United States or the United Kingdom. In the Euro zone, households invest much less on financial markets, which are less sophisticated. And, before the crisis, public finances were in a better situation: the deficit of the Euro countries reached only 0.6% of GDP in 2007, to be compared to almost 3% in the U.S., the U.K. and Japan. But the Euro area was suffering from widening imbalances: Northern countries (Germany, Austria, the Netherlands, and Scandinavia) were curbing their wage levels and their internal demand, thus piling on external surpluses, while

the Southern countries (Spain, Greece, Ireland) experienced strong growth, driven by interest rates below growth rates, and accumulated external deficits.

While the financial crisis started from the United States, the U.S. has implemented a real policy of fiscal and monetary stimulus, while initiating a movement of financial re-regulation. Europe on the contrary has failed to engage in a sufficiently responsive policy. From 2007 to 2010, the fiscal impulse has been limited to 1.6 percentage points of GDP in the Euro zone, versus 3.2 points in the United Kingdom, and 4.2 points in the United States. The production loss caused by the crisis has been much larger in the Euro area than in the United States. Rising public deficits in the area resulted more from the crisis than they were the result of an active policy.

At the same time, the Commission has continued to launch excessive deficit procedures against Member States, to the point that, by mid 2010, virtually all states in the area were concerned. The Commission asked Member States to commit themselves to limit their deficits to 3% by 2013 or 2014, regardless of economic developments. The European authorities have continued to demand restrictive wage policies and challenged public pension and health systems, at the obvious risk of deepening the recession in the continent and increasing tensions between countries. This lack of coordination, and more fundamentally, the absence of an EU budget allowing for an effective solidarity between Member States, have encouraged financial actors to turn away from the Euro or even to speculate openly against it.

For the Euro to effectively protect European citizens from the crisis, we propose the following two measures:

Measure 18: To ensure effective coordination of macroeconomic policies and a concerted reduction of trade imbalances between European countries.

Measure 19: To offset payments imbalances in Europe by a Bank of Settlements (that would organize loans between European countries)

Measure 20: If the Euro crisis leads to the end of the Euro, and pending the reviving of the EU budget (see below), to establish an intra-European monetary system (with a common currency such as the “Bancor”) which would organize the unwinding of imbalances in trade balances in Europe.

Pseudo “obvious fact” # 10: the Greek crisis was a springboard towards an economic government of Europe and effective European solidarity

From mid-2009 onwards, financial markets have begun to speculate on the debt of European countries. Overall, soaring debts and deficits in the world have not (yet) resulted in higher long term interest rates: financial operators believe that central banks will keep real short term interest rates near zero for a long time, and that there is no real danger of inflation or of default of a large country. But speculators have seen the flaws in the organization of the Euro area. While the governments of other developed countries can still be supported by their central bank, Euro zone countries have abandoned this option and are totally dependent on markets to finance their deficits. As a result, speculation was triggered on the most vulnerable countries in the area, i.e. Greece, Spain, and Ireland.

European authorities and governments have been slow to respond to this issue, as they did not want to give the impression that Members States were entitled to unlimited support from their partners. They wanted to punish Greece, guilty of having hidden – with the help of Goldman Sachs – the true size of its deficits. However, in May 2010, the ECB and the Member States had to create an Emergency Stabilization Fund to show markets that they

would bring unlimited support to threatened countries. In return, these countries had to announce programs of unprecedented fiscal austerity, which will condemn them to a downturn in the short term and to a long period of recession. Under the pressure of the IMF and the European Commission, Greece had to privatize its public services, and Spain had to make its labour market more flexible. Even France and Germany, which have not been attacked by speculation, have announced restrictive measures.

But overall, there is no excess demand in Europe. The fiscal situation is better than that of the U.S. or Great Britain, leaving room for fiscal manoeuvre. We must correct imbalances in a coordinated manner: Northern and Central Europe countries with trade surpluses should pursue expansionary policies – higher wages, social spending, etc. – in order to offset the restrictive policies of the Southern countries. In total, fiscal policy should not be restrictive on average in the Eurozone, as long as the European economy does not come close to full employment.

But supporters of automatic and restrictive fiscal policies in Europe today are unfortunately reinforced today. The Greek crisis allows them to make us forget about the origins of the financial crisis. Those who have agreed to financially support the Southern countries want to impose in return a tightening of the Stability and Growth Pact. The Commission and Germany want all member countries to include the goal of balanced budgets in their constitutions, and to have their fiscal policy monitored by committees of independent experts. The Commission wants to impose on countries a long cure of austerity, as long as their public debt is higher than 60% of GDP. Ironically, if there is a step towards a European economic government, it is towards a government which, instead of loosening the grip on finance, imposes further austerity and structural “reforms”, at the expense of social solidarities, within and between countries.

The crisis provides financial elites and European technocrats an opportunity to implement a “shock strategy”, by taking advantage of the crisis to push further for a radical neo-liberal agenda. But this policy has little chance of success:

- The reduction of public spending will undermine the effort needed at the European level to fund spending on needed areas (such as research, education, or family policy) and to help the European industry to maintain itself and to invest in the areas of the future (green economy).

- The crisis will make it possible to impose deep cuts in social spending, a goal relentlessly pursued by the proponents of neo-liberalism, this will come at the risk of undermining social cohesion, reducing effective demand, and leading households to save more for their pension and health plans, thus contributing more to the private financial institutions which are responsible for the crisis.

- Governments and the European authorities are unwilling to put in place the fiscal harmonization that would allow for the required increase in taxes on the financial sector, wealth and higher incomes.

- European countries are currently establishing long lasting restrictive fiscal policies that will weigh heavily on growth. Tax revenues will fall. Thus, public balances will hardly be improved, debt ratios will not diminish, and markets will not be *reassured*.

- Because of their diverse political and social cultures, not all European countries have been able to bend under the iron discipline imposed by the Maastricht Treaty; not all of them will bend to its current reinforcement. The risk of creating a dynamic where each country will turn towards itself is real.

In order to move towards a genuine economic government and a European solidarity, we propose the following two measures:

Measure 21: To establish a European tax (for instance a carbon tax, or a tax on profits) and to create an effective European budget that would facilitate the convergence of economies, and to work towards equal conditions of access to public and social services in each Member State, on the basis of best practices.

Measure 22: To launch a broad European action plan, which would be funded by public subscription with low but guaranteed interest rates (and / or by money creation from the ECB), that would initiate the green conversion of the European economy.

Conclusion: debating economic policy, creating paths to reshape the european union

Europe has been built for three decades on a technocratic basis which has excluded populations from economic policy debates. The neoliberal doctrine, which rests on the now indefensible assumption of the efficiency of financial markets, should be abandoned. We must reopen the space of possible policies and discuss alternative and consistent proposals that constrain the power of finance and organize the “harmonisation while the improvement is being maintained” of European economic and social systems (art. 151 of the Lisbon Treaty). This requires the pooling of substantial budgetary resources, which would be collected from the development of a highly downward redistributive taxation in Europe. Member States should also be freed from the grip of financial markets. It is only if these conditions are met that the European project can hope to regain the democratic legitimacy it currently lacks among its citizens.

It is obviously not realistic to imagine that 27 countries will decide at the same time to make such a break in the methods and objectives of the European construction. The European Economic Community began with six countries: the reshaping of the European Union will also start with an agreement between a few countries willing to explore alternative ways. As the disastrous consequences of current policies will become obvious, the debate on alternatives will rise across Europe. Social struggles and political changes will occur at different times in different countries. Some national governments will take innovative measures. Those who will desire to do so will adopt enhanced co-operations to take bold steps in the realms of financial regulation, and fiscal and social policy. Through specific measures these countries will hold out their hands to other peoples, so that they can join the movement.

As a consequence, it seems important to outline and to debate right now the broad orientations of alternative economic policies that will make the reshaping of the European construction possible.

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Deleveraging is America's future

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The latest [Flow of Funds](#) release by the US Federal Reserve shows that the private sector is continuing to delever. However there are nuances in this process that to some extent explain why a recovery appeared feasible for a while.

The aggregate data is unambiguous: the US economy is delevering in a way that it hasn't done since the Great Depression, from debt levels that are the highest in its history. The aggregate private debt to GDP ratio is now 267%, versus the peak level of 298% achieved back in February 2009—an absolute fall of 31 points and a percentage fall of 10.3% from the peak.

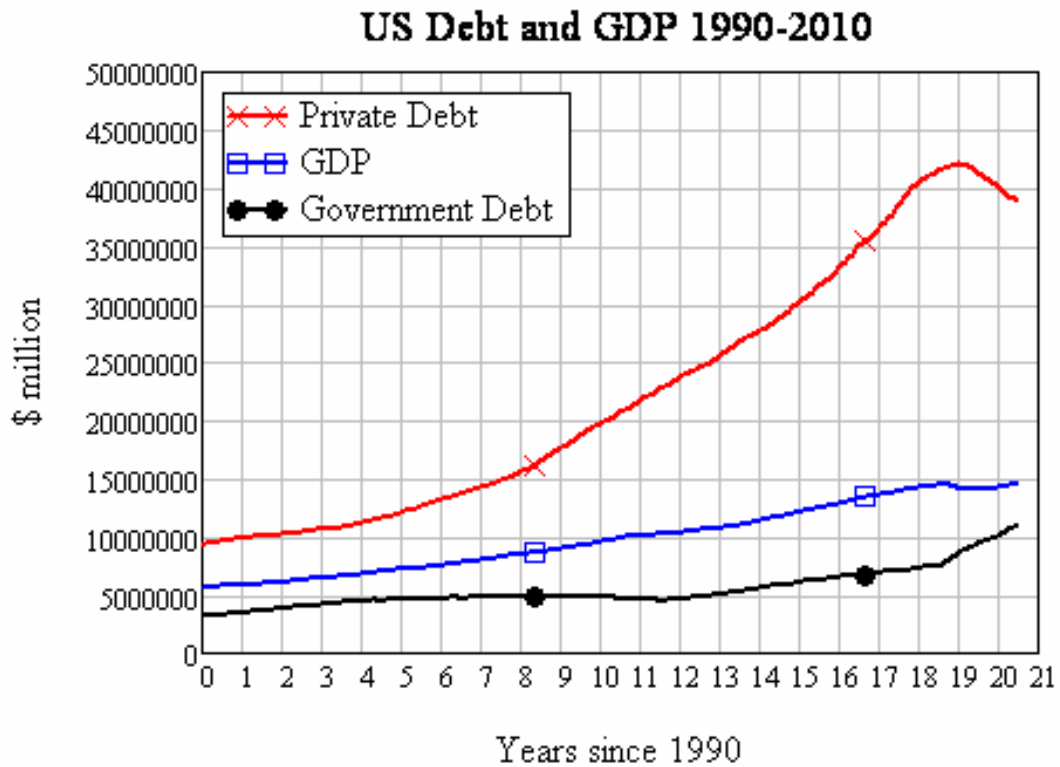


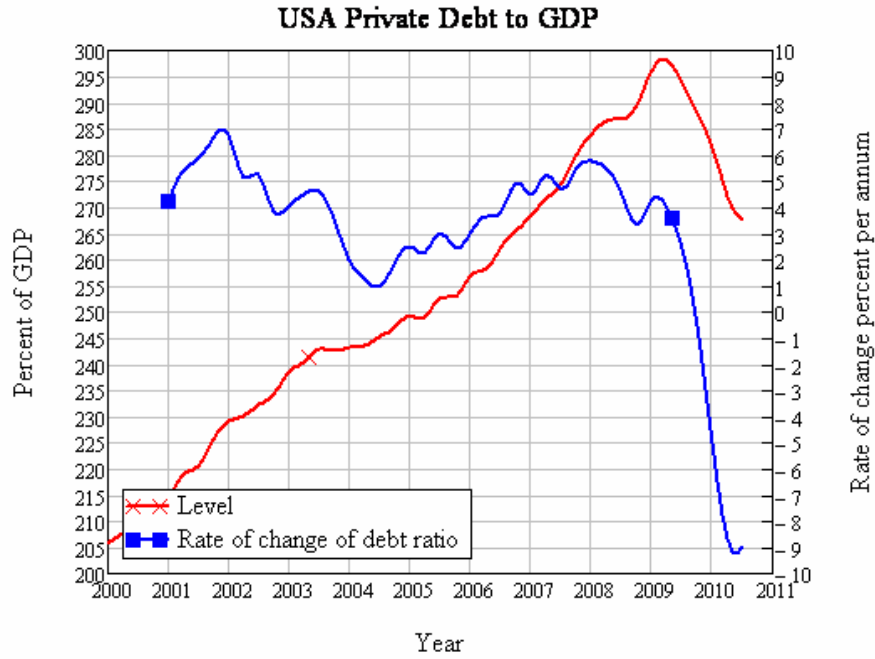
This dwarfs any previous post-WWII experience—even the steep recession of the mid-1970s.

US Debt Downturns	Now	1990s	1970s
Duration in years	1.3	2.3	1.3
Peak Debt	298	169	114
Debt Trough	268	163	106
Fall in Debt	31	7	8
Percent Decline	10.3%	4.2%	6.7%
Rate of Decline p.a.	7.9%	1.8%	5.1%

The aggregate level of private debt now towers over the economy, putting into sharp relief the obsession that politicians of all persuasions have had with the public debt. Rather like Nero fiddling as Rome burnt, politicians have focused on the lesser problem while the major one grew out of control. Now they are obsessing about a rise in the public debt, when in a very large measure that is occurring in response to the private sector's deleveraging.

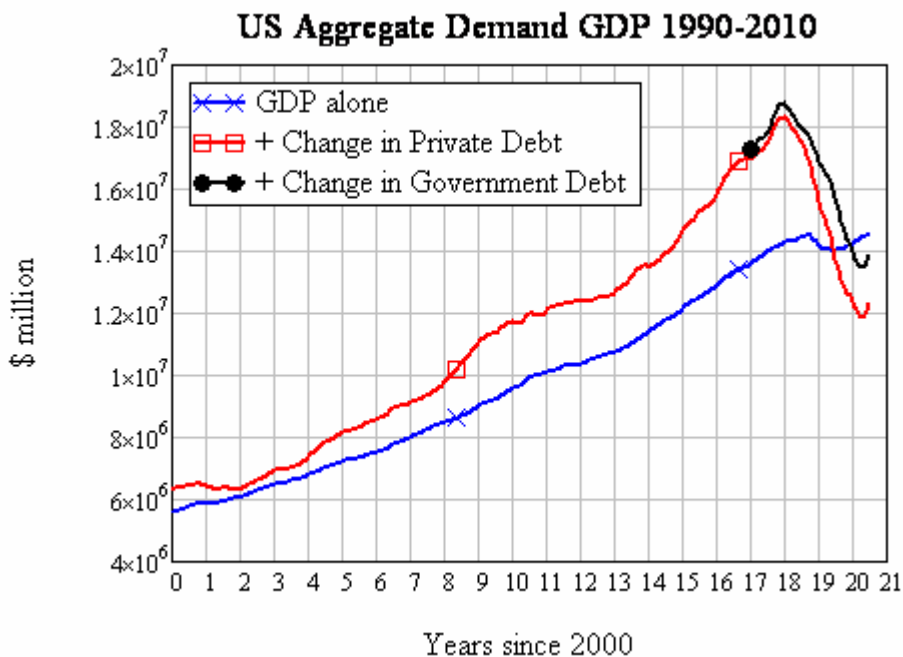
If they had paid attention to the level of private debt in the first place, then we wouldn't be facing exploding public debt today.



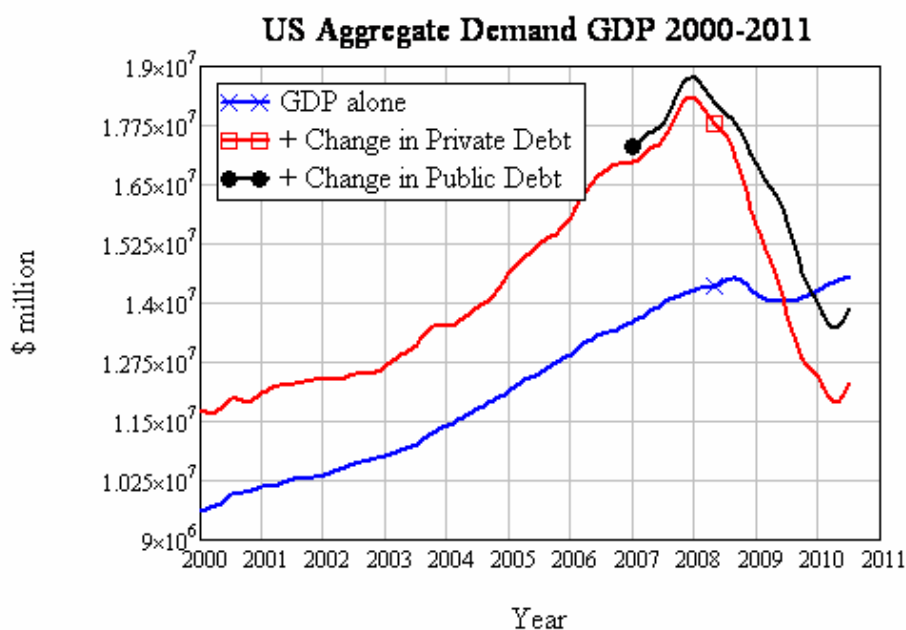


However, though the decline in private debt is steep and continuing, the rate of decline has slowed. Because debt interacts with demand through its rate of change, this has given a stimulus of sorts to the economy in the midst of its deleveraging.

This is obvious when one considers aggregate demand as I define it: the sum of GDP **plus the change in debt** (where this demand is spread across both goods & services and the asset markets). Though debt levels are still falling, because they are falling less rapidly there has actually been a boost to aggregate demand from debt from the fact that debt is declining less rapidly in 2010 than in 2009:



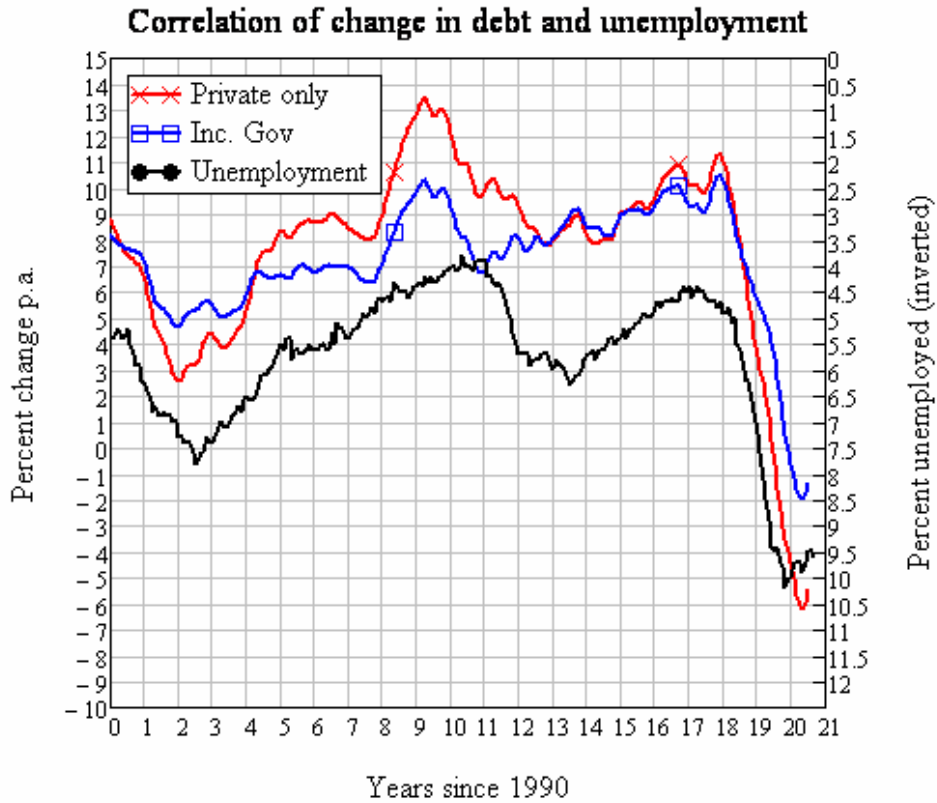
This is doubly so when the contribution to demand from the public sector is included, as this shorter term graph shows more clearly.



However while recent data shows a positive contribution to demand from debt falling more slowly, on an annualised basis, the change in debt is still subtracting from aggregate demand—and more so than in the previous year. So total demand (across all markets—commodity and assets) had to fall, even though GDP itself grew. Obviously most of the fall in demand has been absorbed by the asset markets, which have not recovered to the same level of turnover as in the boom years—and nor should they.

The next table, which uses the aggregate debt figure (public and private debt combined) from the Flow of Funds, shows that aggregate demand fell across July 2008 to June 2009, **even though debt was still rising**, because the rate of growth of debt fell from \$3.7 trillion to \$1.4 trillion. Across July 2009 to June 2010, the decline in aggregate demand was less than the previous year (a 9.7% fall versus a 15.2% fall), even though the change in debt had turned negative.

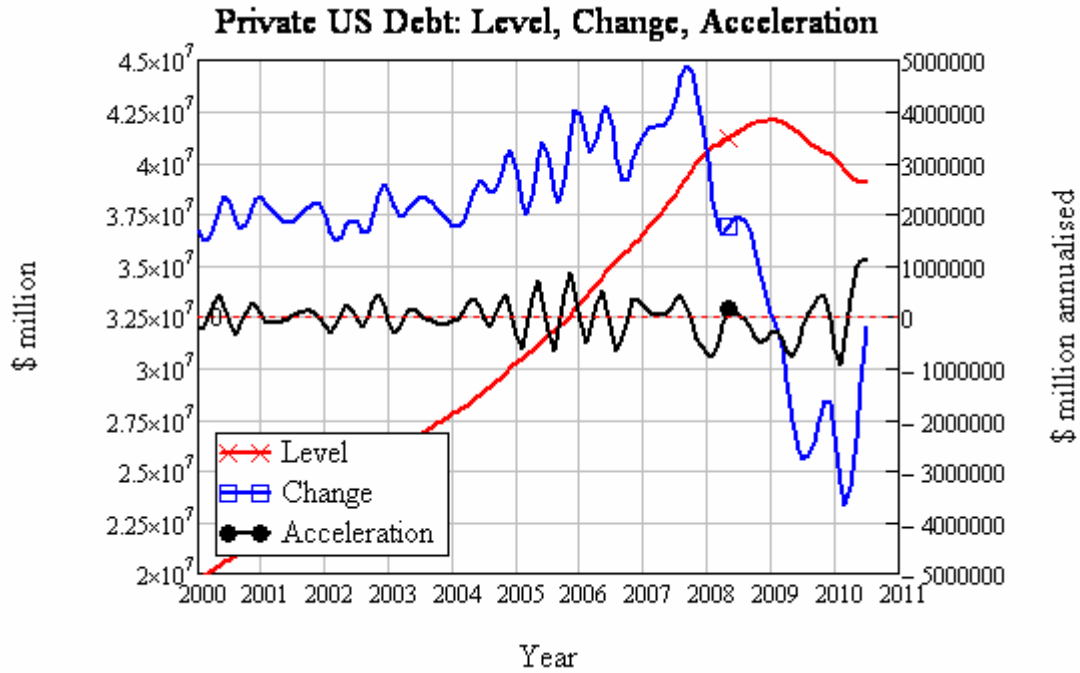
Variable\Year	2006.5	2007.5	2008.5	2009.5	2010.5
GDP	13,347,800	14,008,200	14,471,800	14,034,500	14,575,000
Change in Nominal GDP %	6.6%	4.9%	3.3%	-3.0%	3.9%
Change in Real GDP %	3.0%	1.8%	1.2%	-4.1%	3.0%
Inflation Rate %	4.1%	2.4%	5.6%	-2.1%	N/A
Total Debt	43,337,326	47,528,151	51,272,735	52,686,684	52,054,500
Debt Growth Rate %	10.0%	9.7%	7.9%	2.8%	-1.2%
Change in Debt	3,934,348	4,190,825	3,744,584	1,413,949	-632,184
GDP + Change in Debt	17,282,148	18,199,025	18,216,384	15,448,449	13,942,816
% Change in Aggregate Demand	0.0%	5.3%	0.1%	-15.2%	-9.7%



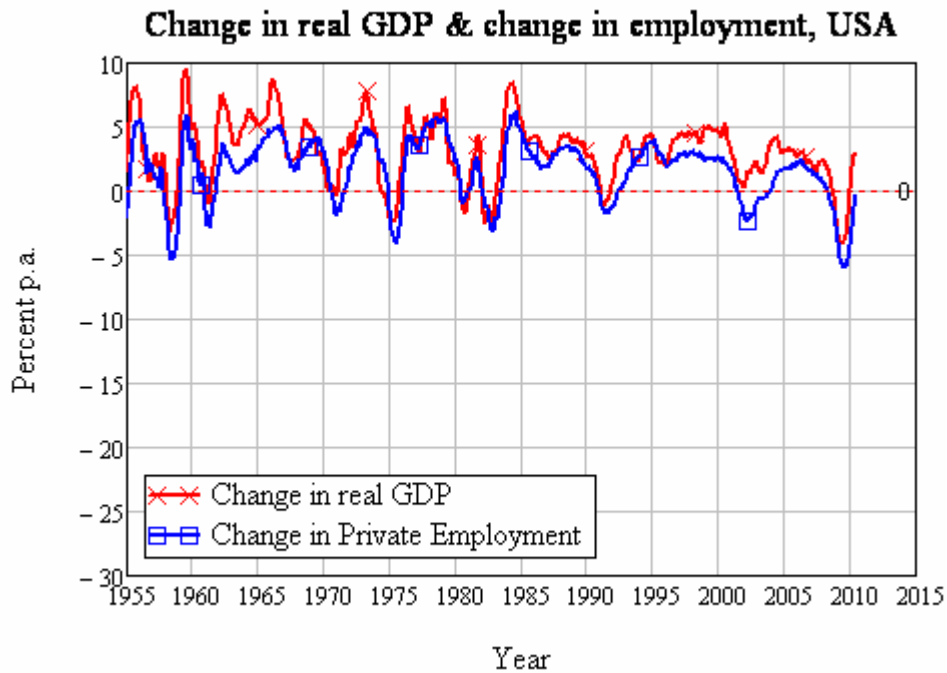
The rise in aggregate demand supported a recovery in employment, but the prospects of this continuing to the point at which economic activity booms once more are remote: with debt levels as high as they are, the potential for further deleveraging still exceeds the worst that the US experienced during the Great Depression.

I have recently become aware of some other economists using a similar concept to my measure of the debt contribution to aggregate demand, which they call the “credit impulse” (Biggs, Mayer et al., <http://ssrn.com/paper=1595980>). They define this as the change in the change in debt, divided by GDP.

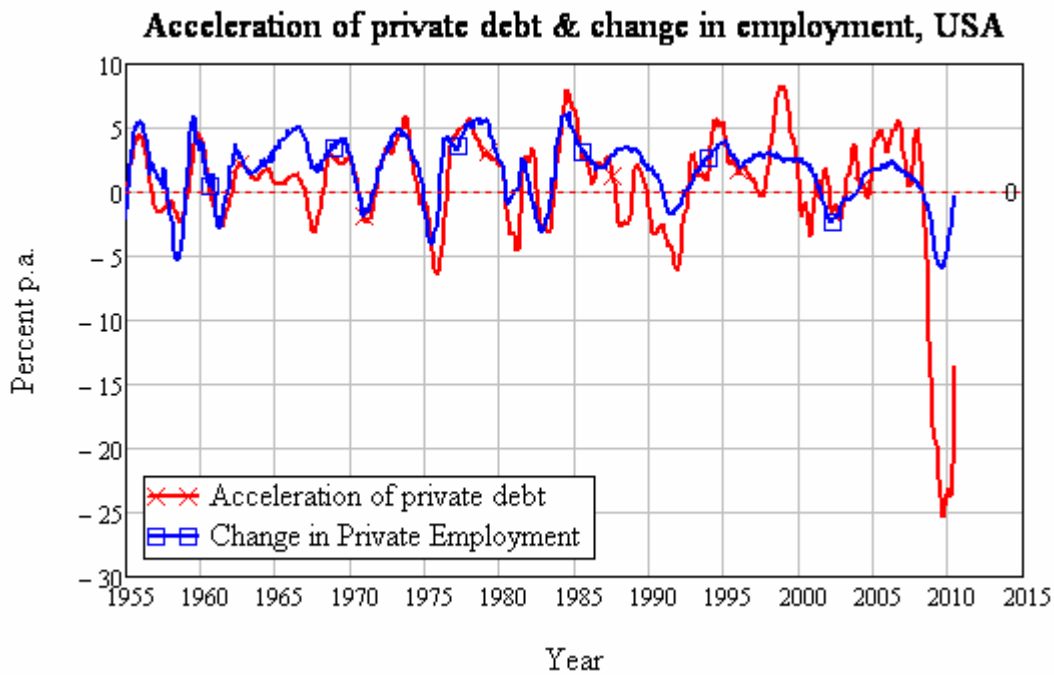
My definition emphasises aggregate demand and correlates this with the level of employment (or unemployment, as above), whereas theirs emphasises the change in aggregate demand and correlates with changes in the level of employment. The logic is identical, but has the advantage of being able to correlate the change in the change in debt with change in employment. It highlights an apparent paradox: the economy can receive a boost from debt, even though it is falling, if the rate of that decline slows.



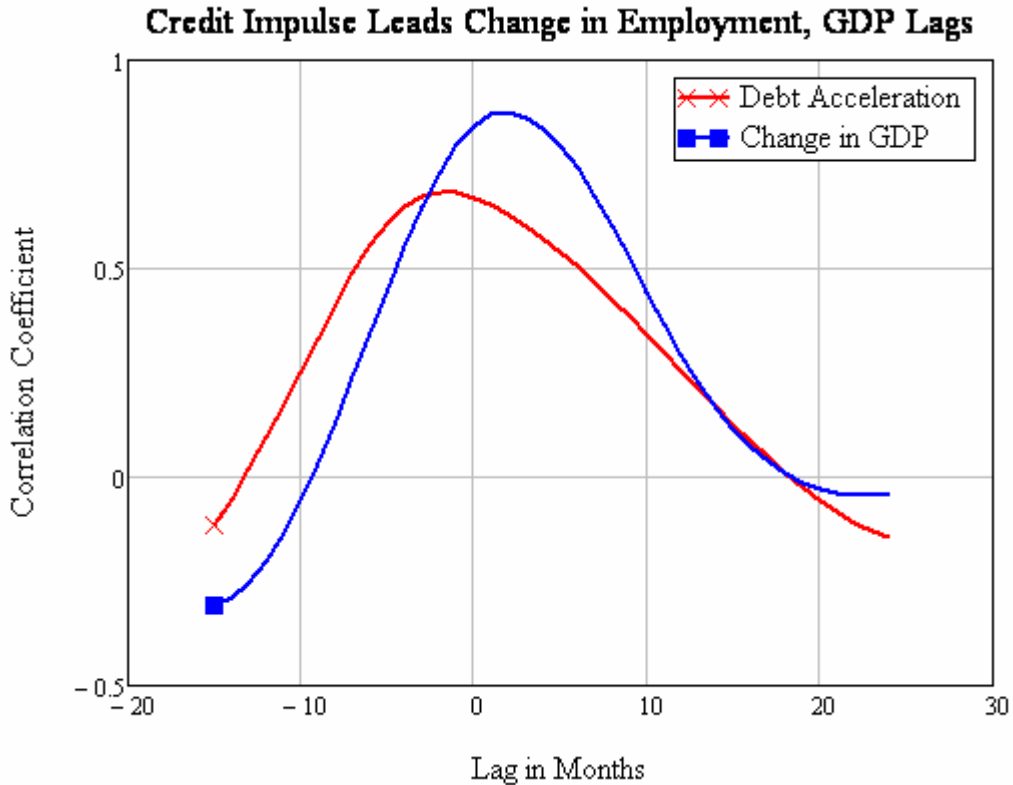
The next few charts apply this concept using the recent Flow of Funds data, and shows why it is so important to consider the dynamics of debt when trying to understand why this downturn has been so severe—and why it also seems to have eased. Firstly, change in employment and change in real GDP are obviously correlated, and on this basis this downturn is bad, though not significantly worse than previous downturns in 1958, 1975 and 1983.



However when you consider the correlation between the “credit impulse” and the change in employment, this crisis has no precedent in the post-WWII period:



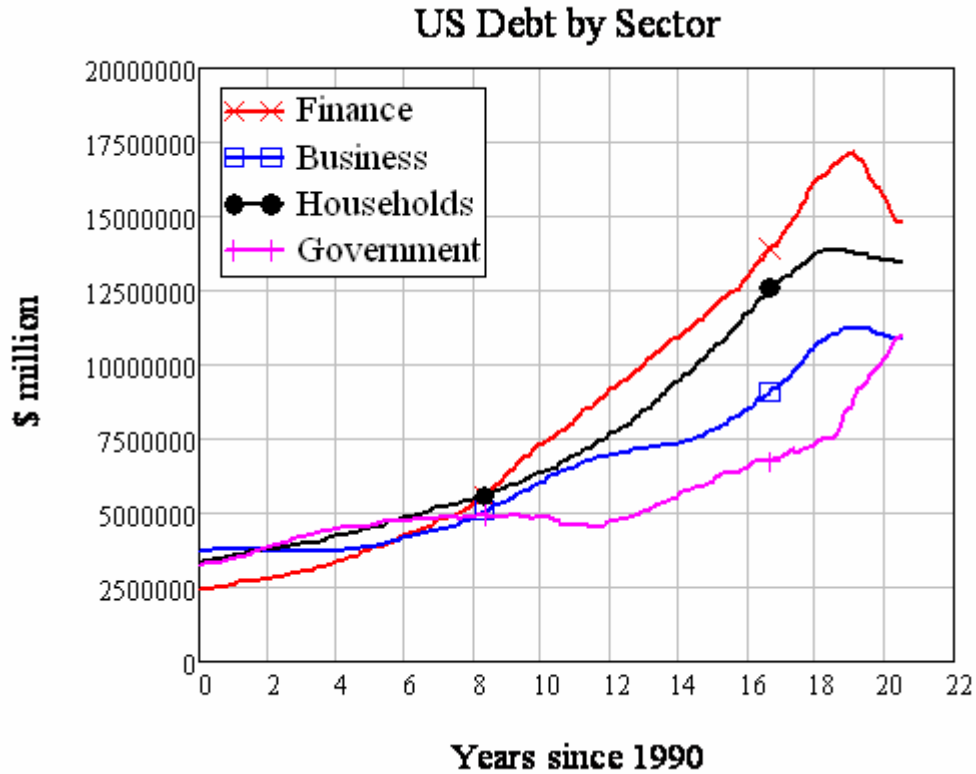
Furthermore, debt is the leading factor in this process. Though the correlation between changes in real GDP and changes in employment are higher than those for the acceleration in debt and changes in employment, the “credit impulse” leads changes in employment while GDP slightly lags changes in employment: credit, which is ignored by conventional “neoclassical” economics, is in the driving seat. This is something that Keynes realized after writing the *General Theory* (Keynes 1936), but which never made its way into the textbook version of Keynes that conventional economists like Stiglitz and Krugman learnt as Keynesianism.



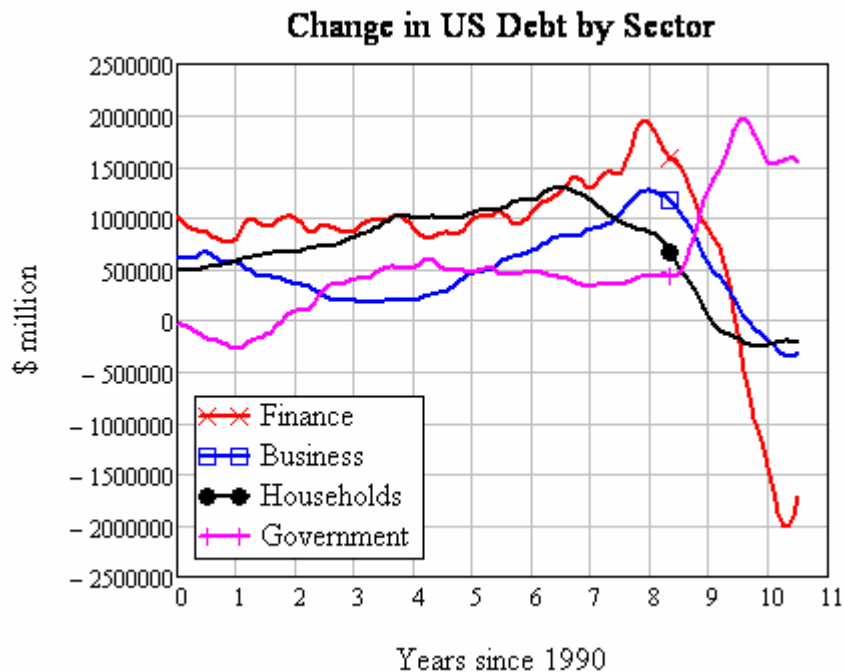
Planned investment—i.e. investment ex-ante—may have to secure its “financial provision” before the investment takes place; that is to say, before the corresponding saving has taken place. This service may be provided either by the new issue market or by the banks ;—which it is, makes no difference... let us call this advance provision of cash the ‘finance’ required by the current decisions to invest. Investment finance in this sense is, of course, only a special case of the finance required by any productive process; but since it is subject to special fluctuations of its own, I should (I now think) have done well to have emphasised it when I analysed the various sources of the demand for money. (Keynes 1937, pp. 246-247)

The good news in the latest Flow of Funds data is therefore that a slowdown in the rate of deleveraging can impart a positive impetus to employment. However the bad news is that the economy is now hostage to changes in the rate of deleveraging, from levels of debt that far exceed anything it has ever experienced beforehand. Since much of this debt was taken on to finance speculation on asset prices rather than genuine investment, it is highly likely that deleveraging will accelerate in the future, as speculators tire—literally as well as metaphorically—of carrying large debt loads that finance stagnant or declining asset prices.

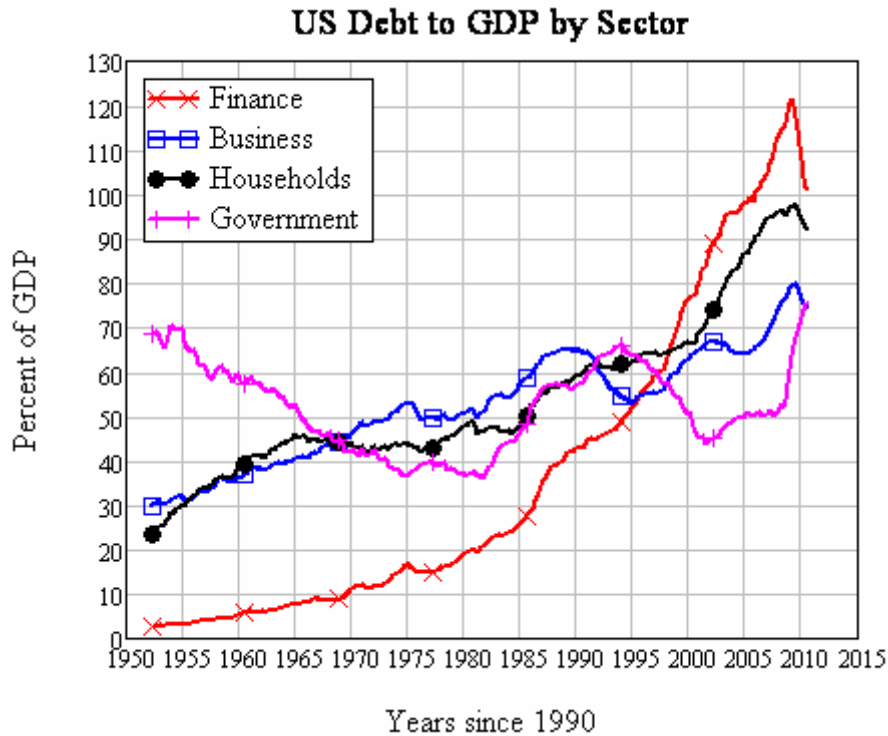
Drilling down into the debt data, it’s apparent that the sector that caused the crisis—the finance sector—is the one that has delevered the most is also the one whose rate of delevering is slowing most rapidly.



This is not a good thing, nor is it likely to last. The finance sector exists to create debt, and the only way it can do that is by encouraging the rest of the economy to take it on. If they were funding productive investments with this money, there wouldn't be a crisis in the first place—and debt levels would be much lower, compared to GDP, than they are today. Instead they have enticed us into debt to speculate on rising asset prices, and the only way they can expand debt again is to re-ignite bubbles in the share and property markets once more.



Here's where the level of debt (when compared to income) matters, as opposed to its rate of change: reigniting these bubbles is easy when debt to GDP levels are low. But reigniting them when debt to income levels are astronomical is next to impossible. Speculators have to be encouraged to take on a level of debt whose servicing consumes a dangerously high proportion of their income, in the belief that rising asset prices will let them repay that debt with a profit in the near future.



With the debt to GDP levels for all non-government sectors of the American economy at unprecedented levels, the prospect that any sector can be enticed to take on yet more debt is remote. Deleveraging is America's future.

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Heterodox lessons from the Crisis

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Introduction

The crisis had at least one important silver lining. It showed the sheer irrelevance of mainstream macroeconomic theory for understanding what caused the crisis and for policy guidance in its aftermath. For a theory based on the very premise that markets work efficiently at all times the crisis simply could not have happened, and the fact that it did was an anomaly too big to ignore. The few – most notably Paul Krugman among them – who have been trying to take stock seem to have provoked a defense of the beleaguered theory by some of its true believers. Yet, no real mainstream explanation of what has gone wrong has emerged and a few arguments that blame the government or the Fed for the crisis lack conviction. In this lacuna, there has been a hasty retreat to “crude” Keynesianism, yet it is too early to tell how much of a lasting influence that will have either.

The situation is arguably different with heterodox macroeconomists. Not only many among them predicted the crisis, but more importantly their reasons why rested on a coherent theoretical view. So, it is no exaggeration to say the crisis was an intellectual vindication of sorts. But, having said that, it is also true that heterodox theorizing needs to take stock and draw its own lessons from the crisis as well. If the recent discordant slew of articles on whether the crisis was indeed a “Minsky moment” is any indication, heterodox economists do not all seem on the same page on the nature of the crisis and what to do about it – that is, beyond platitudes.

It is in this context that the opportunities for discussion and interaction afforded by conferences such as the one organized by New School students on March 5 of this year is to be especially welcomed. This paper, drawing from a presentation made at this conference, is an attempt to contribute to the heterodox discussion on the crisis, focusing on some of its lessons. Two among these top my list: the crucial role asset price bubbles play in a profit-led macroeconomic system and the importance of reading global imbalances from the capital account side. At the end of the paper it will hopefully be clear how insights from these can enhance our understanding of the predicament the world economy is in today.

Asset Price Inflation

The conceptual distinction between ‘demand-led’ growth and ‘profit-led’ growth goes way back among heterodox economists and thus can be a helpful point of reference for the foregoing discussion. The main point I want to emphasize here is the crucial role asset price bubbles seem to play in how a profit-led regime actually works. Consider the monetary/financial institutional dimension, especially how maturity and liquidity risks are kept under wraps, respectively, in the two *regimes*. The power central banks have had over commercial banks to rein in or stimulate credit growth, as well as their lender of last resort function, was a defining characteristic of the older ‘demand-led growth’ era. By contrast, in the era of financial liberalization and deregulation that followed, both the overall credit supply and provision of liquidity became market driven and closely tied to changes in asset prices which in turn became especially sensitive to international capital movements.

True, in the earlier era mainstream economists exaggerated the power the monetary authorities had over commercial banks, going to the extreme of assuming that it was in the central bank's discretion to control the money supply exactly as it desired. This had made it possible for monetarist economists in the 1970s to argue that inflation was solely a monetary phenomenon, caused by too rapid a growth of the money supply. That also meant that it could simply be contained if the central bank curtailed the money supply. Ever since, Post Keynesian economists challenged this monetarist view by correctly arguing that the central bank could not possibly control the money supply the way monetarist economists alleged. While the central bank had considerable discretion in setting the policy interest rate it had next to none over the money supply, which it was argued simply lagged overall bank credit. For the loans commercial banks issued to meet the credit demand from businesses simply returned to the banking system in the form new deposits, a process which the central bank was powerless to check unless it put at risk the very integrity of the payments system. Thus, post Keynesians argued, the influence of the central bank over the economy rested not on its ability to control banks and the money supply as such but instead in its ability to lower or raise the interest rates that impacted businesses' willingness to borrow. Others thought that the point was overdone, for they recognized that the central bank policy influenced banks' ability and willingness to make loans as well and emphasized the role of financial innovations. However, as heterodox economists we have long failed to resolve these issues and instead found ourselves mired in a long running debate between, so-called "structuralists" and "accommodationists."

While we argued, the real world moved on. Financial liberalization and deregulation - the monetary/financial dimension of the broader set of institutional transformations that brought about a new macroeconomic configuration that we term 'profit-led growth' for short - has changed the very landscape of financial intermediation. Most notably, the overall mechanism of credit creation became increasingly market driven as the relative importance of traditional banking decreased in both credit creation and the money supply process. This also meant that the central bank's traditional instruments of control over commercial banks became less and less important in controlling the overall supply of credit in the economy. But, ironically, this was also the time when central banks took credit for "Big Moderation," the lower price inflation, which enhanced their ability to *talk* financial markets and shape expectations. Though a 'red herring' as it later proved to be, *inflation targeting* became the official doctrine of central banking and was widely believed effective in controlling price inflation. At the same time, the very perception that central banks conquered price inflation itself contributed to the official complacency about asset price bubbles. In the earlier era, wage pressures almost invariably increased during business cycle expansions causing increased expectations of price inflation, and that impelled the central bank to take measures (or raised expectations that it would) to dampen the growth of bank credit. In the new era, however, globalization severed the connection between output expansion and price inflation as cheap manufactured imports from emerging economies and the threat of capital flight in the core countries kept both price and wage pressures in check. Thus, given the absence of any sign of an uptick in price inflation, central banks remained complacent in the face of asset price inflation and the credit expansion it fueled. Little else it appears could have prevented asset prices from becoming the engine of credit growth and source of market liquidity in the new institutional structure that emerged.

In this new era, banks became dependent on financial markets just as much as their own customers. Higher asset prices not only increased the borrowers' collateral and willingness to borrow but also raised that of banks' own, increasing their ability and willingness to underwrite more lending in one shape or another, on or off their balance sheet.

Also, just as higher asset prices stimulated credit, the increase in credit in turn stimulated spending as well as speculation, pushing up asset prices further. As traditional banking decreased in importance in the credit creation process, so did the ability of the central bank to directly intervene.

Considering that the crisis first broke out as a liquidity problem, perhaps more important was the fact that rising asset prices also came to play a crucial part in how the system dealt with liquidity risk. The financial innovations that were made possible by deregulation meant that progressively an ever smaller base of short term liabilities supported an ever larger volume of long term debt in the financial system as a whole. Of course, the big neoliberal assertion was that this did not involve an increase in the maturity risk and thus not a cause for concern. It was argued that risk was much more efficiently distributed in the system since deregulation enabled the market to be the arbiter of who bore it. This also meant that the “unregulated” shadow banks – and proxy institutions set up by “commercial” banks - became the fulcrum of the financial system. That these institutions did not enjoy the lender of last resort protection from the central bank was not a cause of concern for it was believed the market would provide whatever liquidity was needed as long as risk was priced right, which in turn was axiomatically held to be true. Indeed markets were flush with liquidity and it was easy to borrow short term under favorable terms as long as asset prices kept rising. Relying on the ‘lender of last resort’ protection of an overbearing central bank seemed an archaic way to deal with liquidity risk. Now, of course, we know only too well how market liquidity disappeared once the rise in asset prices came to an end and needs no further elaboration. But, the question is what does this all mean in terms of how the macroeconomic system worked?

Conceptually, the central role asset prices have come to play in unregulated financial markets since the 1990s is reminiscent of Keynes’ discussion in his *Treatise on Money*, where not only a sharp distinction is made in terms of how asset and goods prices are determined but also asset mispricing is an important part of the business cycle dynamics. Consider the distinction Keynes makes between a *bull market with a consensus of opinion* and a *bull market with a division of opinion* in his discussion of how sentiment in financial market evolves over a business cycle expansion. In the latter phase, characterized by asset price mispricing, a growing number of agents choose to remain liquid because they think that asset prices are excessive. That is what Keynes calls the *bear position* (and, *alternative opinion* in 1937). What happens next to the asset price bubble depends very much on the role the banking system plays, whether – and, the extent to which - it recycles bear funds to the bulls. When it does, a potentially destabilizing dynamic emerges: the expanding bear position transferred to the bulls turns into increased asset demand, making the bubble expand further, which in turn makes the bear position even bigger and the funds recycled to bulls even larger, causing the cycle to repeat itself on a larger scale. Keynes argued that during these periods of runaway speculation ‘financial circulation’ rose disproportionately to ‘industrial circulation.’ Keynes’ conceptual framework in the *Treatise* can be helpful in on how we understand global imbalances and their impact on speculative credit booms in the US and around the world.

Looking at Global Imbalances from the Capital Account Side

The US trade deficit has been rising ever since the early 1990s, and rising especially faster since the late 1990s almost continuously until the outbreak of the crisis. Overall, this was also a period of rapid economic growth in much of the world economy when asset prices and debt rose rapidly. There was a relatively brief interlude after the US dotcom stock market

bust and the recession that followed in 2001, but the resumption of expansion in 2003 caused trade imbalances to increase at even a faster clip than in the late 1990s. As US house prices and household debt rose to unprecedented levels personal savings plummeted and imports exploded, culminating in the financial crisis that began in 2007. The descriptive story is well known of which global imbalances are assumed an essential part, though little clarity exists on what exactly was its driving force.

There are basically two different ways of understanding the causal mechanism behind the global trade imbalances as to whether we read them from the 'current account' side or the 'capital account' side. For instance, from the problem from the current account side, overspending in the US is the ultimate cause of the global imbalances, while 'policy exchange rates' allegedly pursued by countries running trade surpluses get the other part of the blame. While trade imbalances emerge because of overspending in the US they persist due to the surplus countries' practice of keeping their currencies from appreciating. If only exchange rates were flexible the argument goes surplus countries' currencies would continue to appreciate against the dollar until the imbalances disappeared. Unsurprisingly, surplus countries like to blame the profligacy of the deficit countries, while the latter blame the former of circumventing market forces. But, everyone agrees that the ultimate solution calls for measures that enhance higher savings in the US and flexible exchange rates overseas.

The alternative is to look at global imbalances from the capital account side, which gives a very different understanding of the problem. A well known example is Bernanke's 'savings-glut' thesis. It basically says that the US overspending that caused the trade deficit was in turn caused by the money flowing into the US from the rest of the world through its capital account. The resulting credit expansion and lower long term interest rates were what made US households to overspend, making US household consumption the engine of world growth. Note that in this capital account view what needs to be done is not as obvious as in the previous case. Here, the overspending in the US, along with the trade deficit it gave rise to, appear as a "solution" to a deeper problem involving excessive savings in the global economy. Unless this deeper problem is addressed simply reducing global imbalances by having the US raise its savings or having the Chinese appreciate their currency would end up pushing us into a worldwide slump. In fact, the "remedy" might prove much worse than the disease.

Thus, before we can address what needs to be done, two other questions need answers first. One is what causes excessive savings in the world economy, and a second, especially pertinent one if it turns out that global excessive savings are due to structural causes that are not responsive to policy, is: What, if anything, can take the place of US overspending in offsetting the potential ill-effects of global excess savings? In relation to the first question, Bernanke's own argument emphasizes the high propensity to save in surplus countries in Asia due to demographics and cultural/historical factors. Others have more convincingly pointed at the collapse of investment after the Asian crisis as the real cause of the "savings glut." But, in one respect both explanations are similar: both underscore long term factors that are unlikely to be easily amenable to policy manipulation at least in the short run – though, admittedly not to the same degree.

Different from the first two on this score is yet a third explanation that emphasizes the recycling of reserves overseas through the US financial system. Because they are disproportionately kept in dollar denominated assets, the effect of any accretion of reserves overseas is an increase in demand for US financial assets. Thus the steady rise in foreign reserves overseas is directly tied to the ever rising inflow of funds into the US financial system

from abroad, fueling asset prices bubbles and credit expansion in its wake. “Excessive” reserve accumulation overseas in turn is often explained either by the attempt of emerging economies to self-insure against speculative currency attacks or to keep their currency from appreciating in order not to lose their export competitiveness.

There is no denying that the Asian crisis and the speculative currency attacks of the 1990s in general left an indelible mark on policy makers in emerging economies, and building a war chest in the form of large foreign currency reserves came to be seen as one of the very few things that could be done to discourage speculative attacks. In more recent years, once reserves became sizeable, the effort to prevent currency appreciation has become the more operative cause of reserve accumulation. Reliant on exports, emerging countries again felt they had little choice but to keep their currency from appreciating to make sure their economies did not slump.

Another important source of reserve accumulation overseas especially after the dotcom bubble burst has been simple money creation, what more recently came to be termed, “quantitative easing” by central banks. Though, this is not as much discussed as the previous two causes, its importance has once again risen in the current period. Prior to the crisis, it mainly worked indirectly through the monetization of US debt by foreign central banks. The most notable example of this was, of course, the massive purchases of US debt by the Bank of Japan during the period 2002 to 2003, which arguably played an important role in igniting the real estate bubble and reviving US growth in 2003. After the crisis, the Fed itself began to engage in quantitative easing on a massive scale, causing the carry trade to reverse by making the dollar the funding currency in search of yield overseas. For the recipients of this outflow overseas, such as China, the speculative capital inflow became yet another source of funds in addition to their trade surplus that had to be absorbed by their central banks to prevent their currencies from appreciating. Thus, along with the reserves that grew faster overseas, so did the demand for “safe” US assets. The reserves thereby recycled to the US returned overseas in search of yield anew and repeat the cycle on a larger scale.

Towards an Alternative Understanding

The main point of the discussion about global imbalances is that the US financial system has been functioning globally just the way the ‘banking system’ propagates bubbles in a national economy in Keynes’ discussion in the *Treatise* above. Except, in this instance the financial system not only kept transferring global “bear funds” to “global bulls” but began to create money at an increasing clip as well. In other words, though increasingly dysfunctional, what we have here is a unified system of global financial intermediation in an emergent *transnational* global economy, rather than an *international* one consisting of the sum of individual countries with their own distinct systems of financial intermediation. That is the first salient point; and the second is that in this global financial intermediation, the US financial system plays the role of the world’s banker, i.e., when it is working properly. It issues short term liabilities to the rest of the world and invests long in other countries. This clearly is no longer happening smoothly because the very system of global intermediation is unraveling.

In recent articles, Jane D’Arista and I have argued that this crisis can be understood as this very process of unraveling (D’Arista & Erturk 2010a, 2010b, Erturk 2009). We argued that a system of global financial intermediation had gradually come into existence during the era of financial liberalization after the breakdown of the Bretton Woods system. Signs of distress, however, began to accumulate by the end of the 1990s. First, the Asian crisis along

with the threat of contagion in other emerging economies and then the burst of the dotcom bubble led to a recession in the US in 2001, causing a sharp worldwide slowdown in the private capital inflow to and outflow from the US. Massive monetization of US debt by Bank of Japan and the ensuing real estate boom jumpstarted growth in 2003, giving rise to a new wave of credit expansion in the US that came to an end with the outbreak of the crisis.

The US real estate boom was perversely functional because it kept alive a dysfunctional system of global financial intermediation – though, in an unsustainable way. The credit boom was the means by which the ever expanding dollar reserves overseas could be loaned out in the US as it became harder and riskier to do so in emerging economies. It made it possible for US households to absorb an ever larger part of these global surpluses over time. But that also meant that the US became the epicentre of debt build up as well, which eventually wrecked the balance sheets of its households and the banks that lent to them.

The policy response to the crisis so far has been to substitute public spending for the falling private consumption and keep banks on life support until no longer necessary. The overall aim seems to be to revive the recycling of global imbalances to the US on more sound footing by revamping financial regulation and using US sovereign credit to vouch for its impaired private counterpart such that US private consumption can again spearhead world growth. But, the trouble is that this has already given rise to the fear of a future sovereign debt crisis in the US as it is now unfolding in Europe. Even if we think that the bleak expectations behind this fear are far-fetched and wildly overblown, the point is that the fear is real and will impair the continued use of public stimulus here and now, increasing the likelihood of a double-dip. That also means that US private consumption will not be able to lead the world economy out of its doldrums. As that sinks in it might also become clear that the real problem is not global imbalances but global excess savings. It only remains to be seen if the policy discussion then moves onto what can replace US over-consumption to revive global financial intermediation. It might at long last be recognized that the real policy challenge will be to figure out how to put to use the large dollar reserves to finance development in poor countries which will potentially benefit everyone including the rich.

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The epistemology of economic decision making

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From knowledge to ignorance in four easy steps

To engage in a business, to undertake a project, to provide long-term financing or do anything “for the long haul”, takes one on a mental journey into a land we call “the future”. Initially, when we are contemplating the short run, the terrain looks familiar. But it becomes less and less so, the farther we look ahead and the more and more uncertainty and ignorance displace certainty and probability. This marked deterioration in our ability to anticipate and understand the future as our planning horizon advances, is the chief problem today of what may be called “the epistemology of economic decision making”.

One approach to this problem is to systematically describe as many as possible of the things that might happen to us “on the road of life”, do so in terms of possible “outcomes” and the possible “impacts” of each outcome and then attempt to estimate for each one, the probabilities that it will be realized. Unfortunately the results of this effort will vary greatly in quality, depending on many factors, especially our time horizon. So it is convenient to group the outcomes in four “domains” — certainty/near certainty, risk, uncertainty and a fearsome domain of high-impact, low-frequency outcomes, one which we may call HILFO’s or “hill fows”.

In oversimplified fashion, the nature of the these four domains may be illustrated as follows —

Certainty/near certainty — There will be no hurricanes before June. [Or, I am 95 % sure that there will be no hurricanes before June.]

Risk — There is a 45% chance of a major hurricane this summer.

Uncertainty — There might be as many as five hurricanes next summer but if we are lucky, there could be none ! [No probabilities ventured].

HILFO’s — I am sure that there will be at least one hurricane next summer, but I have no idea if any of next summer’s hurricanes will be as nearly bad as Hurricane Andrew.

Unfortunately, in forecasting and decision making, most people tend to focus on first two domains as if they were the only ones which count. In these domains, we can usually enumerate each and every one of the possible outcomes and most [if not all] of the several impacts which each outcome might cause. Moreover, we can estimate the great majority of the probabilities, construct a collective probability distribution for all the outcomes and construct individual distributions for many of the sets of the impacts corresponding to particular outcomes. [Feynman 1999, Seife 2003.]

However, such cases as Chernobyl, Deepwater Horizon, Exxon Valdez, Three Mile Island and massive extinctions of dinosaurs remind us that the third and fourth domains are sometimes of great consequence for humanity. So we must give them some thought as well.

Domain of uncertainty

Beyond the domain of risk, lies the domain of uncertainty. And if our long run is long enough, it is probably the most populous. Here we can neither fully enumerate all the outcomes nor all of the impacts, we lack a full understanding of the impacts and we certainly cannot calculate all the probabilities. At best, any estimates of the latter will have wide margins of error and at worst, they will border on the indeterminate. In many cases, the best we can do is to *guess* at the rank order of outcome probabilities.

Uncertainty has many origins. We mention the ones which seem to be most common and/or important —

[1] Our imperfect knowledge of dynamic systems and their processes.

This is especially so for those systems which are not only complicated but also complex — such as economies, enterprises, markets, nuclear generating stations, space missions and large telecommunications systems. It is an even bigger problem with those which are predominantly chaotic — such as weather systems.

[2] Difficulties in interpreting the time series generated by the diverse processes which drive dynamic systems, that is, “the tracks which they make in the sands of time”. For example —

[a] It is frequently possible to characterize a particular line segment of such a time series by a mathematical function or statistical test and so define what one may call the system’s “mode of behavior” during the period. However, we often find that a particular segment looks like it came from somewhere else. That is, that it could have been generated by a process other than the one which actually originated it. This can happen even if the process is deterministic and generates a long run of data.

In fact, each of the major types of dynamic systems — the chaotic, the complex and the random — is capable of imitating several of the modal patterns exhibited by the other two. In particular, any one of the three can exhibit trends, pseudo trends or random behavior on occasion. [Auffhammer, 2005. D’Agostini et al, Apr 2006; Ormerod and Mounfield, Jan. 2000; Phillips, Jul 2004; Phillips, 2003; Ploberger and Phillips, Mar. 2003; Smith 2002, Sornette, 2003 and Jan 2003; and Zellner, 2005.]

[b] Tests for identifying a process, based on the characteristics of particular line segments, tend to be complicated and require large samples of data.

[Das 2005, Hommes 2006, Srblijinovic 2003;, Voorhees 2006.]

[c] Despite the best efforts of econometricians in academia and the “technicians” on Wall Street, there is no foolproof method for telling when a given time series is going to switch from one mode to another. In securities markets, for example, it is very hard to call more than

70% of the turning points. The NYSE in 1986-87 is a classic case of the latter. [Blackman 2003, Penn 2006, Snead 1999 and Zellner 2005.]

While prices in securities markets frequently trend, when a trend ends, most of the time it is not replaced by another trend but by an altogether different pattern of behavior. [Coles 2010.]

And once a complex system has entered a chaotic or a random mode, there is no way of telling where it going to end up. So there is no way of telling what will be the starting point of the next mode, even if we have reason to believe that this will be the resumption of the previous trend.

[d] The behavior of complex systems is further complicated by such phenomena as increasing returns to scale, path dependence [Reinhart 2003] , positive feedbacks and “branch jumps on the possibility tree”. The latter occurs, for example, when a nation of camel herders discovers a huge reservoir of crude oil under their historic pasture lands.

[e] While economists like to characterize dynamic systems with continuous, smooth, twice-differentiable curves, the world faces the possibility of three thresholds in the foreseeable future, thresholds which will most likely produce severe discontinuities — Peak oil no later than 2020, peak gas no later than 2025 and irreversible damage to our climate and weather systems no later than 2050.

[3] Trends are less trustworthy.

While most dynamical systems continue to generate trends from time to time, there has been a marked deterioration over the last several decades in the confidence we can place in these trends, both with regard to their persistence in time and as to the stability of their slopes. Two problems are especially troublesome — “ambushes”, which affect the persistence, and “structural breaks”, which affect the slopes.

[Ambushes are unpredictable events (foreseen or unforeseen) which “derail” or seriously impact a trend, of which more following. We call the problem of structural breaks, the problem of “wiggly parameters” ! Smith 2010, p. 22+.]

[4] The energy sector — is it going over a cliff ?

Although abundant and cheap energy has been the foundation of human progress since the beginning of the Industrial Revolution, today the future of the energy sector of the world’s economy is highly uncertain, more so than the future of any other economic activity. For example —

[a] Peak oil and peak gas are coming sooner than most people expect, but when and with what impact is a matter of dispute.

[b] Measures to brake Global Climate Disruption must be taken but whatever they may be, they will seriously affect the energy sector. As yet, however, there is no agreement on their content, coverage or the timing of their implementation.

[c] The traditional type of cost/benefit analysis used to account for the environmental impacts in this sector is being strongly challenged by proponents of alternate techniques. So how do we account for these impacts in the meantime? Needless to say, the lack of resolution adds to our uncertainty. [See Day 2009, for example.]

[d] More than in any other sphere of human activity, trends in the energy sector are subject to being “ambushed” by untoward events, most of them conceptually foreseeable but little more. For example — War over Israel/Palestine issues, an Israeli attack on Iran, the development of an Iranian atomic bomb, the shut down of the exit to the Persian Gulf, the shut down of the entrance to the Red Sea, the death of the ailing king of Saudi Arabia, the insoluble and growing water shortage in the Middle East and political disruption in China. [For example, see Lloyd 2010, pp. 24+, especially pp. 26 and 31.]

[5] Human imperfection.

This includes not only failings in matters of altruism, morality and rationality but many other kinds including — administrative, intellectual, physical and technical failings. These ensure that with any human venture, there will be frequent foul ups, mistakes, shortfalls and outright failures — in forecasting, execution, investing, management, strategic planning *et cetera*. So a key question in forecasting becomes, When and how will our people “goof up”, and what impact will this have on our operations? Do we have the kind of corporate “subculture” that could lead to a disaster like Deepwater Horizon?

Moreover, it is difficult to incorporate such possibilities into ones forecasting and planning, even with a good sensitivity analysis for each and every undertaking. Plans are one thing. Execution is another. [We use “sensitivity analysis” in the project evaluation sense, not the econometric sense.]

This is an special problem for energy since the expansion of capacity is usually on the basis of new projects rather than an incremental increase in output at existing facilities. The former is more difficult to execute well than the latter. Among other problems, achieving collaboration between construction and operating people is not always easy.

This latter problem in turn aggravated by the diversity of algorithms, architectures, file formats and user interfaces which has evolved over time in the information technology used in the construction business, resulting in “data silos” or “islands of information”, which in turn impede communication between contractors, operators and vendors. [McPhator 2010.]

[6] The way people make decisions.

Contrary to some versions of Neoclassical theory, economic decision makers take account of many more things than just the price and volume at which a particular good is trading at a given moment. Among other things, they develop expectations about the future and formulate strategies for dealing with it. And these expectations include perceptions with regard to the expectations and strategies of other participants in the market, whether or not any of these expectations will ever be fulfilled! Moreover, the information on which these expectations are based is almost always incomplete, sometimes contradictory and sometimes erroneous.

Under the circumstances, the farther the planning horizon advances, the more likely is it that the outcome of this circular reasoning process will be indeterminate, rather than leading to an equilibrium. And this indeterminacy cannot be conjured away by mathematical slight of hand. [Arthur 2002.] At worst, the participants can end up looking like a pack of unruly hound dogs, chasing each others' tails. By contrast, the particles of physics merely bump into each other, without ever worrying about each other's expectations ! [Stauffer, Oct. 2003.] This problem is ignored by most economists, especially Neoclassical ones.

In addition, the preferences of the participants in an economy or a market are neither complete, fixed nor transitive, contrary to theory. As demonstrated clearly by behavioral economics and psychology, preferences may not only be inconsistent but may cycle or evolve and do so in part because they are affected by the preferences of others — passively by richer neighbors and actively by those who explicitly try to change them — such as advertisers, civic leaders, political leaders and religious leaders,. [Manski, 2000, Ostrom 2000.]

To complicate matters further, people behave differently when they know the odds in a particular situation than when they don't. [Epstein 2010.]

[7] Low-frequency events.

It is usually very difficult to predict the timing of low-frequency events. For example, Will a fifty-year flood hit the newly completed county bridge two weeks from now or 100 years from now ?

[8] The limitations of economic institutions, instruments and systems.

The verdict of history is that none of these deal very well with the long run, rapid change, significant technological change or strategic considerations. The massive failure of the Neoclassical model and the US economy in the recent financial crisis are good examples. However, it would be equally instructive to sit in on a debate between “the bean counters” and the strategic planners in a pharmaceutical company, over a new product of great strategic value but one which does not meet the firm's “hurdle rate” for internal rates of return on investment.

[9] National and regional variation

It is the belief of the writer and many others that countries and regions vary too much in their characteristics, resource endowments and national objectives for one to take a “cookie cutter” approach to economics. [See Universal 2004, for example.] But by “custom designing” for each jurisdiction, we increase uncertainty about the attainment of desired outcomes.

[10] Forecasting

As a result of the above and factors intrinsic to particular classes of dynamic systems, we can no longer do a good job of forecasting the behavior of many dynamic systems beyond the short run, including that of almost any economy. The “best estimate” forecasting once so beloved by large corporations and Marxist dictatorships is no longer reliable.

In the case of complex systems, our precision today is limited to that offered by sophisticated scenario planning. [Smith 2002.] As for chaotic systems and for other systems when they are in chaotic modes, it has always been very hard. [Mitchel 2009 and Hubler 2009] And in the case of random systems and other systems in random modes, it is inherently impossible, if the most of the outcomes are truly independent events. These events have no memory, and any apparent cycles or trends are mere statistical illusions which could cost you your stake, especially if you expect the “law” of averages to bail you out of a “loosing streak”.

Domain of the HILFO's

Uncertainty is also a problem in this domain and for the same reasons, but perhaps the greatest problem is sheer ignorance!

In this domain, all of the outcomes have a high impact [often negative] yet all have a very low probability of occurring, which of course usually makes their timing impossible to predict. Moreover, some of them are beyond the human imagination [at least until they happen] . Last but not least, few of the desired probabilities can be calculated and then not with much precision.

HILFO's vary so much that it is useful to group them into three “sub-domains” — outcomes which result from the activation of a path of failure [whether foreseeable or not] , non-path outcomes which are foreseeable and non-path outcomes which are not. Each sub-domain present distinct problems for forecasters, managers, strategic planners and others of like ilk.

Path-of-failure type outcomes [POFE's]

A path of failure is highly improbable sequence of events in an engineered system which result in one or more severe, negative impacts. Moreover, the probability of any one event in the sequence may vary considerably, and there may be alternate “routes” to a given impact. Examples are the California blackout, the Chernobyl disaster and the Three Mile Island accident. [Iansiti and West 1997; Mattick 2005 ; Zorian, 1999.]

These paths are typically activated by sequences of faults in design, manufacturing and/or operations, by the impact of external factors or by some combination thereof. [Li 2006.]

POFE's typically occur in complicated and/or complex systems — such as advanced communications systems, complicated semi-conductors, large electric grids, missions to outer space and nuclear-electric generating stations. Often these systems are so full of obscure “paths of failure” that we lack the imagination, money and/or time to uncover all of them, let alone provide remedies against them. At some point, we just give up searching, shrug our shoulders and hope for the best. [Iansiti 1997; Mattick 2005; Zorian 1999.)

As noted, each path has a very low probability of occurrence. But the presence of many such systems in every human society and many such paths within each system guarantees that within our planning horizon, at least one of these paths will be activated sooner or later, often with serious consequences for human beings who live in the vicinity.

Non-path foreseeable outcomes [NP foreseeable]

These are negative outcomes in any type of system which are foreseeable but are either not foreseen or so improbable that people wonder whether it is worth while taking precautions. [Mandelbrot 2006.]

They are surprisingly common with infrastructure subject to natural disasters and in the transportation of chemicals, explosives, nuclear waste and non-solid fuels. But they also occur in industrial operations, especially those using biological and chemical processes, and in drilling for oil and natural gas. They may include one or more spectacular combustion events as part of the outcome. For example —

[a] Dalian, China.

The recent explosion of two crude-oil pipelines at Dalian, China.

[b] Deepwater Horizon.

It is well known that drilling for oil is an inherently risky business. Spills have occurred before and will occur again. So the fact that 5,000 deep-water wells had been drilled in the Gulf of Mexico without major incident, should not have lulled BP into disregarding obvious safety measures on the Deepwater Horizon platform.

[c] The terrorist attack of September 11, 2001.

Not only had the possibility of such attacks been previously discussed within the intelligence community, but there were prior warnings [ignored] that such an attack might occur. Even without warnings, such an attack was not only conceivable but more probable than the oft-discussed ignition of a nuclear bomb in a New York City subway.

[d] *Exxon-Valdez*.

An annual meeting of private-sector and public-sector emergency-management planners in Alaska discussed the possibility of an *Exxon Valdez*-type oil spill well before it happened, but they determined that it too improbable to prepare for ! [Badolato 1989.]

[e] Long-term Capital.

In 1998, a pair of interest rates moved against the firm and threatened not only its bankruptcy but the liquidity of the US financial system. This possibility was anticipated by a questioner at a previous meeting of fund holders, but he was told in no uncertain terms that such an event would never happen!

[f] Dead dinosaurs.

The asteroid strike in Yucatan, Mexico, which is blamed for exterminating most of the dinosaurs.

In many other cases, however, foreseeable outcomes are neither foreseen in planning nor detected during operations, due to carelessness, ignorance, lack of testing equipment *et cetera*. Yet they happen. For example —

[g] Creeping corrosion.

Minor errors in the compounding of metal alloys or in the fixing the carbon content of steel can lead to a slow accumulation of corrosion which ends in the spectacular blowout of a pipe or valve. Similar outcomes can result from the presence of diffuse hydrogen in a process. This sort of outcome is most common in petrochemical plants, refineries and such like. [Freit 2010.]

Non-path unforeseeable outcomes [NP unforeseeables]

These are non-path outcomes which are either truly unforeseeable, or so “off the wall” that we do not conceive of them until after they have occurred. Many of them would qualify as one of Taleb’s “black swans”. [Taleb 2007.] And some can even be positive, for some people. [For the distinction between Sornette’s “dragon kings and Taleb’s black swans”, see Sornette 2010, pp. 5-9, 21.]

Technology provides many examples of the first kind, such as the invention of the Internet and the personal computer. Although the development of a new technology typically involves the exploitation of known phenomena for perceived needs, the critical moment in its evolution is often a “breakthrough” achieved by a unique combination of known technologies. [Arthur 2009.]

History provides many examples of the second kind, such as the highly improbable sequence of events which lead to World War I, not a path in any logical sense. Such outcomes are reflected in the phrase, “Sometimes history turns on a dime” and in the rhyme about the kingdom that was lost “for want of a [horseshoe] nail !

In sum, if your occupation is that of forecaster, manager, strategic planner or such like, there is a HILFO in your future ! But when, where and of what kind, is anybody’s guess!

Some conclusions

[1] Murphy lives.

Although we will never know for sure, it is probable that each sub-domain of the HILFO’s has its own probability distribution and that these distributions are lopsided. Worse yet, it is probable that the “bad tail” is by far the longest, only we can’t tell how long ! We can even add a corollary to Murphy’s Law — Murphy’s ex-employees are everywhere !

As a result, the probability distribution of *all* possible outcomes for a given new venture may be skewed as well, even if the one for risky outcomes is symmetrical, a conjecture which has to be proven in each case. [It should never be assumed, as “Wall Streeters” have been accustomed to do, at least until 2008

In other words, there may be a statistical basis for Murphy's Law and even for the famous declaration of US president James Earl Carter, "Life is unfair".

To oversimplify a bit, "bad luck" may be more probable than "good luck". This of course shows up in the high mortality of new ventures and in the repeated failure of economists to "get the future right", among other examples.

[2] Bad epistemology.

As human beings, we all face serious limitations on what we know, when we know it and how well we understand it, as described above. Metaphorically speaking, one might well say that all of us suffer from "bad epistemology", as if it were a chronic and incurable disease ! Regardless of name, this condition affects all people, all organizations, all systems and all societies. This is not just a problem for centrally planned economies, with their high information requirements, as the Austrian School of economics would have us believe.

[3] Most people don't like risk or ambiguity.

As a result of human failings, of risk, uncertainty and HILFO's, bad things can happen to good people, regardless of the economic, political and social systems in which they live.

The crippling or closing of enterprises, the loss of assets, freedom, incomes, jobs and/or pensions for individuals and bankruptcy for both are all very real possibilities during their respective lifetimes. Indeed at times, the five-year survival rate for new ventures in the USA has been as low as 20%. [For the current situation, see *Inc.* magazine.]

Outside of selected enterprises in centralized economies, any one individual is almost certain to be laid off at least once in his or her lifetime, due to such factors as the business cycle, changes in a supervisor, competition between countries, competition between firms, corporate takeovers, personal failings, policy changes and technological changes. Moreover, the next job may pay less than the job lost and/or require new learning and/or retraining.

Even if an individual owns stock in an apparently successful company, this does not always assure justice, convey power or guarantee future income. As the victims of Enron know, appearances and formal structure — whether in society or the firm — may not lead to desired outcomes or expected behavior.

As a result of the foregoing and other factors, most individuals are risk adverse and ambiguity adverse, enough so that most of them will not attempt to start a new business nor invest heavily in assets, other than their own home.

[4] We are poorly prepared to deal with risk, uncertainty and HILFO's.

Even people who are willing to run risks are often poorly prepared to deal with them, much less to handle the domains of uncertainty and HILFO's. This includes some of the people who currently are responsible for investments in financial or non-financial assets, not withstanding 2008. In the USA and many other countries, failure is overlooked in the distribution of year-end bonuses, provided the failed person has the right friends, ethnicity, gender *et cetera*. And nowhere does the "vast herd" of well informed, rational stockholders posited by Neoclassical economics exist.

In developing countries, where the vast majority of small businesses are, most people who are in business are in it because they have few [if any] alternatives for making a living, not because of a tolerance for risk and ambiguity. This is reflected by the facts that typically in these countries, there are too many people employed in distribution and too many levels in the distribution chain.

In developed countries, what does exist often does act like a vast herd, but it would be a misnomer to call them stockholders in any meaningful sense.

In the USA, for example, the vast herd is composed of gamblers in “the Wall Street casinos” who care little about the companies to which they have entrusted their meager fortunes. When things go wrong, they sell out, rather than protest to “their” board of directors or mount a proxy war.

And even when they do care, neither they nor the boards have [or can have] any real influence over the management of these companies. To begin with, a proxy war costs too much time and money, and the members of the boards are almost always chosen by the Leninist system of cooption. This usually ensures that the board’s loyalty is to management, not the stockholders. The latter are the ones who almost always get “fleeced”, in a showdown between the twos.

[5] Equity financing is essential.

Opinion is some quarters notwithstanding, financing is an essential input to the production of goods and services, since it smoothes out the unavoidable irregularities in cash flow. Moreover, every business needs some long-term financing, regardless of who owns it or the economic system in which it is embedded. And all forms of financing merit a return of some kind, regardless of who is the supplier. [The proofs of these assertions lie beyond the scope of this paper.]

What this paper does is provide support for an additional assertion — All by itself, the epistemology of economic decision making requires that at least some of this financing to be in the form of equity investment, regardless of who owns the firm or what is the economic system in place.

That is, every enterprise needs “a cushion against adversity”, a portion of its financing which does not carry an obligation to make some kind of payment in a fixed amount on date certain. Given the limitations on our ability to forecast and execute, the firm dare not offer such guarantees to every claimant on its revenues. Somebody is going to have to take a risk!

[6] Under the circumstances presented above, optimization of the joint welfare of the firm, its stakeholders and society as a whole may be approximated by optimization of its profits [or the equivalent] *subject to four provisos* —

[a] This optimization must be done over the firm’s planning horizon, not the short run.

[b] Since the final division of profits comes at the end of each fiscal year rather than at the end of each planning period, this division must not only be done fairly and wisely, but it must be done with a proper balance between a prudent estimation of future needs and the

just claims of present stakeholders. When “the pie” is to be divided, “the future” should be always at the table.

[c] Entities which have not directly contributed inputs to the firm’s operations but which have helped to create an environment in which the firm has a chance to grow and prosper must be recognized as “stakeholders”. Their contribution must be internalized through taxes, donations to NGO’s and other means, regardless of other arguments for such payments. Otherwise the cost of producing goods or services will be understated.

[d] Widespread tax evasion and a large “underground economy” must not be tolerated. Otherwise the presence of a large group of “free riders” will seriously undermine the fairness and effectiveness of all attempts at optimization.

[Obviously the foregoing is not the same as maximizing short-term profits for the primary benefit of management, the typical situation in the American plutocracy. Nor is it the same as the Neoclassical ideal, as espoused by Milton Friedman, for example. But these are stories for another day.]

Towards a new type of capitalism

If the epistemology of economic decision making was difficult before, it has gotten worse with the passage of time, to the point where in this writer’s judgment at least, its imperatives override most of the traditional factors considered in designing an ideal economy. The latter may include — ownership of the means of production, the factors of production available, possible governance structure of firms and markets for the goods and services which can be produced.

In today’s world, flexibility, resilience and the capacity for innovation in the face of the unexpected are the most important characteristics of a successful economy and its component economic enterprises.

To achieve these abilities, an economy and its component organizations should have certain features. Following is a list of some which seem to follow from [or are compatible with] what we have said so far about the known and the unknown —

[1] The components of the economy and their units should have considerable individual autonomy, regardless of who owns them. One might say that they should be “loosely articulated. Yet they should also be well connected and enjoy a good information flow, not only between firms but with the public sector. As uncertainty increases, the diffusion of such information as we have becomes more important. And these components should forecast and plan using scenario planning, rather than “best estimate” planning.

[2] The components should include a wide variety of business enterprises and other economic institutions, including novel ones like DARPA, the Department of Energy laboratories, alliances between organizations of diverse kinds and Ostrom’s polycentric governance systems. [Ostrom 2010.]

For example, a municipal agency, several private corporations and a public authority, all resident in the same industrial park, might form a cooperative or a limited partnership, to

generate and wheel “green electricity” to the residents of that park from a distant location over the lines of the local utility. This sort of thing is, of course, to be found in very few [if any] expositions of economic theory or textbook of economics.

[DARPA is the Defense Advanced Research Projects Agency of the US Department of Defense. Among other activities it promotes long-distance, over-the-road races of robot cars, to stimulate the growth of the robotics industry!]

[3] The economy should be broadly inclusive, in terms of the distribution of economic power, the distribution of information, participation in planning processes and participation in decision making. Where conflicts between the powerful and the weak have no clear-cut solution, the benefit of the doubt should be given to the weak. Where conflicts between transparency and propriety rights to information have no clear-cut solution, the benefit of the doubt should be given to transparency. And so on.

[4] Needless to say, decentralized, competitive markets [wherever they are feasible] have an important contribution to make toward the attainment of [1] through [3]. But these markets should not be allowed to “run wild” [as was Wall Street for many years] . Nor should they become “golden calves”, to which human welfare is sacrifice in the name of economic theory.

[5] The economy should have an active public sector which functions simultaneously as a facilitator, guide, referee, stabilizer, stimulator and selective investor.

[6] The economy should operate within a framework of normative laws and regulations which, among other things, take into account the imbalances of power which may arise here and there, as when management escapes from the control of its stockholders, as so frequently happens. In particular, organizations which might “bully” their competitors, exploit other participants in the economy or control legislatures should be watched closely and contained the minute they get out of line.

[7] Some of the most important people in such an economy will be “the antenna people”. These are ones who use their knowledge, experience and diverse “conning towers” to detect which scenario is unfolding, whether or not it morphing into some other and whether or not it is about to be replaced by still another, perhaps one which is not on the current planning menu ! This is a first in world history.

[8] Other important [but usually separate] groups of people will be comprised of those who have primary responsibility for decisions about new investments, whether financial or non-financial. However, these people should not have the last word on these decisions. Nor should their selection be left “to the market”, to political leaders, to religious leaders or to the vagaries of the organizational politics. Instead society should pay special attention to the recruiting, training and supervision of the individuals assigned to these vital tasks.

[9] Needless to say, the foregoing considerations are not the only ones to take into account in designing an economy for a country. For example — We should consider the Barcelona Consensus, the implications for economics of the new discipline of complexity, John Paul II’s principal of subsidiarity and so forth.

[10] Guided by the overwhelming evidence of history, certain options can be ruled out in advance, in part because all of them are prone to abuses of power. They include — poorly regulated economies, plutocracies and highly centralized economies. [Aside from their proclivity for dictatorship, the latter are also prone to low productivity and low product quality and need more information about the future than is available.]

In brief, the epistemology of economic decision making is pushing us in the direction of a new type of capitalism.

Postscript

The economy describe above is obviously “capitalist” in a generic sense, because its features include the following — investment in assets is important, a small minority has the dominant influence on decisions about these assets and this minority has an elite status in society, although it is not the only elite nor is it an unbridled elite.

However, the other characteristics of our proposed economy make it clear that we are talking about a very different kind of capitalism than any seen or imagined to date. Examples of the latter include Adam Smith’s owner/operators, American plutocracy, Iranian theocracy, the Neoclassical ideal, private enterprise in China, private enterprise in the first stages of the Industrial Revolution, the small-business sectors of developing countries today and the state capitalism of Marxist dictatorships.

If the foregoing stands the test of time, arguments for capitalism based on decentralization, efficiency, greed, incentives, the invisible hand, Pareto optimality, the rights of private property and/or the supply chains required by high-tech industries may continue to be interesting and even significant but as a practical matter, they may well become of secondary or tertiary importance.

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Ricardian “comparative advantage” is illusory

John Duffield

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Editor’s Note: Mathematical symbols used in this paper have necessitated putting it in a different typeface.

Part 1

The doctrine of “comparative advantage” attributed to David Ricardo remains a staple in the apologetics of corporate globalization: If international trade only benefits rich and poor countries alike, its opponents are summarily indicted for plain misanthropy. In the nearly two centuries since its appearance, the Ricardian doctrine has been criticized by both Right and Left of the politico-economic spectrum, but critical consensus still awaits a definitive refutation of Comparative Advantage on its own terms. This essay presents just such a refutation.¹

Ricardo’s paradigm case² for Comparative Advantage is analytic, deriving from a model of the world economy consisting of two originally closed systems (autarkies), each producing the same two commodities (here, food and clothing) as the other. Commodities of the same description are qualitatively identical, so that advances (or declines) in productivity are manifested only quantitatively. A simple labor theory of value provides the *numéraire* for each closed system, such that the original intrasystemic exchange ratio of F (food) and C (clothing) for each system is set by the quantity of simple labor (labor undifferentiated by skill or productivity) required for the production of the respective commodities. Equivalent-value exchange is the intrasystemic rule. Intersystemic labor migration is prohibited, as is the intersystemic migration of know-how (skill); while intrasystemic labor mobility is assumed to be a completely free option, such that the producers of either commodity may switch to the production of the other commodity—thus, the “specialization” advocated by Ricardo—without encountering barriers to entry, such as training, transportation costs, monopoly, etc. Although Comparative Advantage turns upon intersystemic differences in productivity, whereby the commodity-exchange ratio (“relative cost” of F and C) differs from one system to the other, technology per se is not quantified in the Ricardian problematic, which modern texts present as a single-factor model that turns upon labor cost per unit of output. At this level of abstraction, the productivity differentials that animate Comparative Advantage inhere in the laborers themselves and thus are equivalent to skill differentials.

From the above problematic modern texts deduce that intersystemic trade is economically beneficial to all concerned (and harmful to none) if, and only if, the laborers of each system specialize in the production of that commodity for which the “relative cost,” given in the commodity-exchange ratios of the respective closed systems, is more favorable. In the example detailed below, the laborers of system I should specialize in F because F costs half as much as C in system I, given the original (closed system) commodity-exchange ratio ($1 F = 1/2 C$); while F costs three-fourths as much as C in system II, given system II’s autarky exchange ratio ($1/3 F = 1/4 C$, i.e., $1 F = 3/4 C$). The “comparative advantage” of system I is

thus in the production of F. (The “□” sign stands for “equals” or “exchanges for.” Under Ricardo’s labor theory of value “exchanges for” signifies equality of labor content only if the exchange transpires within either closed system; intersystemic exchange in accordance with Comparative Advantage proceeds by the calculation of mutual benefit described below.) By the same token the laborers of system II should specialize in the production of C, since C in their (closed) system costs four-thirds as much as F ($1 C = 4/3 F$), while in system I C costs twice as much as F ($1 C = 2 F$). System II’s comparative advantage is thus in C. It will advantage the laborers of system I, specializing in F, if they can trade for C at a rate better than the $1 F = 1/2 C$ that would obtain in their system absent specialization. Thus they will require a trading rate of $1 F > 1/2 C$ (“>” for “greater than” or “is worth more than”; “<” for “less than” or “is worth less than”). It will advantage the laborers of system II, specializing in C, if they can trade for F at a rate better than their closed-system rate of $1 C = 4/3 F$; i.e., their required trading rate will be $1 C > 4/3 F$, which is equivalent to $1 F < 3/4 C$. Collating the requirements, intersystemic trade will benefit all concerned in the trading range given by $(1/2 C < 1 F = nC < 3/4 C)$. Within this range the rate coefficient n is undetermined; let it be arbitrarily set at $1 F = 2/3 C$. Then by trading for C the laborers of system I will enjoy the equivalent of a 33 1/3% increase in the C-productivity of their F over their closed-system rate

($[2/3 C - 1/2 C] \div 1/2 C = 1/3 = 33\ 1/3\%$). To the extent that they trade for C instead of producing it, their real income increases by 33 1/3%. (Their F-productivity per se is seen as unchanged. The overall increase in real income will depend on system I’s current-income shares of F and C, a parameter that is independently assigned.) By the same token, trading for F at $1 C = 3/2 F$ ($\equiv 1 F = 2/3 C$; the symbol “ \equiv ” for “equivalent to”) brings to the laborers of system II the equivalent of a 12 1/2% increase in the F-productivity of their C over their closed-system rate ($[3/2 F - 4/3 F] \div 4/3 F = 1/8 = 12\ 1/2\%$). Their real income increases by 12 1/2% to the extent that they trade for F instead of producing it. (Their C-productivity per se is seen as unchanged; the overall increase in system II’s real income will depend on the current-income shares of F and C.)

Ricardian Problematic

Where “→” or “←” means “produces,” “xhr” means “x hours of labor,” “p F” for “p units of commodity F,” “q C” for “q units of commodity C,” while “p” and “q” designate real numbers, it is given that

system II 1 hr → 1/3 F = 1/4 C ← 1 hr

system I 1 hr → 1 F = 1/2 C ← 1 hr

		Labor productivity or skill (1hr→)		Labor cost per unit	
		F	C	F	C
system II	1/3 F	1/4 C	system II	3 hr	4 hr
system I	1 F	1/2 C	system I	1 hr	2 hr

In the above, system I enjoys an “absolute advantage” in the production of both F and C, since its laborers are trebly productive or skilled in F, and doubly productive or skilled in C, compared to the laborers of system II. The absolute advantage of system I is therefore uneven, i.e., I is *more* absolutely advantaged in F than in C. In consequence, system I’s *comparative* advantage is only in the production of F, which is relatively cheaper within I (@ 1 F = 1/2 C) than within system II (@ 1 F = 3/4 C). It follows that the absolutely disadvantaged system II enjoys a comparative advantage in the production of C, which costs 4/3 F within II as opposed to 2 F within system I. Then, with I specializing in F and II in C, trade at the rate of 1 F = 2/3 C yields mutual advantage from the ultimately unequal labor exchange,

(system I) 1 hr → 1 F = 2/3 C ← 2 2/3 hr (@ 1/4 C/hr) (system II)

Here 1 F and 2/3 C are worth the same on the international market (each serving as the *numéraire* for the other, while the *numéraire* is reflexive for the price relation), notwithstanding their unequal labor contents, i.e., unequal values. Trade is mutually advantageous because the 1 F that system II obtains for 2 2/3 hr of labor would cost it 3 hr absent specialization; hence system II reaps the equivalent of a 12 1/2% increase in its real F-productivity ([3 hr – 2 2/3 hr] ÷ 2 2/3 hr = 1/8 = 12 1/2%). Trade is likewise advantageous for system I because the 2/3 C obtained by trade for 1 hr of labor (→1F) would have cost it 4/3 hr absent specialization (i.e., 2/3 C = 4/3 hr @ 1/2 C/hr); hence system I enjoys the equivalent of a 33 1/3% increase in its real C productivity ([4/3 hr – 1 hr] ÷ 1 hr = 1/3 = 33 1/3%). The uneven development of intrasystemic productivity—in the above, system I is *more* absolutely advantaged in F than in C—is a necessary condition of Comparative Advantage. But since inequality of absolute advantage is infinitely more likely than equality even in a two-commodity model (for any one rate of absolute advantage there is an infinity of differing rates) the Ricardian problematic is assured of universal applicability.

The elegant simplicity of the above proof of the mutually beneficial character of free trade cannot be gainsaid. *A closer inspection, however, reveals that Comparative Advantage harbors self-contradictions that have hitherto passed without notice.* A brief logical exercise demonstrates the *reductio ad absurdum* most concisely.

SYMBOLS: “ \supset ” for “implies” or “if . . . then.” “ \bullet ” for “and.” “ \neq ” for “not equal to.” “ \sim ” for “not.” Again, “ \rightarrow ” or “ \leftarrow ” for “produces,” where the relata are labor hours and units of a specific commodity; “ \equiv ” for “equivalent to.” The subscripts “I,” “II” and “S” denote discrete economic systems.

TERMINOLOGY: Where “n” denotes a specified real number, “nhr X_S labor” for “n hours of labor applied to the production of commodity X in system S.” Here, $X = F$ or C , where “F” denotes food and “C” clothing. “ rc_S ” for “the intrasystemic commodity-exchange ratio, or relative cost, specified for the two products of system S.” “ $ca_{I,II}$ ” for “comparative (or relative) advantage in one product for system I and in a different product for system II, both commodities being originally produced in both systems.” By definition, $ca_{I,II} \equiv (rc_I \bullet rc_{II}) \bullet (rc_I \neq rc_{II})$. “ le_S ” for “the intrasystemic labor-exchange ratio specified for rc_S .” E.g., “1 hr F_{II} labor = 1 hr C_{II} labor” denotes le_{II} because for rc_{II} ($1/3 F = 1/4 C$), $1 \text{ hr } F_{II} \text{ labor} \rightarrow 1/3 F = 1/4 C \leftarrow 1 \text{ hr } C_{II} \text{ labor}$. “ $le_{X_{I,II}}$ ” for “the implied intersystemic labor-exchange ratio associated with commodity X by virtue of the productivity differential for X obtaining between systems I and II.” E.g., “1 hr C_{II} labor = 1/2 hr C_I labor” denotes $le_{C_{I,II}}$ because $1 \text{ hr } C_{II} \text{ labor} \rightarrow 1/4 C \leftarrow 1/2 \text{ hr } C_I \text{ labor}$; the “=” here denotes equality and not any actual exchange. Unless otherwise derived, all values are those given in the Ricardian Problematic. An aside to the logical cognoscenti: The following is an informal proof, all of whose substantive expressions signify descriptions (as in, “the square root of nine”) unless otherwise indicated by the logical context; in which case the expressions signify propositional assertion (as in, “there is the square root of nine”). For example, in the definition of “comparative advantage” symbolized above, as also in line 1 of the proof, the first “ \bullet ” connects propositional assertions while the “ \neq ” connects the same symbols, but as descriptions; the second “ \bullet ” connects the resultant compound proposition. Again as indicated by the logical context, the parenthetical expression “(1 F = 3/4 C)” serves as a description in line 4 of the proof, “ $rc_{II} = (1 F = 3/4 C)$,” which is a propositional assertion that identifies the rc of system II. Lines 12, 18, and 27 are similarly qualified. But line 11 of the proof, consisting entirely of the proposition “1 F = 3/4 C,” asserts the equality of the labor contents of 1 F and 3/4 C, per the previous two lines of proof. Line 26 is similarly qualified.³

GIVEN: (system II) 1 hr F_{II} labor \rightarrow $1/3$ F = $1/4$ C \leftarrow 1 hr C_{II} labor
 (system I) 1 hr F_I labor \rightarrow 1 F = $1/2$ C \leftarrow 1 hr C_I labor

TO PROVE: $ca_{I,II} \supset \sim ca_{I,II}$

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. $ca_{I,II} \supset (rc_I \bullet rc_{II}) \bullet (rc_I \neq rc_{II})$ 2. $ca_{I,II}$ 3. rc_{II} 4. $rc_{II} = (1 F = 3/4 C)$ 5. 1 hr F_{II} labor = 1 hr C_{II} labor 6. 1 hr C_{II} labor = $1/2$ hr C_I labor 7. 1 hr F_{II} labor = $1/3$ hr F_I labor 8. 1 hr C_{II} labor = $1/3$ hr F_I labor 9. 1 hr C_I labor = $2/3$ hr F_I labor 10. $1/2 C = 2/3 F$ 11. $1 F = 3/4 C$ 12. $rc_I = (1 F = 3/4 C)$ 13. $rc_{II} = rc_I$ 14. $\sim ca_{I,II}$ 15. $ca_{I,II} \supset \sim ca_{I,II}$ 16. $ca_{I,II}$ 17. rc_I 18. $rc_I = (1 F = 1/2 C)$ 19. 1 hr F_I labor = 1 hr C_I labor 20. 1 hr F_I labor = 3 hr F_{II} labor 21. 1 hr C_I labor = 2 hr C_{II} labor 22. 1 hr F_I labor = 2 hr C_{II} labor 23. 3 hr F_{II} labor = 2 hr C_{II} labor 24. 1 hr F_{II} labor = $2/3$ hr C_{II} labor 25. $1/3 F = 1/6 C$ 26. $1 F = 1/2 C$ 27. $rc_{II} = (1 F = 1/2 C)$ 28. $rc_I = rc_{II}$ 29. $\sim ca_{I,II}$ 30. $ca_{I,II} \supset \sim ca_{I,II}$ | <p>def. $ca_{I,II}$
 premised
 1, 2 m. ponens, simp.
 3, given
 le_{II}, given
 $le_{C_{I,II}}$, given
 $le_{F_{I,II}}$, given
 5, 7, trans.
 6, 8, trans.
 9, \rightarrow_I, \leftarrow_I, given
 10
 11, def. rc_S
 4, 12, trans.
 13, 1, m. tollens
 2-14, c.p., Q.E.D.
 premised
 16, m. ponens, simp.
 17, given
 le_I, given
 $le_{F_{I,II}}$, given
 $le_{C_{I,II}}$, given
 19, 21, trans.
 20, 22, trans.
 23
 24, \rightarrow_{II}, \leftarrow_{II}, given
 25
 26, def. rc_S
 18, 27, trans.
 28, 1, m. tollens
 16-29, c.p., Q.E.D.</p> |
|---|--|

By way of explication: The first half of the proof (lines 1-15) states that if the F-laborer of system I is three times as productive as the F-laborer of system II, and if the C-laborer of system I is twice as productive as the C-laborer of system II; but the C-laborer of system II is equally productive as the F-laborer of system II, then it follows by substitution that the F-laborer of system I is $3/2$ as productive as the C-laborer of system I. I.e., one hour of the former's labor is worth $3/2$ hr of the latter's labor. This conclusion assumes that the "learning curves" of the F- and C-laborers of system I are identical and linear, such that however the different productivities or skills are acquired, the value difference per unit of productivity change is the same for both classes of labor. At the given rate of output per hour for the two laborers, the derived commodity-exchange ratio within system I will be $1 F = 3/4$

C; exactly that given for system II. The difference in relative costs between the systems has vanished, and therewith comparative advantage.

By way of explication: The second half of the proof (lines 16-30) states that if the C-laborer of system II is one-half as productive as the C-laborer of system I, and if the F-laborer of system II is one-third as productive as the F-laborer of system I; but the F-laborer of system I is equally productive as the C-laborer of system I, then it follows by substitution that the C-laborer of system II is $3/2$ as productive as the F-laborer of system II. One hour of the former's labor is worth $3/2$ hr of the latter's labor. This conclusion assumes that the value difference per unit of productivity change is the same for both classes of labor in system II. At the given rate of output per hour for the two laborers, the derived commodity-exchange ratio within system II will be $1 F = 1/2 C$; exactly that given for system I. The difference in relative costs between the two systems has vanished, and therewith comparative advantage.

The textbook case for Comparative Advantage purports to justify *international* (intersystemic) specialization, but the above elenchus establishes that *intrasystemic* specialization is already at work in the textbook argument; and that it is only by virtue of nonrecognition of same that the modern Ricardian makes a case for Comparative Advantage. The contradictions exposed in the elenchus only make explicit the tacit contradiction at work in the received model: On the one hand, Comparative Advantage obtains only if intrasystemic productivity/skill levels are *uneven*—as in the above example, system I is *more* absolutely advantaged in the production of F than C. On the other hand, just this uneven development must be forgotten because its recognition, via quantification of intrasystemic productivity/skill levels, exactly cancels the intersystemic mutual benefit claimed by Comparative Advantage.

The proof takes the given commodity-exchange ratio (and so the relative cost ratio) of one system as template or standard, then derives the labor-exchange ratio (and so the relative cost ratio) of the other system. In this manner the intrasystemic productivity/skill level of the latter system is quantified. In the first half of the proof (lines 1-15), system II is the template; in the second half (lines 16-30), system I. The proof in effect calculates a price index—therewith a productivity measure—for the derived system, using the template system as “base year.” Of course, the “years” (system I, II) here are contemporaneous. In every case—i.e., irrespective of the commodity-exchange ratio (relative cost ratio) of the template system—the calculation will replicate for the derived system the same commodity-exchange ratio given in the template. This should come as no surprise: A (Paasche) price index asks, What would today's quantity of goods (here, quantity of use-values in one system) cost or be worth yesterday, i.e., in the “base year” (here, in terms of another system taken as template)? (This sum is then divided into “today's” expenditure to provide the “deflator.”) But “cost or be worth” here means exactly “in terms of yesterday's relative value relationships,” i.e., in terms of the template system's prices. So if “yesterday” (i.e., in the template system) 1 unit of F cost or exchanged for $3/4$ unit of C, the calculation of a price index puts “today's” (the derived system) quantity of use values into *that* relationship ($1 F = 3/4 C$). *That* relationship, moreover, will be replicated *whether or not* the derived system exhibits uneven productivity differentials vis-à-vis the template system (i.e., whether or not the given intersystemic labor-

exchange ratios are the same for all commodities). In every case a measure of the real income of the derived system is calculated.

The modern case for Comparative Advantage is therefore fatally undone by the dilemma: If the real intrasystemic productivity differential of the derived system is recognized (i.e., recognized *in* that system), the intersystemic relative cost differential upon which Comparative Advantage relies vanishes. But if the aforesaid real productivity differential is *not* recognized—e.g., if lines 9-11 of the proof are peremptorily denied in order to claim that $1/2 C$ is the real, not merely the nominal, worth of 1 hr of F-labor (a “logical” edition of the *price control* that economics associates with monopoly or governmental fiat)—then the mutual benefit upon which Comparative Advantage relies vanishes. I.e., one class of labor would be deprived of recompense commensurate with its labor: It would be disadvantaged. Either alternative undoes the doctrine of Comparative Advantage.

The above reveals that the mutual advantage purportedly divided up between systems I and II in fact consists in the uncompensated real income of the more skilled laborers of whichever system is subject to a productivity calculation in terms of the other system given as a template. The neoclassical case for Comparative Advantage is thereby exposed as a shell game in which labor’s unacknowledged wherewithal is flashed to onlookers in order to entice their assent to a free trade regime. When system II is taken as template, the more advanced laborers (the F-laborers) of system I are disadvantaged if the relative cost ratio in system I is the $1 F = 1/2 C$ maintained by the modern Ricardian (as in lines 1-15 of the above proof). But if the real (derived) productivity level of I *is* recognized intrasystemically (thus, $1 F = 3/4 C$), the *advantage* that would be required for I’s specialization in F ($1 F > 3/4 C$) would be exactly contrary to the *advantage* required for II’s specialization in C ($1 C > 4/3 F, \equiv 1 F < 3/4 C$) at its *given* productivity level (where $1 C = 4/3 F$). When system I is the template, the more advanced (or less unproductive by comparison with system I) laborers of system II (the C-laborers) are disadvantaged if the relative cost ratio in system II is the $1 F = 3/4 C$ maintained by the modern Ricardian (as in lines 16-30 of the above proof). But if the real (derived) productivity level of II *is* recognized intrasystemically (thus, $1 C = 2 F$), the *advantage* that would be required for II’s specialization in C ($1 C > 2 F$) would be exactly contrary to the *advantage* required for I’s specialization in F ($1 F > 1/2 C, \equiv 1 C < 2 F$) at its *given* productivity level (where $1 F = 1/2 C$). Instead of mutual advantage, a zero-sum game is therefore exhibited. The real bearings of Ricardian free trade therefore resonate ironically with the intraclass antipathy historically associated with the “labor aristocracy.”

The above *elenchus contra* Ricardian Comparative Advantage does not require reliance upon a labor theory of value. Modern price indices are relative-value calculations in terms of the regnant fiat currency as *numéraire*. This methodology, and therewith the relevant lines of the above proof *contra* Comparative Advantage, may be replicated for the Ricardian two-commodity problematic if the commodities of one system alternate as *numéraire* for each other while the other system serves as template or “base year” for the commodity-exchange ratio derived for the first system; which ratio turns out to equal that given for the second or template system, *pace* the textbook model. Reversing this procedure derives the commodity-exchange ratio of the erstwhile template system, again *pace* the

textbook model. If system I is first regarded as producing only use-values of C that are priced in terms of F as *numéraire*, while system II serves as template, the equivalent of the Paasche price index, $P_I Q_I \div P_{II} Q_I$, may be calculated. P_I is the F-price of 1 C in system I, given as 2 F. P_{II} is the F-price of 1 C in system II, given as $4/3$ F. Q_I is the quantity of C produced per hour in system I, given as $1/2$ C. The calculation then is $(2 \text{ F/C} \cdot 1/2 \text{ C/hr}) \div (4/3 \text{ F/C} \cdot 1/2 \text{ C/hr}) = 1 \text{ F/hr} \div 2/3 \text{ F/hr} = 3/2$, a pure number, the equivalent of the Paasche “deflator.” The real income per hour of the C-laborer of system I, who produces $1/2$ C/hr, is therefore (nominal income/hr \div deflator) = $1 \text{ F/hr} \div 3/2 = 2/3 \text{ F/hr}$. But $(1/2 \text{ C/hr} = 2/3 \text{ F/hr}) \equiv (1 \text{ C} = 4/3 \text{ F}) \equiv (1 \text{ F} = 3/4 \text{ C})$, thus affirming lines 11-14 of the proof, therewith the *reductio ad absurdum* (line 15). The same result is obtained if system I is now regarded as producing only use-values of F that are priced in C as *numéraire*, with system II again serving as template. In this case P_I is the C-price of 1 F in system I, given as $1/2$ C. P_{II} is the C-price of 1 F in system II, given as $3/4$ C. Q_I is the quantity of F produced per hour in system I, given as 1 F. The calculation reveals the equivalent “deflator” as $2/3$: $(1/2 \text{ C/F} \cdot 1 \text{ F/hr}) \div (3/4 \text{ C/F} \cdot 1 \text{ F/hr}) = 1/2 \text{ C/hr} \div 3/4 \text{ C/hr} = 2/3$. The real income per hour of the F-laborer of system I, who produces 1 F/hr, is therefore (nominal income/hr \div deflator) = $1/2 \text{ C/hr} \div 2/3 = 3/4 \text{ C/hr}$. Then $(1 \text{ F/hr} = 3/4 \text{ C/hr}) \equiv (1 \text{ F} = 3/4 \text{ C})$, again affirming lines 11-14 of the proof and the *reductio* of line 15.

Reversing this procedure takes system I as the template or “base year” and replicates lines 26-29, 30, of the proof by alternately treating F and C as *numéraire* for system II. Thus $P_{II} Q_{II} \div P_I Q_{II}$ is calculated. First using F as *numéraire*, i.e., regarding system II as producing only use-values of C that are priced in terms of F, we are given that $P_{II} = 4/3 \text{ F/C}$, $P_I = 2 \text{ F/C}$, and Q_{II} is $1/4 \text{ C/hr}$. The equivalent “deflator” is $2/3$: $(4/3 \text{ F/C} \cdot 1/4 \text{ C/hr}) \div (2 \text{ F/C} \cdot 1/4 \text{ C/hr}) = 1/3 \text{ F/hr} \div 1/2 \text{ F/hr} = 2/3$. The real income per hour of the C-laborer of system II, who produces $1/4 \text{ C/hr}$, is therefore (nominal income/hr \div deflator) = $1/3 \text{ F/hr} \div 2/3 = 1/2 \text{ F/hr}$. Thus $(1/4 \text{ C/hr} = 1/2 \text{ F/hr}) \equiv (1/4 \text{ C} = 1/2 \text{ F}) \equiv (1 \text{ C} = 2 \text{ F}) \equiv (1 \text{ F} = 1/2 \text{ C})$, affirming lines 26-29 of the proof, therewith the *reductio ad absurdum* of line 30. Then C is used as *numéraire* for a system II producing only use-values of F, with system I again serving as template. Q_{II} is now $1/3 \text{ F/hr}$, P_{II} is $3/4 \text{ C/F}$ and P_I is $1/2 \text{ C/F}$. Then $P_{II} Q_{II} \div P_I Q_{II}$ is $(3/4 \text{ C/F} \cdot 1/3 \text{ F/hr}) \div (1/2 \text{ C/F} \cdot 1/3 \text{ F/hr}) = 1/4 \text{ C/hr} \div 1/6 \text{ C/hr} = 3/2$, the equivalent “deflator.” The real income per hour of the F-laborer of system II, who produces $1/3 \text{ F/hr}$, is therefore (nominal income/hr \div deflator) = $1/4 \text{ C/hr} \div 3/2 = 1/6 \text{ C/hr}$. But $(1/3 \text{ F/hr} = 1/6 \text{ C/hr}) \equiv (1 \text{ F} = 1/2 \text{ C})$, again affirming lines 26-29, 30, of the proof.

The consilience of measurements—price indices (above) and the intrasystemic productivity differentials derived in the elenchus (lines 9 and 24)—owes to the implicit identity of the measures brought to bear in the Ricardian Problematic. The proponents of Comparative Advantage are unaware that in juxtaposing two erstwhile closed systems, containing only identical commodities and different labor times, they are positing a measure for each system in the other. (The isolated autochthon does not learn that his kind is different until visited by the missionary.) A price index measures the relative value of money, while in the above the commodities of each system alternate as money. A productivity index measures the relative value of commodity-specific labor, i.e., the physical output per labor hour expended in production. In stating the “absolute advantage(s)” of either system, the closed

systems are opened to intersystemic comparison of commodity-specific labor; but since the same labors also actually exchange with one another within each system, the measurement of the former determines the latter. I.e., an intrasystemic productivity index of commodity-*differentiated* (F and C) labor is derived. This last inference is methodologically equivalent to the employment of alternate commodities as *numéraire* in deriving the “deflators” of the price-index calculation. And when productivity differentials are equivalent to skill differentials—as in the single-factor (labor) model presented in modern texts—a skilled-unskilled labor-exchange differential is likewise derived for each system in alternation. The price indices therefore express as the result of an apparently external comparison what the productivity indices express as the common content (human labor) of two systems at different levels of development. When the derived intrasystemic skill differentials are taken into account, the “relative costs” (“given” commodity-exchange ratios) upon which Comparative Advantage relies are revealed as but nominal expressions of relative value.

Part 2

At this juncture it is appropriate to remark a profound distinction between the modern textbook presentation of Comparative Advantage and Ricardo’s own sketch of same in chapter 7 of *The Principles of Political Economy and Taxation*: The textbook version is a single-factor (labor) model, so that productivity differentials are equivalent to skill differentials, inviting the elenchus spelled out above. But Ricardo’s presentation is squarely if narrowly premised upon the capital-labor relation: International specialization concomitant to free trade cheapens the necessaries of life and therefore augments the rate of profit, assuming that the real wage (*qua* socially necessary minimum quantity of means of subsistence) is constant.⁴ Ricardo’s reliance upon the capital-labor relation, moreover, renders plausible what is incredible in the neoclassical globalizer’s version of Comparative Advantage, *viz.*, the assumption that labor is equally unskilled in both systems subject to free trade (i.e., the assumption that intrasystemic labor mobility is perfectly free in both). For it is precisely the capital-labor relation that historically develops profitability by virtue of the systematic divorce between the skill of the laborer and the productivity of capital; such that the atomization of the labor process denudes the laborer of skill to the precise extent that skill is monopolized by the functioning capitalist (today, the corporation). Thus the Taylor System takes the palm as capital’s paradigm for the division of labor.⁵

For Ricardo, therefore, productivity differentials are *not* equivalent to skilled-unskilled labor differentials. Attribution of the former to capital, however, only amplifies the failure of the mutual advantage that is the main purchase of Comparative Advantage in its modern rendition. (In Ricardo’s presentation the assumption that real wages are static *prima facie* impeaches the halcyon case for free trade.) Key here is Ricardo’s explicit recognition that his case for free trade rests upon the suspension of equivalent-value exchange in intersystemic trade.⁶ Thus are reconstituted the exchange premia (trade-equivalent productivity increases) upon which the modern version of Comparative Advantage turns, save that in Ricardo these premia are from the start appropriated by capital via cheaper wage goods, augmenting profit. Although Ricardo does not specify precise values for the capital-labor relation premised in the two countries adduced in his discussion, such values may be

interpolated by relying upon his doctrine of static real wages. In terms of the textbook values elaborated above (p. 3),

$$\text{(system I)} \quad 1 \text{ hr } F_I \text{ labor} \rightarrow 1 \text{ F} = 2/3 \text{ C} \leftarrow 2 \frac{2}{3} \text{ hr } C_{II} \text{ labor } (@ \frac{1}{4} \text{ C/hr}) \quad \text{(system II)}$$

let the F-laborers of system I continue to consume at the real rate of 1 F/hr (= 1/2 C/hr), while the C-laborers of II continue at 1/4 C/hr (= 1/3 F/hr). The 33 1/3% trade-equivalent increase in real C-productivity achieved by system I—since the 2/3 C obtained from one hour of labor (= 1 F) would otherwise cost it 4/3 hr (i.e., 2/3 C = 4/3 hr @ 1/2 C/hr)—then accrues to the capitalists of system I; while the 12 1/2% trade-equivalent increase in real F-productivity achieved by system II—since the 1 F obtained for 2 2/3 hr of labor would otherwise cost it 3 hr (i.e., 1 F = 3 hr @ 1/3 F/hr)—accrues to the capitalists of system II. Thus mutual advantage dissipates in unilateral class advantage; while profits in the more productive country (I) are augmented more than those of the less productive (II).

The appropriation of the exchange premia by the capitalists may be spelled out in terms of the process designated by Ricardo (cheaper wage goods, augmenting profit). For system I, the price of C in terms of F drops 25% (from 2 F to 3/2 F); in consequence, the wage value of one hour of labor expended for the consumption of C drops 25% to 3/4 hr. Per 1 hr F_I labor \rightarrow 1 F = 2/3 C (the trading rate), this 3/4 hr purchases 1/2 C (i.e., 3/4 hr · 2/3 C/hr = 1/2 C), thus maintaining the laborer's real wage at the 1/2 C/hr that obtained pre-trade. With respect to the wage segment trading for C, the capitalist of system I reaps a surplus profit (exchange premium) of 33 1/3% on the value of the wage (3/4 hr) paid for the 1 hr (= 1 F) of output obtained ([1 hr – 3/4 hr] ÷ 3/4 hr = 1/3 = 33 1/3%). The overall decrease in the value of I's wages depends on the product mix of C and F in the laborer's consumption. (The equivalent productivity of F proper, hence the wage value of labor expended for the consumption of F, is unaffected by the exchange-rate premium, and the F_I laborer's real wage in terms of F remains 1 F/hr.) If, say, the value is evenly divided, the overall decrease in the value of the wage in I is 1/8 or 12 1/2%. For system II, the price of F in terms of C drops 1/9 or 11.1% (from 3/4 C to 2/3 C : [3/4 C – 2/3 C] ÷ 3/4 C = 1/9); in consequence, the wage value of one hour of labor expended for the consumption of F drops 1/9 to 8/9 hr. Per 1 hr C_{II} labor \rightarrow 1/4 C = 3/8 F (\equiv 4 hr C_{II} labor \rightarrow 1 C = 3/2 F, the trading rate), this 8/9 hr purchases 1/3 F (i.e., 8/9 hr · 3/8 F/hr = 1/3 F), thus maintaining the C_{II} laborer's real wage at the 1/3 F/hr that obtained pre-trade. With respect to the wage segment trading for F, the capitalist of system II reaps a surplus profit (exchange premium) of 12 1/2% on the value of the wage (8/9 hr) paid for the 1 hr of output obtained ([1 hr – 8/9 hr] ÷ 8/9 hr = 1/8 = 12 1/2%). The overall decrease in the value of II's wages depends on the product mix of C and F in the laborer's consumption. (The equivalent productivity of C proper, hence the wage value of labor expended for the consumption of C, is unaffected by the exchange rate premium, and the C_{II} laborer's real wage in terms of C remains 1/4 C/hr.) If, say, the value is evenly divided, the overall decrease in the value of the wage in II is 1/18 or 5.6%.

The interpretation here offered evokes comparison with Ricardo's doctrine of differential rent, wherein the landlord monopolizes the fruits of the differential productivity of agricultural land, regarded as intrinsic. In the doctrine of international trade, the intersystemic

productivity differential is maintained by the prohibition of capital and labor migration, i.e., by monopoly. Comparative Advantage in the hands of its honorary founder is then tantamount to a policy prescription for the international maximization of the fruits of monopoly; obliquely confirmed in a counterfactual in which Ricardo singles out the capitalists of the absolutely disadvantaged economy as beneficiaries of a hypothetical removal of the prohibition against international factor migration.⁷ But the exchange premia appropriated by capital in the trade case do not rely upon actual present production at the more inefficient level of productivity in either system (analogous to the least productive lands of the rent doctrine, where present production must occur)—i.e., the added real income accruing to the masters of international commerce is deduced as any real income is deduced, viz., by a virtual contrast with what the quantity of use-values in point would “otherwise” cost. Virtual advantage then becomes actual in the surplus profits reaped via Ricardo’s juxtaposition of cheaper wage goods and a static real wage, as spelled out above.

Part 3

The unconvinced partisan of the modern textbook presentation of Comparative Advantage may protest that the elenchus above offered cannot be cogent since it posits an infinity of derived measures of intrasystemic productivity/skill differentials, each a function of the productivity/skill differential of the *other* system given as template or reference frame. Surely there must be but one true productivity/skill differential, accessible to direct observation, for any given economic system! --The naiveté of Cartesian univocity is historically compelling⁸, but demanding a direct and univocal reading of a system’s productivity/skill/real income is as futile as demanding a universal “now” in protest against Einstein’s theory of the relativity of simultaneity, which declares that the question, Are these two events simultaneous or not? has no univocal answer; but depends entirely upon the choice of the reference frame in whose terms the question of simultaneity is resolved. Economic time, no less than physical time, is demonstrably subject to expansion or contraction, as when the same value in exchange is manifested in greater or fewer labor hours, depending on the skill differential of the laborers party to the exchange. In the economic problematic of productivity the only value relationships directly observed are *nominal*; their *real* bearings in every case require that a second system—whether in the shape of the “same” system at an earlier time or an altogether different system—be adduced, as in the fabled “index-number problem” of national income accounting.⁹ The Ricardian therefore has no basis for assigning his “given” skilled-unskilled labor differentials *in real terms* for either of his systems in isolation, i.e., *qua* closed systems. If it is protested that observed (the Ricardian’s “given”) labor hours cannot be merely nominal, it need only be recalled that Ricardo’s labor theory of value casts labor hours as *numéraire* (money) and that as such the labor hour is as susceptible to the disparity between nominal and real value as is any other *numéraire*, whether currency or gold. This complication is mutely conceded in the intersystemic skilled (system I)—unskilled (system II) labor disparity that is the upshot of Comparative Advantage itself, where (nominal) 1 hr F_I labor exchanges for (nominal) 2 2/3 hr of C_{II} labor; while the mutual benefits alleged therefrom require omission of any consideration of the real intrasystemic skill differentials demonstrably at work (above, pp. 3, 6).

The last-named complication poses a difficulty unique to labor theories of value generically: Any labor theory of value claims that labor time is the criterion of value in exchange, but as soon as skilled labor is recognized the theory must concede that some labor hours are more valuable than others. The labor-hour *numéraire* is thus exposed as an ambiguous oracle, requiring further interpretation. John Stuart Mill encountered an analogous difficulty in the field of moral philosophy when he first declared Pleasure to be the criterion of value but went on to claim that no amount of pig-pleasure could equal the pleasure of a Socrates; a qualification inaccessible to the labor theory of value, where the correlates of pig-pleasure (unskilled labor) and Socratic pleasure (skilled labor) exchange on an equivalent-value footing. (Modern utility theory is untroubled by either scruple.¹⁰) The skilled-unskilled labor differential evidently recurs to the issue of productivity, since the producer of any given use-value becomes more productive as his skill improves. Within the confines of any closed system, however, such a productivity/skill differential can be determined only with reference to an *identical* use-value, as when, e.g., skilled laborer A produces twice as much use-value U per hour as unskilled laborer B. But identical use-values are not the typical relata of contemporaneous commodity exchange, which equates values of disparate use-values; as is also typically the case in the commodity exchange that mediates skilled-unskilled labor exchange. It is precisely this problematic that the textbook model's configuration poses intrasystemically in the implied exchange ratios that obtain between the F- and C-laborers *within* either of the two systems. In order to determine whether or not the F-laborers of system I are equally skilled as the C-laborers of the same system, recourse must be had to a second system, whereby alone productivity indices may be constructed for each class of laborer; i.e., recourse must be had to the "absolute advantage" of each class of labor, determined by comparison with the second system taken as template or reference frame. Thus (above, p. 5) it was observed that the F-laborers of system I were trebly productive as the F-laborers of II; while I's C-laborers were only doubly productive as II's C-laborers. The next inference—which the Ricardian does not draw—relies upon the skilled-unskilled labor differential of system II, which the Ricardian again (as with system I) presumes to be nonexistent. (I.e., it is presumed that the F- and C-laborers of system II are equally skilled.) Only then can system I's skilled-unskilled labor differential, and therewith its real commodity-exchange ratio, be derived, as in lines 5-9, 10-12 of the elenchus. Any labor theory of value must regard the ratios *derived* for system I as definitive, hence as "observables" in the latter-day scientific acceptance, a theory-specific concept.¹¹

The above procedure—deriving the real skilled-unskilled labor-exchange differential for one system by relying upon the corresponding ratios of another system adduced as template or reference frame—seems to invite both arbitrariness (in the choice of reference frame) and an infinite regress (in the labor differential assigned to the template or reference system). But the choice of reference frame is no more arbitrary in economics than in physics, where the appropriate reference frame is a function of the boundary conditions of the problematic at issue. In the problematic of Comparative Advantage, the boundaries are national and the appeal is to the politics of the economic systems under consideration: The policy of free trade and international specialization should be adopted because it is in the best interests of each nation. The argumentation proceeds under an unexamined premise comprising the external comparison of static economic systems, which procedure has above

been shown to be either logically absurd (the textbook model) or class-biased (the Ricardian original). Mutual advantage is exposed as illusory in either alternative. The proper perspective, however, already implicit in the appeal to polity, is reflexive; i.e., the proper template or reference frame for each system is not that arbitrarily imposed by an external system but rather that afforded by each system's own evolution. Skilled-unskilled labor differentials would then be calculated for each system with respect to its own development, such that past editions of each system would provide the template; "chaining" these together would provide a "time series" (statistical sequence), as in the methodology of the national income accountant.¹² Nor is this choice of perspective merely discursive: Under the working hypothesis that skill is positively correlated to scientific advancement, (1) the more valuable (because more skilled) laborer of the derived system should presuppose a greater scientific basis than his less valuable contemporaries; and (2) the reflexive template sequence should exhibit a closer correlation with its own rate of scientific advance than with that of any independent, externally imposed system. Thereby falsifiability is doubly affirmed for the choice of reference frame and concomitant observables. (Again: The calculation of the observables assumes that productivity inheres in the laborer, hence is equivalent to skill, as in the textbook model of Comparative Advantage; and that the differential economic valuation of the "learning curves" of the different classes of laborer is uniform in the derived system, as stipulated above in the explication of the elenchus.)

The specter of question-begging via an infinite regress in the choice of reference frames is eliminated if an evolutionary perspective is frankly postulated, such that the point of departure for labor differentiation ultimately traces to an ur-laborer equally unskilled in all of his primitive tasks: In The Beginning, we are all generalists. This postulate is falsifiable with respect to the history, and pre-history, of the division of labor. If it is then hypothesized that this jack-of-all-trades (the ur-laborer) develops his skills unevenly—again, falsifiable—the procedure pursued in the above elenchus logically follows (as in line 5 of the proof, for deriving system I's figures; line 19, for system II's); while the "time's arrow" of the evolutionary perspective determines the sequential alternation of derived and reference systems. In this manner an economic uniformitarianism would be hypothesized, and template systems *without* labor parity (of skill levels) could be developed without question-begging. It is pertinent to note that the observables developed by the above route, although attaining to scientific status (falsifiability), reckon as only *explananda* in the economic problematic under consideration; the *explanans*, i.e., *how* skilled labor becomes more *valuable* than unskilled *and yet* exhibits equivalent-value exchange with the latter under the aegis of a labor theory of value, is another investigation altogether.

A further complication, unbroached in Ricardo's problematic, resides in the circumstance that labor evolves not only with respect to grade (skill) but use-value, such that entirely new use-values are produced while old use-values fall into disuse. I.e., the jack-of-all-trades develops a qualitatively new trade; commodity-exchange ratios come and go. Is the new trade skilled or unskilled with respect to extant trades? Here it may be hypothesized that in every case the new trade bears a generic identity with some previous trade in the same economic system, since all tasks are ultimately a function of human need, itself an index of cultural evolution. An index of skill may thereby be formulated. E.g., a Board Certified M.D. specializing in oncology is presumably capable of producing use-values (such as

formulating chemotherapy) beyond the ken of the General Practitioner. But both classes of laborers are generic healers, or life-prolongers, and a generic skill/productivity index may be derived under the claim that the specialist can perform Galen's art more efficiently than the nonspecialist. I.e., the resort is to intensive magnitude, such that the specialist is regarded as being a healer to a greater degree than the nonspecialist. Economic valuation of the different laborers would then recur to the assessment of the "learning curves" whence the skill differential derived. Thus the evolution of skill may depict a vast "branching bush" à la Charles Darwin.

Once the skilled-unskilled labor differentials for each system, therewith the real commodity-exchange ratios, are put in their proper perspectives, the issue of free trade then devolves upon the polity of each country. Ever since Ricardo, the route traveled has been a profit-oriented regime frankly premised upon the arrested development of externally colligated systems.¹³ While Ricardo openly proclaimed the class orientation of his policy, modern proponents of Comparative Advantage assure the universal beneficence of free trade by enshrining a textbook model of a noncapitalist (single-factor) economy that nowhere exists and, as demonstrated above, is logically unsatisfactory. Thus progress in academic economics. But demonstration of the failure of Comparative Advantage as advertised is no brief for autarky. Beyond the imperatives of class and nation there remain to be explored possibilities of global cooperation unimagined by Ricardo and unimaginable to his modern successors. Such possibilities, however, are themselves a question of political evolution. Specifically, until the lesser agents in capital's economic drama learn to speak to each other, and for themselves, in a manner that broadcasts civic virtue, the regnant economic policy of the twenty-first century will be but a jaded epilogue to the narrative of the twentieth, whose principal theme was the abject failure of all attempts to break with the ways of capital. As in the biblical story of Babel, the tyranny of the sacred is premised upon the incapacities of the profane. And as in the tale of the contradiction between polity and productivity related by the ancient democrat Protagoras, the cooperation of the many must supersede the calculation of the few if society is to evolve into a life worth more than just earning a living:

having no art of government, they evil intreated one another . . . Zeus feared that the entire race would be exterminated, and so he sent Hermes to them, bearing reverence [*aidos*, respect] and justice [*dike*, human law] to be the ordering principles of cities and the bonds of friendship and conciliation. Hermes asked Zeus how he should impart justice and reverence among men—Should he distribute them as the arts are distributed; that is to say, to a favored few only, one skilled individual having enough of medicine or of any other art for many unskilled ones? 'Shall this be the manner . . . or shall I give them to all?' 'To all,' said Zeus; '. . . for cities cannot exist, if a few only share in the virtues, as in the arts.'¹⁴

Endnotes

¹ "In the theory of international trade Ricardo stated explicitly for the first time the law of comparative advantage . . . The law of comparative advantage survives as an important part of the theory of international trade today." Graham Bannock, R.E. Baxter and Evan Davis, *The Penguin Dictionary of Economics*, 7th ed. (London: Penguin, 2003), "Ricardo, David," pp. 336-7. "Ricardo

may not have been the first economist to advance the concept of comparative advantage. Another Englishman, Colonel Robert Torrens, included a brief, very rough formulation of the law of comparative advantage in one paragraph in ‘An Essay on the External Corn Trade’ (1815), but Ricardo’s treatment of the topic is more explicit and influential . . . historians of economic thought consider it more likely that Ricardo arrived at his conclusions independently.” Morgan Rose, “A Brief History of the Concept of Comparative Advantage,” <http://www.econlib.org/library/Columns/Teachers/comparative.html>. “There is no body of economic theory that has achieved greater professional acceptance than David Ricardo’s theory of comparative advantage and the modern emendations of Ricardo’s ‘law.’ Criticisms of comparative advantage and its extensions from a theoretical perspective have not resulted in any substantial weakening of the overall strength of this body of theory nor of its corollary, a free trade regime.” James M. Cypher and James L. Dietz, “Static and Dynamic Comparative Advantage,” <http://www.highbeam.com/doc/1G1-20970221.html>. (Article orig. in *Journal of Economic Issues*, June 1, 1998.) “At the deepest level, opposition to comparative advantage—like opposition to the theory of evolution—reflects the aversion of many intellectuals to an essentially mathematical way of understanding the world. Both comparative advantage and natural selection are ideas grounded, at base, in mathematical models . . . ” Paul Krugman, “Ricardo’s Difficult Idea,” <http://web.mit.edu/krugman/www/ricardo.htm>. “Nobel laureate Paul Samuelson (1969) was once challenged by the mathematician Stanislaw Ulam to ‘name me one proposition in all of the social sciences which is both true and non-trivial.’ It was several years later than [*sic*] he thought of the correct response: comparative advantage. ‘That it is logically true need not be argued before a mathematician; that it is not trivial is attested by the thousands of important and intelligent men who have never been able to grasp the doctrine for themselves or to believe it after it was explained to them.’” Paul A. Samuelson, http://www.wto.org/english/res_e/reser_e/cadv_e.htm (citing P.A. Samuelson, “The Way of an Economist,” in P.A. Samuelson, ed., *International Economic Relations: Proceedings of the Third Congress of the International Economic Association*, London: Macmillan, 1969, pp. 1-11).

² Ricardo’s doctrine is sketched in ch. 7 of his *The Principles of Political Economy and Taxation*, 1817; rev. 3d ed., 1821. He died in 1823. Ricardo’s doctrine is specifically addressed in section II of this essay. The principal problematic utilized in this essay is the modern textbook case for Comparative Advantage as spelled out by Paul A. Samuelson and William D. Nordhaus, *Economics*, 14th ed. (New York: McGraw-Hill, 1992), pp. 663-5. *The Penguin Dictionary of Economics* (Bannock et al., op. cit., pp. 336-7) offers a modern explication that utilizes Ricardo’s original commodities (wine and clothing) and productivity figures, although the latter are couched in terms of man-hours instead of Ricardo’s man-years.

³ The proof’s treatment of description and propositional assertion is an abbreviation of the procedure laid out in J.M. Bochenski, *A Precipis of Mathematical Logic*, O. Bird, tr. (Dordrecht: D. Reidel, 1959), pp. 53-4. Another authority marks “informal proof” as “passing from the neat, precise domain of formal logic, where there is a rule for everything, to the more complicated, less precise world of ordinary mathematics and the empirical sciences”: “In an informal proof enough of the argument is stated to permit anyone conversant with the subject to follow the line of thought with a relatively high degree of clarity and ease. It is presumably intuitively transparent how to fill in the logical lacunae of the proof. In many respects the standards of intelligibility for informal proofs are similar to those for informal conversation . . . Analogously, in giving an informal proof, we try to cover the essential, unfamiliar, unobvious steps and omit the trivial and routine inferences.” Patrick Suppes, *Introduction to Logic* (Princeton, N.J.: D. Van Nostrand, 1957), p. 122.

⁴ “It has been my endeavour to show throughout this work that the rate of profits can never be increased but by a fall in wages, and that there can be no permanent fall of wages but in consequence of a fall of the necessaries on which wages are expended. If, therefore, by the extension of foreign trade, or by improvements in machinery, the food and necessaries of the labourer can be brought to market, at a reduced price, profits will rise . . . The natural price of labour is that price which is necessary to enable the labourers, one with another, to subsist and to perpetuate their race, without either increase or diminution . . . The power of the labourer to support himself, and the family which may necessary to keep up the number of labourers, does not depend on the quantity of money which he may receive for wages, but on the quantity of food, necessaries, and conveniences become essential to him from habit which that money will purchase.” David Ricardo, *The Principles of Political Economy and Taxation*, rev. 3d ed. (N.Y.: Dover, 2004), pp. 80, 52. Orig. pub. 1821.

⁵ “. . . increases in employee productivity are *not* matched by increases in employees’ real wages and benefits, with the fruits of increased productivity diverted elsewhere—to shareholders, senior managers, and CEOs [*sic*]. The link between higher productivity and higher real wages and benefits breaks down when technology is used in ways that deskill [*sic*] most workers, undermine their security in the workplace, and leave them vulnerable to employers possessed of overwhelming power . . . the New Taylorism [the “vision of the corporation as machine, renewing the values of the machine age for the new century”] . . . should . . . be opposed on the grounds that it subjects employees to a degree of monitoring and control that, outside the workplace, would be considered demeaning and a gross violation of privacy.” Simon Head, *The New Ruthless Economy, Work and Power in the Digital Age* (Oxford: Oxford Univ. Press, 2003), pp. 188, 169, 185. Orig. emph. “Capital is that part of the wealth of a country which is employed in production and consists of food, clothing, tools, raw materials, machinery, etc., necessary to give effect to labour.” Ricardo, op. cit., p. 53.

⁶ “The quantity of wine which she [Portugal] shall give in exchange for the cloth of England is not determined by the respective quantities of labour devoted to the production of each, as it would be if both commodities were manufactured in England, or both in Portugal.” Ricardo, op. cit., p. 82.

⁷ In Ricardo’s example, Portugal has an absolute advantage in the production of both wine and cloth, and a relative (comparative) advantage in wine: “. . . if capital freely flowed towards those countries where it could be most profitably employed It would undoubtedly be advantageous to the capitalists of England, and to the consumers in both countries, that under such circumstances the wine and the cloth should both be made in Portugal” Ricardo, op. cit., p. 83. Ricardo’s affirmation of the counterfactual’s benefit to the consumers in Portugal but not to the capitalists invites a charge of inconsistency, since the consumers would pay the same for the two commodities as the capitalists. But Ricardo’s argumentation is frequently elliptical, and he probably was counting upon the cheapness of English manufactures generally to offset the increase in the price of cloth that Portuguese consumers (and capitalists) would face if the prohibition against international factor mobility were lifted.

⁸ “. . . there being but one truth for each thing, anyone who finds it knows as much as one can know about that thing” René Descartes, *Discourse on the Method for Rightly Conducting One’s Reason and for Seeking Truth in the Sciences*, D.A. Cress, tr. (Indianapolis, Ind.: Hackett, 1980), II, p. 11.

⁹ Where “base-weighted” refers to “prices and quantities purchased in the base year 1,” while “current-weighted” refers to the figures for the same types of commodities in “the current year 2”: “The retail prices index, for example, could equally rationally . . . be calculated as a *base-weighted* or a *current-weighted* index, but the two types of index do not necessarily give the same answer.” Bannock et al., op. cit., “index-number problem,” p. 183. Orig. emph.

¹⁰ “As no single measure of utility exists . . . it is by their choices of combinations of available commodities that consumers reveal what it is that generates utility for them. Economists ignore possible circularities in the concept and rarely argue about what consumers enjoy, taking it as a matter of psychological fact.” Bannock et al., op. cit., “utility,” p. 395.

¹¹ “The quantum theorists regard ultra-violet light as observable. Yet ultra-violet light is invisible. When we speak of ultra-violet light as observable, what we really mean is that certain observable occurrences (e.g., those affecting a photographic plate) are attributed to the presence of ultra-violet light. But this conclusion is manifestly inferential But when inference forms a characteristic feature of some sophisticated theory, the magnitudes which are observable in principle according to that theory may cease to be so when, at some subsequent date, the theory is rejected.” A. d’Abro, *The Rise of the New Physics*, 2d ed., 2 vols. (N.Y.: Dover, 1951), vol. 1, pp. 88-9.

¹² J. Steven Landefeld and Robert P. Parker, “BEA’s Chain Indexes, Time Series and Measures of Long-Term Economic Growth,” *Survey of Current Business* 77, May 1997, pp. 58-68.

¹³ Even from the standpoint of the presumptive *summum bonum* (profitability in the bourgeois nation-state), history has not seconded academe’s tender regard for Comparative Advantage inasmuch

as parvenu capitalist powers have typically eschewed free trade as inimical to their own profitability. Thus either Comparative Advantage does not deliver maximum profitability as advertised or else maximum profitability is not, after all, the principal determinant of capitalist behavior. Cf. Ha-Joon Chang, *Bad Samaritans, The Myth of Free Trade and the Secret History of Capitalism* (New York: Bloomsbury Press, 2008), pp. 56-64.

¹⁴ Plato, *Protagoras*, B. Jowett, tr., *Great Books of The Western World* (Chicago: Encyclopedia Britannica, 1952), vol. 7, 322, pp.44-5.

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Could the money system be the basis of a sufficiency economy?

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In Issue 53 of the *real-world economics review* Richard Smith called for 'a practical, workable post-capitalist ecological economy, an economy by the people, for the people, that is geared to production for need, not for profit' (2010:42). He suggests economic theorists should 'go back to the drawing board' to re-frame how such an economy would operate. In my book *The Future of Money* I have explored whether the money system could be a possible mechanism for achieving a socially just, democratically administered, sufficiency economy (2010a). A sufficiency economy would be one oriented to meeting people's material needs to the minimum necessary to enable a high quality of life for all. My case for advocating the money system is that as a socially constructed intangible economic form it is most immediately amenable to collective social action. As Geoffrey Ingham has argued 'money...is the most powerful of the social technologies' (2004: 202). A major proviso is that even radical reform of the money system will not eliminate the private ownership and control of tangible economic resources, a key element of the capitalist economy, but it could provide a stepping stone to radical social change.

Those arguing for an ecologically sustainable economy point to the destructive nature of the capitalist market (Scott Cato 2006). This is mainly in terms of externalities and the drive for growth (Scott Cato 2009). Value is attributed to those activities and resources that can immediately access and generate money. Resources not already in private ownership are treated as free goods, and market prices do not take account of long term damage to the environment. The capitalist financial system also drives growth as the search for profits drives competition and expansion together with the reliance on debt-based bank credit to fund the monetary circuit (Rossi 2007, Parguez & Seccareccia 2000). Ecofeminist political economy adds to the ecological critique by pointing out that much of women's work and lives is excluded from the money-based economy (Mellor 2010b). The market economy and the public economy both frame their activities in money terms, externalising unpaid community and domestic activities. The real economy in ecological and feminist terms would embrace all aspects of the provisioning conditions for human existence to include unpaid work and environmental resources, damage and resilience.

So why see money as the key to developing a sufficiency economy? It is true that money has had a bad press. Love of it is the root of all evil. It commodifies and alienates human relationships. It is the mechanism of the extraction of profit and capital accumulation. At the same time it is arguably a symbol of social trust in that people honour it in their dealings, and it can be, potentially if not actually, an instrument of social policy. What is even more important is the evidence, particularly in the recent financial crisis, that the only mechanism that stands behind money systems is the state as representing the collective economic resilience of the population. While the state can create and circulate money *ex nihilo*, it still relies on social trust and acknowledgement of that money to enable it to circulate, its power to tax and the collective activities of the people in accepting that money as a reward for labour.

So why not do away with money?

A range of greens, social transformers and social libertarians have made the case for abolishing or reforming national systems of money (Large 2010 Greco 2009, Bennholdt - Thomsen et al 1999). Feminists have also debated long and hard about whether domestic work should receive a wage and often rejected it as crystallising the inequalities inherent in domestic labour. My case for not rejecting a national (or international) money system is that I do not see how complex societies can operate without a generalised mechanism of valuing human activities and fairly allocating goods, services and resources. This case is enforced by the fact that most examples put forward for how local economies would operate involve either localising the existing market system (e.g. farmers markets, craft fairs, etc.) or building new local economic systems based on some alternative means of accounting. In the later case there needs to be either a prior issue of local tokens (Ithaca Hours, Stroud Pounds, etc.) or a central system of recording the interchange of activities as in a LETS scheme (North 2009). What is notable about such local innovations is that it is the money/accounting system that creates the economic circuit, not the interchange of activities that produces an organic emergence of some form of represented value.

This will come as no surprise to social theorists of money. The most important aspect of money is not that it circulates to enable economic exchange, but that it has to be created and issued. This is often skated over in the conventional discussion of money in market systems. The commodity view of money sees it as emerging out of an original market that is assumed to be based on barter. One commodity is adopted as a medium of exchange to solve the problem of finding suitable mutual exchanges. A valuable, durable, divisible and portable commodity is chosen such as gold or silver. From this 'metallist' perspective, money is both natural and neutral. It is natural in that the value of money is assumed to relate back ultimately to the intrinsic value of the commodity, usually based on its scarcity or special qualities. It is neutral because commodity money only represents a prior value as between relative goods.

While the shift from barter to gold/silver, to paper representation is still told, the commodity theory of money has been extensively challenged. As Parguez & Seccareccia argue 'the very notion of a commodity money is an illusion' (2000:106). The opposing view is a social theory of money (Innes 1914/2004, Ingham 2004, Smithin 2009). This rejects the barter story, pointing out that money had a variety of early uses such as tribute, wergeld (injury payment) or temple money (offerings). It is also pointed out that money has appeared in many types of society and in many different forms. The emphasis on metal coinage in western economic thinking reflects the fact that in Europe coin emerged a thousand years before banking. However in historical terms the banking and accounting functions are thousands of years older than coinage. Even in the case of coin, the link with precious metal was tenuous as Mitchell Innes pointed out as early as 1913. Rarely was the nominal value of coins the same as the value of the metal of which it they were made (Innes 1913/2004). Given the varying amount of precious metal in coins, the only guarantee of the worth of the coin became the authority behind the minting. Far from being a precious commodity that had become readily accepted through trade as the barter theorists thought, money as coin has generally been issued by fiat, that is, issued and guaranteed by an authority, such as a powerful leader, an office-holder or a religious organisation. In fact, as Davies has argued, when coins were too closely associated with scarce precious metal, economic activities became restricted. Economies flourished where coins were plentiful, such that 'long run trends in depression and prosperity correlate extremely well with the precious metal famine

and surplus of the Middle Ages' (Davies 2002:646). Even debasement of the coinage through reducing the precious metal content was not in itself a problem as the countries which experienced the greatest economic growth were those whose leaders had 'indulged in the most severe debasement' of their coinage' (Davies 2002:647).

As Rossi argues, money cannot be a commodity because its value would need to be established using another standard of value such that 'infinite recursivity makes this measurement logically impossible' (2007:13). Money value is therefore much less certain than even an arbitrary measure such as an inch. Once an inch is chosen as a unit of measurement it stays constant whereas money as a unit of measurement can never be assumed to be constant no matter what it is made of. For Ingham money does not in itself embody a value, it measures relative values. He argues that the market could not exist without a means of establishing relative value and therefore money as a unit of measurement is 'logically anterior and historically prior to market exchange' (2004:25). Measuring value in economic exchange is much more important than the actual medium used to transfer value. Money should be seen not as a 'thing' but as a social form (2004:80) and the idea that there is some 'invariant monetary standard' is a 'working fiction' (2004:144). 'Sound money' is a product of society, not of nature. Money is something that people trust to maintain its value or be honoured in trade, while its actual value can vary. Effectively when we say people trust in money they are trusting in the organisations, society and authorities that create and circulate it, other people, traders, the banks and the state. Money, whatever its form, is a social construction not a natural form. However as a social form it represents power (Hutchinson, Mellor and Olsen 2002:211).

Power and the issue of money

Power is central to the issue and circulation of money. As Wray (2004), Ingham (2004) and others have pointed out, states or other monetary authorities have used their power to establish the circulation of money either as accounting records or as physical tokens such as clay tablets, tally sticks or coin. Money systems can also be established by consent as indicated earlier for local money systems, but establishment through power or authority has historically been the main mechanism. The state theory of money was set out by Georg Knapp in the early 1900s (1924). Central to his ideas was a link between the issue and circulation of token money and state taxation. Rather than demanding goods and services directly, states 'buy' goods and services issuing what is effectively an IOU while at the same time demanding tax payment in a form of money that it designates. As Wray points out, 'what Knapp called the state money stage begins when the state chooses the unit of account and names the thing that it accepts in payment of obligation to itself - at the nominal value it assigns to the thing. The final step occurs when the state actually issues the money things it accepts' (2004:243). Why should people give up their labour, goods or resources for a worthless accounting record, tablet, stick or coin? Because tax is demanded that must be paid by that same mechanism. As those people not directly subject to state 'purchase' also need to pay taxes, the money-tokens circulate more widely in the economy and become generally accepted. Taxation must also not reclaim all the IOU's otherwise there would be no mechanism for general circulation. The state must therefore always be in deficit, an important lesson for today's advocates of a balanced budget.

State money theorists point out that there is no artificial limit within a monetary system to how much money a state or political authority can issue, provided it doesn't outstrip

the capacity of the people to produce and circulate goods and services. There is no need for a state to contract any debt other than through the issue of its own IOUs. As Nersisyan and Wray argue in Issue 53 of the *real-world economics review* 'there is no financial constraint on the ability of a sovereign nation to deficit spend' (2010:123). Quite the contrary 'every recession since World War II was preceded by a government surplus or a declining deficit-to-GDP ratio (2010:120). The problem is that the state role in the issue of money has been virtually obliterated in modern economies. Money has been privatised through the issue of money through banks as debt.

Debt-based bank issued money

Modern market economies do not rely on the state to initiate a monetary circuit, they create money endogenously within the market system through the issue of credit via the banking system. This is now so extensive that governments have become clients of the so-called 'money markets'. This endogenous theory of money describes a monetary circuit where 'the creation of money is essentially tied to bank credit' (Rossi 2007:21). In what Rossi describes as the 'monetary production economy' (2007:32) bank deposits are created by firms 'monetising' their production costs' since 'if there were no workers to remunerate bank deposits could not exist...as there would be no production at all and financial markets would be meaningless' (Rossi 2007:34). The new money issued pays the cost of production. This is then repaid in the process of exchange and consumption, and the circle turns again.

The most important aspect of the shift to money issue through bank debt is that banks (like the state) create money *ex nihilo*. While it is widely assumed that banks issue multiples of deposits placed 'on demand', intermediating between savers and borrowers, this does not explain where the savers got their money from in the first place. Money must be issued before it is saved. As it is the bank, not the depositor, who creates the money, logically debt-based money issue must come before deposits are made. Even when debt issued money is lodged as a 'new' deposit there is no tangible link between deposits and loans. As Steve Keen argues, neo-classical theorists continue to theorise banking as a barter between savers and borrowers despite the fact that no matter how much the bank lends out, individual savers can still get their money back on demand (2001:289). As Galbraith observed, conventional theory would imply that money within the banking system could be in two places at once (1975:19).

Anyone who takes on debt is creating new money. In Galbraith's well recorded words, 'the process by which banks create money is so simple that the mind is repelled. Where something so important is involved, a deeper mystery seems only decent' (1975:18-19). James Tobin has described bank issued money as "fountain pen money" (1963:408). The most important outcome of the dominance of bank issued money is that the supply of money is largely in private hands determined by commercial decisions, while the state retains responsibility for managing and supporting the system, as has become clear through the financial crisis. While the public collectively bears ultimate responsibility for the failures of the privatised money creation system, there is no direct public influence on the overall direction of how that finance is invested or used. As Chick points out, 'money confers on those with authority to issue new money the power to pre-empt resources' (1992:141).

For Smithin, money is a social relation that makes possible 'both market exchange and the more extensive set of relationships known as capitalism' (2009:59). Modern banking

and the capacity of virtually unlimited creation of money through debt, has enabled capitalist expansion. For Ingham, 'the essence of capitalism lies in the elastic creation of money by means of readily transferable debt' (2004:108). Far from money representing prior market activities as the barter theorists claimed, it is the prior issuing of bank credit that is essential to bringing profit-seeking activities into being. Capitalism would collapse if everyone paid their debts, or if no further debts were taken out. However, as Ingham points out, 'the state and the market share in the production of capitalist credit money' (Ingham 2004:144). The modern banking system brings together private banking in relation to trade and the currency creating powers of the state.

Early commercial bankers issued their own credit notes drawn on the bank, but as money issue and banks became more regulated, the money the bank issued was declared legal tender, that is universally recognised money authorised by the state. Through this process privately generated debts in the market sector were being turned into transferable state money through the banking system. The significance of this is vital to state responsibility for the viability of the banking system. Commercial debt issued as commercial paper between traders is a liability on the issuer. Commercial debt exchanged for a bank credit note is a liability on the bank. But, commercial debt exchanged for bank money that is recognised as legal tender, is a liability on the state. State endorsement of bank debt through its designation as national money means that 'banks are...able to issue liabilities at will' (Parguez & Seccareccia 2000:105).

If banks are issuing new money designated in the national currency, they are issuing what is, or should be, a national resource. Certainly they are issuing money that carries a public liability as is clear from the recent financial crisis. Even when money was deposited within another banking system (as in the case of the Icelandic banks), default became the responsibility of the British state. Equally, the Icelandic people, through the state, were forced to take on financial liabilities that were created by their private sector banks. This is the peculiarity of the political and social nature of the banking system. If a company produces a car which goes bust the owner does not go to the state asking for a new one. However, for bank deposits and certain other financial investments such as pensions, that is exactly what the holder of that money will do. If conventional economics and neoliberal ideology tells us that money is a private matter, the stampede of people towards a government guarantee of bank deposits in the event of default tells us otherwise.

Money: Endogenous or Exogenous?

As Ingham argues in the preface to his long researched and immensely useful 'The Nature of Money', 'deciphering some economic 'lexicons and idioms' was 'slow-going'. He had particular problems with 'endogenous' and 'exogenous' money which 'took a little time to unravel'. He reports that when he asked 'exogenous to what?' he found at least three meanings which, unfortunately he does not elaborate in the book (2004:ix). Advocating the reclaiming of the money system from the market would seem to be making a case for exogeneity. This is particularly the case if money issue is to be used to democratically influence economic priorities.

The endogenous, circuit theory of money has explained how credit creation is central to the development of capitalism. This is in contrast to exogenous views of the nature of money whether based on commodity theory, monetarism or a theory of state money.

Endogenous theorists are quite right to point to the impotence of the state and central banks in the face of capitalist financial expansion where capitalist finance controls money issue as bank-generated debt. The monetary experiments of the 1980s were a great failure as it proved impossible to control the amount of money circulating in the economy. Warburton argues that the Anglo-Saxon economies lost control of credit creation in the 1980s and this was the basis of the impressive performance of global equity markets in the ensuing speculative boom years (1999:8). This should not happen according to Rossi's version of the endogenous theory of money creation which argues that producers call forth money in order to launch the circuit of production. On this basis there should never be a problem of money inflation as the new money would always be accompanied by new production and consumption. However it is clear that in the late twentieth and early twenty-first centuries, the bank credit creation system was not just responding to the needs of production but the demands of speculative inflation. Rossi discounts the possibility of borrowing for pure speculation: 'we leave financial speculation aside, as at the end of any purely speculative ...transaction there is always consumption' (Rossi 2007: 122).

While neoliberal ideology would quickly pounce on the possibility of the state borrowing or creating money, citing the problem of inflation, the massive issue of credit for speculative finance went largely unremarked. It was no less inflationary, but this was presented as 'wealth creation' through rises in asset price. Certainly it made many people very rich and some of the money found its way in to state coffers through tax. However, as states were receiving the product of uncontrolled credit creation, the public would eventually have to pay the price in its role as guarantor of the money system. It would appear that the endogenous circuit of money could destructively expand out of the sphere of production and exchange to launch leveraged speculative booms. Following Minsky, Steve Keen has been particularly forceful in his view that private debt has escalated to such an extent that the economy is threatened by total collapse (<http://www.debtdeflation.com/blogs/>).

Keynes certainly thought that money was a force independent of market forces. For Keynes 'money plays a part of its own and affects motives and decisions...we live.. in a monetary economy' (Smithin 2009:60). Central to Keynes' ideas was the severe impact on the productive economy if the money system malfunctioned. Markets were not necessarily efficient and money might not circulate: money could be created but people might not spend it. The government might therefore need to intervene to maintain the circulation of money,(that is, liquidity), so that effective demand continued within the economy, (that is, demand backed by money) (Chick 2000). The current economic downturn has certainly revealed how the productive economy is dependent on the functioning of the money system. However, recent experience of quantitative easing shows the limits of monetary policy that rests on a conventional view of monetary theory. The experience has been very much Keynes notion of pushing on string. In the UK the Bank of England was relying on the multiplier theory of bank credit issue. The quantitative easing of £200 billion was expected to translate into many times that in volume of loans. As endogenous money theorists would point out this is a fallacy. There is no direct link between deposits and loans, or government 'high powered money' and loans. If people or companies do not wish to borrow, no amount of money supply will encourage them to do so.

Even when working effectively, debt-based bank-generated money issue cannot achieve the aim of a sufficiency economy. The demand for repayment with interest creates a growth imperative with the need for an ever expanding increase in debt-based money as more money must be paid back than was originally issued. In order to repay their debts,

people must also find work and debt driven labour can have social and ecological implications if people have to work unnecessarily hard or long, or engage in ecologically destructive patterns of production and consumption. As Stiglitz points out, only 2% of the US labour force is needed to produce all necessary food and exports (2010:288). For the rest, labour is necessary to gain access to money and therefore to an entitlement to share in the goods and services produced by the society. The most important change that a sufficiency economy would require is to establish the right to livelihood independent of the need to 'earn' it through labour. While there would be an obligation to share in necessary work, this would be independent of the right to livelihood itself, that is, necessary sustenance. At the same time, excessive work or consumption could be discouraged by adverse taxation.

Another major problem with seeing money issue as endogenously based in the capitalist market system is that it cannot support an extension of money issue to take account of the wider 'real economy' of the environment or women's unpaid work. To achieve such an extension the externalised activities would need to be incorporated into the monetary circuit of production, possibly as a reproductive and environmental 'charge' added to all productive activities. However, this would not change economic priorities. A practical alternative to escape the framework of commercial activities for profit would be the issue of an income as of right free of debt such as a citizen's income. This would shift the money circuit from one dominated by anticipatory production in search of profit, to one dominated by consumer demand. The more equally the power of the consumer was spread in such a system the more likely that the demand expressed would reflect needs rather than discretionary expenditure. However such an approach must mean that a money issue system based on a democratically determined allocation of money must be exogenous, certainly to the present conception of 'the economy'. However such an issue of money would not be exogenous to society as a whole. This would mean that there would be no externally determined exogenous limit to money issue and circulation. As Ingham said, the question in relation to the endogeneity or exogeneity of money must be endogenous to what? Exogenous to what?

The democracy deficit

The possibility of a more democratically based and ecologically sustainable economy through a radical reform of the money system has been made much more difficult by a major triumph of neoliberalism, its ideological attack on the idea of public action. The general condemnation of the state has brought even welfare systems into disrepute and undermined any notion of a right to livelihood with the castigation of 'benefit scroungers'. This is compounded by the privatisation of the money supply which has forced states into higher taxation or more public borrowing. As a result there is very little political base from which to launch the idea of an egalitarian sufficiency economy. The issue of money through the banking system has also removed from the public sector any direct control over the direction of money use. This means that those who take on debt are making vital choices about the direction of the economy and, as the financial crisis reveals, those choices can rebound on society as a whole. Despite the obvious problems of the capitalist economy and financial system, making the case for money as a national resource and the need to democratise or socialise the money system is very difficult. Yet it must be done. A starting point is the financial crisis itself and the demonstration that the money system is an essential national utility. It is clear that while the benefits of money creation have been privatised and largely piled up in the financial sector itself, the costs have been socialised.

This point has been made many times but some of the detail is telling. At the peak of the boom hedge fund and private equity managers in the US were earning up to 19,000 times the average wage compared with around 350 times for non-financial corporate executives (Stiglitz 2010: 350). Banks fed the speculative credit frenzy by creating 'complex pyramids of loans to each other' (Korten 2009:50). Using Phillip's calculations (2008) Korten points out that US financial sector debt at the height of the boom was about equivalent to US GDP (\$14 trillion) and comprised 32% of all US debt. For Korten, 'Wall Street has been engaged in class warfare pure and simple'. It has used its control of money supply to create 'phantom wealth' on which it collected interest, dividend and financial service fees. A modern form of 'debt bondage' (2009: 52-3).

There are many voices challenging the status quo, not least in this journal. However, analysis alone will not create social change, but the real experience of people in their daily lives might. The task must be to link the critical analyses being made here and elsewhere with the real-world experiences of the wider public.

Money in a Sufficiency Economy

This paper has argued that the money system is a national resource that should be taken seriously as a mechanism for radical social change. The case has been made that money cannot be anything other than social, as there is no 'natural' base for it. While the money system is both social and public, its administration has been privatised, particularly the issue of new money. This is important because the ability to issue money in a society creates the ability to define what is to be seen as valuable (in money terms). Letting the market harness the allocation of money has prevented the recognition of value created by the environment, non-market activities and public investment. Largely, the financial sector has been able to allocate value to itself by issuing money to itself. Allocating money to citizens as of right or to public investment would give a completely different message about what is important in society.

Such a system of money allocation would not require growth other than to meet need because most money would be issued free of debt. Security of money allocation for consumption and production would remove the need to undertake unnecessary work and enable people to be confident of a sufficiency of material goods with more emphasis on the quality of life. Overall priorities would also put public welfare first (hospitals, education, transport) which would make people feel more secure about their future. This would mean they did not need to accumulate money savings. The problem with aiming to achieve future security in money terms is that there is no way people can know what their money will buy. While sufficiency can be calculated in real terms (how much bread will I need?), there is no basis for sufficiency in money terms (what will bread cost in thirty years' time?). Returning the money system to democratic control would not be a total answer but it would be an incredible step forward towards creating a socially just and ecologically sustainable sufficiency economy.

Where would that leave 'the market'? It would not be able to access new money from banks. Any money for investment would be a direct transfer of savings as equity or timed loans. However where firms (for profit or not for profit) were meeting democratically identified priorities they could request loans or grants from national, regional, or local democratically controlled banks. Firms would earn money by providing the goods and services that citizens

socially determine. Instead of money circulating through the market to create 'wealth' which is then taxed (under much protest) for public use, public benefit would be the basis for the allocation of money. Administration via a public money system would avoid both the rigidity of a command and control economy and the speculative exploitation, waste and inequality of a capitalist market. From a public perspective the fiscal and monetary systems would be two sides of the same process. Public expenditure would not require taxation but taxation would be used to regulate the economy, redistribute wealth and influence resource use or social benefit (including fair labour policies). The endogenous money circuit of capitalist production would be replaced by the endogenous money circuit of a public economy. As such it would respond not to the demands of profitable production but the provisioning of social need.

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<http://rwer.wordpress.com/2010/09/27/rwer-issue-54-mary-mellor/>

How to bring economics into the 3rd millennium by 2020²⁷

Edward Fullbrook

You may post comments on this paper at
<http://rwer.wordpress.com/2010/09/27/RWER-issue-54-Edward-Fullbrook/>

Introduction

This paper argues four theses and outlines an action plan.

1. The Global Financial Collapse has created a climate among the intelligentsia - left, right and centre - that strongly supports fundamental changes in economics as a discipline, but this climate is unlikely to have significant effect.
2. Six basic and interconnected categories of institutions comprise the economics profession: university departments, associations, journals, classification systems, economics 101 textbooks, and its basic narrative. The institutions currently filling these categories are together closed to major change and capable of resisting all attempts at serious reform.
3. The combination of digitalization and globalization has rendered economics' existing institutions in five of the six categories anachronistic and vulnerable not to reform but to being superseded by new institutions within ten years. The exception is university departments, but the existing ones would be reformed as a consequence of the ascendancy of new institutions in the other five categories.
4. These new institutions will emerge only if their linked realization becomes the goal of informed, co-operative, non-profit entrepreneurial pursuit. A rough outline of how these goals could be realized is offered.

²⁷ An earlier version of this essay was presented at the *Imitatio* Economic Forum, in Paris at l'École Normale Supérieure on 13-14 June 2010. I am grateful to *Imitatio* and its sponsor, the Thiel Foundation for their financial support and for the opportunity to test-fly these ideas in special conditions. An account of this experience, including analysis that pertains to this essay, may be read here: [The Glass Wall](http://rwer.wordpress.com/2010/06/25/the-glass-wall/).
[<http://rwer.wordpress.com/2010/06/25/the-glass-wall/>]

Economics after the Global Financial Collapse

Post-crash outsider views of economics

In modern times no respected discipline has ever suffered such a radical and widespread decline in its public credibility as has economics since the Global Financial Collapse. Outside of economics itself, support for fundamental reform of economics has become nearly universal. The titles of articles that have appeared in mainstream English periodicals since March 2009 illustrate this point. Here are examples, most of which come from publications usually identified with the preservation of the status quo.

From the *Financial Times*

- “How economics lost sight of real world”
- “Academics languish behind the curve set by journalists”
- “Needed a new economic paradigm”
- “Sweep economists off their throne”

From *Business Week*

- “Why Economics is Bankrupt”
- “What Good Are Economists Anyway?”

From *Atlantic Magazine*

- “Will Economists Escape a Whipping?”
- “Why Economics Failed”
- “Have economists gone mad?”

From the *New York Times*

- Seduced by a Model
- “Vested interest in an analytic structure “
- “The Return of History”

From the *New York Times Magazine*

- “How Did Economists Get It So Wrong?”

From *The Guardian*

- Rescuing economics from its own crisis
- The Nobel prize for economics may need its own bailout
- It's possible to subtract mathematics from economics
- Praying for a revolution in economics

From *The Economist*

- Whither the efficient market hypothesis?
- The State of Macroeconomics

From the Foreign Policy Journal

- Bought-and-paid-for-economists

From *Newsweek*

- Blame the Economists

From the *Vancouver Sun*

Economics: Dismal Science or Science at All?

From the *Korea Herald*

Economics is a religion, not a science

From the *Huffington Post*

How the Fed Bought the Economics Profession

From *tpmcafe*

Should We Bury Macroeconomists at Ground 0?

From *Money Magazine*

How to rebuild a shamed subject

The articles themselves tend to be even more vitriolic and condemning than their titles. Here are some examples. The first is from *Business Week*.

The rap on economists, only somewhat exaggerated, is that they are overconfident, unrealistic, and political. They claim a precision that neither their raw material nor their skill warrants. Too many assume that people behave like the mythical homo economicus, who is hyperrational and omniscient. And they take sides in quarrels that freeze the progress of research. Those few who defy the conventional wisdom are ignored. ["What Good Are Economists Anyway?"]

From *Atlantic Magazine* the conservative Richard A. Posner begins

It is remarkable how economists have been able to deflect blame for the economic crisis that erupted last September with the sudden collapse of the international banking industry and that continues to afflict the world's economies.

[Economics] failure was I think due in significant part to a concept of rationality that exaggerates the amount of information that people have about the future, even experts, and to a disregard of economic factors that don't lend themselves to expression in mathematical models, or are intractable to formal analysis.

Posner concludes:

. . . the control of the business cycle had until the present crisis been regarded as a principal triumph of modern economics and justification for regarding economics as the queen of the social sciences. . . . The urgent need is for the part of the profession that concerns itself with business cycles to acknowledge its inadequacies and reorient its training and research.

Another *Atlantic* article says:

. . . the concept of rationality even exaggerates rationality. Even with good information, people often make stupid decisions based on emotion. I would even argue that generally people are more emotional than rational -- and that's a huge problem for modern economics.

But of all the economics-bashing journalism read since the GFC, the one perhaps most satisfying appeared more recently (March 26, 2010) in the *New York Times*, a thoughtful piece by Republican commentator David Brooks titled "The Return of History". He divides the

history of modern economics into five acts: scientism, splintering and slowly emerging sophistication, exposure of the shortcomings of the whole field by its “causing untold human suffering”, soul-searching (today), and the blowing up of the whole field to become a subsection of history and philosophy. Acts I, IV and V are especially apropos.

Act I in this history would be set in the era of economic scientism: the period when economists based their work on a crude vision of human nature (the perfectly rational, utility-maximizing autonomous individual) and then built elaborate models based on that creature.

Act IV, the period of soul-searching that we are living through now. More than a year after the event, there is no consensus on what caused the crisis. Economists are fundamentally re-evaluating their field. . . . are taking baby steps into the world of emotion, social relationships, imagination, love and virtue.

In Act V, I predict, they will blow up their whole field.

Economics achieved coherence as a science by amputating most of human nature. Now economists are starting with those parts of emotional life that they can count and model (the activities that make them economists). But once they're in this terrain, they'll surely find that the processes that make up the inner life are not amenable to the methodologies of social science. The moral and social yearnings of fully realized human beings are not reducible to universal laws and cannot be studied like physics.

Once this is accepted, economics would again become a subsection of history and moral philosophy. It will be a powerful language for analyzing certain sorts of activity. Economists will be able to describe how some people acted in some specific contexts. They will be able to draw out some suggestive lessons to keep in mind while thinking about other people and other contexts — just as historians, psychologists and novelists do.

At the end of Act V, economics will be realistic, but it will be an art, not a science.

Post-crash insider views of economics

Alas, the “soul-searching” that Brooks says mainstream economists are now undertaking appears more cosmetic than real. If “[e]conomists are fundamentally re-evaluating their field”, it remains publicly invisible and most likely not happening. Let us begin with those establishment economists whom we might most expect to be contemplating a fundamental re-evaluation.

In recent years Paul Krugman has been the most strident and publicly vocal of insider critics of the state of economics. So when his long article with the promising title “How Did Economists Get It So Wrong?” appeared in the *New York Review of Books* last September, one might have expected to find therein recommendations for strong and even radical reform of the economics profession. But after six or seven thousand words of bashing his perennial enemies -- Friedman, Fama, Lucas and Prescott -- Krugman concludes with only three short paragraphs addressed to reform. And only one contains substance. It is as follows.

So here's what I think economists have to do. First, they have to face up to the inconvenient reality that financial markets fall far short of perfection, that they are subject to extraordinary delusions and the madness of crowds. Second, they have to admit — and this will be very hard for the people who giggled and whispered over Keynes — that Keynesian economics remains the best framework we have for making sense of recessions and depressions. Third, they'll have to do their best to incorporate the realities of finance into macroeconomics.

This is hardly radical stuff. Krugman has pushed stronger reform measures at times when economics enjoyed broad uncritical support among the intelligencia. One senses that like maverick members of political parties at election time, Krugman is showing his loyalty now that it might be needed.

What about Joseph Stiglitz and George Akerlof? In a joint article in the *Guardian* [October 28, 2009] they speak not of a need for a revolution in economics but merely of explorative thought. They write:

Just as the crisis has reinvigorated thinking about the need for regulation, so it has also given new impetus to the exploration of alternative strands of thought that would provide better insights into how our complex economic system functions — and perhaps also to the search for policies that might avert a recurrence of the recent calamity.

They then go on to identify the “Research grants, symposia, conferences and a new journal” to be financed by George Soros as the means by which this exploration may be realized.

At the end of March 2010 in a video

<http://www.youtube.com/watch?v=DEqk8HLeiFA&feature=related>

for Soros's new institute and titled “Economics Trapped in an Old Paradigm”, Stiglitz speaks of economics' need for “more diversity of ideas” and identifies the existing journals with their peer review process as the collective institution by which a monopoly of ideas is maintained. But noticeably and sadly he appears to have no substantive ideas about how that monopoly might be broken up so that economics would cease to be trapped.

David Colander is another insider economist (and past contributor to this journal) who, long before the GFC, was publicly saying that our house needs repair. In July of this year he submitted written testimony to a US Congressional committee considering the economics profession's part in the recent calamity. In his introduction Colander identifies himself as “the Economics Court Jester because I am the person who says what everyone knows, but which everyone in polite company knows better than to say.” So what is it now that “everyone knows” but dares not speak?

Colander says that there are two ways in which the economics profession has gone astray and thereby “failed society”:

1. “it over-researched *a particular version* of the dynamic stochastic general equilibrium (DSGE) model”, [emphasis added] and
2. “by letting policy makers believe, and sometimes assuring policy makers, that the topography of the real-world matched the topography of the highly simplified DSGE models”.

This diagnosis suggests that the profession's affliction should be easy to cure, and Colander spells out the remedy. Two measures will do the job:

1. increase the “diversity of the reviewer pool” for “the reviewing process of NSF [National Science Grants] to the social sciences, and
2. “increase the number of researchers explicitly trained in interpreting and relating models to the real world.”

Colander calls these “structural changes”. Perhaps so, but at best they are equivalent to putting in patio doors. His testimony also appears to presume that Economics, like the Ozark Mountains, belongs to the USA. Sadder still, Colander gives the false impression that new research is needed before GFCs can be foreseen and avoided. He scrupulously avoids any mention of Keen, Roubini, Baker or any of the other economists who, working outside the neoclassical box, analytically foresaw and warned of the coming collapse.

Krugman, Akerlof, Stiglitz and Colander are of course part of the mainstream, but they occupy its outer edge and therefore are now, no less than before -- even with grants, symposia, conferences, a new journal and the benevolence of a billionaire -- unlikely to have the power needed to free economics from the monopoly of the neoclassical paradigm, assuming that that is what they want. Meanwhile the generals of that mainstream status quo show no signs of giving ground or even of feeling the need for appeasement. Here are two examples.

Gregory Mankiw, who’s textbook *Economics* is the current world gold standard in introductory level textbooks, wrote a short article for the *New York Times* titled “That Freshman Course Won’t Be Quite the Same”. (24 May 2009) But the title, mild as it is, overstates Mankiw’s case. The four changes he points to and which he emphasizes are the only ones needed are at best miniscule: the role of financial institutions should “become more prominent in the classroom”, likewise for “the effects of leverage”, ditto again for the “tools of monetary policy” and, finally, students must be taught that economic events like the Global Financial Collapse cannot be foreseen.

Robert Lucas in an article for *The Economist* is even more intransigent. He sneers at “people who have seized on the crisis as an opportunity to restate criticisms they had voiced long before 2008”, and he stands by what he calls the “main lesson” from the Efficient Market Hypothesis: “the futility of trying to deal with crises and recessions by finding central bankers and regulators who can identify and puncture bubbles.”

The voices coming from the mainstream’s middle ranks echo those of the generals. *The Economist* on 17 September 2010 published the invited responses of fifteen economists to the question “How has the crisis changed the teaching of economics?” With the exception of the China-based Michael Pettis who wants history placed “at the heart of economics instruction, all of them recommend a fresh coat of paint rather than structural changes – “adjustments but no paradigm shift” as one respondent puts it. Mark Thoma’s expectations are typical:

In the short run, the way in why [sic] we teach economics won’t be very different from the way it was taught in the past because the basic analytical tools and the models that we use won’t change all that much.

And in the long run and at the graduate level?

The reliance on micro-based, rational agents operating in a dynamic, stochastic, general equilibrium (DSGE) environment will persist, and our teaching will reflect that.

Meanwhile economists who publicly do not identify with the mainstream, and there are thousands, are enjoying their days of recognition and of being listened to by the mainstream media. Ego-wise, heterodox economists have never had it so good. But our new-found, and probably short-lived, public esteem in no way threatens economics' status quo. To understand why we must look at the institutions that rule economics as presently constituted.

The power structure of the economics profession: six categories of institutions

Three years ago James Galbraith, in a piece for tpmcafe.com, wrote as follows:

The neoclassical trick is to insist that all “real economists” adhere to an arcane and limited set of techniques. The focus on conformity, on a bizarre hierarchy of journals, the dominance of the AEA [American Economics Association] at the annual meetings, all serve to define who is in the tribe, and their rank. Mainstream economics . . . is defined by who accepts the discipline of the cult.

I broadly agree with Galbraith's quick sketch of how the economics profession is structured, but we must grasp that sociology in greater depth and detail before we can think seriously about engineering its change.²⁸ To that end I want to focus attention on six categories of institutions, each with its internal hierarchy, by which the economics profession as a power in the world is presently comprised. These are as follows:

1. university departments,
2. associations,
3. journals,
4. classification systems,
5. economics introductory level textbooks, and
6. the discipline's basic narrative, which structures its introductory textbooks and is, unless stated otherwise, presumed in most of the conversations that economists conduct among themselves and initiate with the wider world.

Contrary to everyday belief, the institutions currently filling these categories are together closed to major change and capable of resisting all attempts at serious reform. This intransigence and insuperability stems from the fact that as institutions, although independently constituted, they are interlocking and their characteristics inter-determined.

The interdependency between the hierarchies of the **departments** and the **journals**, including its determination of who teaches at and publishes in them, is much appreciated and often discussed. Similarly everyone in the profession knows that all of the economics **associations** in the world take at best third place to the American Economics Association, that it owns three of the five or six journals offering the most kudos and that virtually all of its officers are or have been affiliated with one or more of ten American universities. Because these three sets of institutions interlock so securely, attacking them individually, either from within or from out, will bring no results. Moreover, although the AEA has elections, the slates of candidates nominated by the existing leadership are traditionally rubberstamped by the members.

²⁸ Galbraith's then frontline approach to changing economics was essentially fatalistic. “My hope is that the neoclassical ghetto will continue to build its walls, and that universities, who hold the power in these matters. Will eventually just shrink those departments and let them wither away.”

It seems likely that most economists, including heterodox ones, look upon the *Journal of Economic Literature* (JEL) **Classification System** as a neutral piece of intellectual equipment. But it exists as a powerful device for maintaining the status quo. It exerts power in three ways. It quietly conditions economists to approach economics and the economy through a hierarchy of boxes whose permanence rivals the Periodic Table of Elements. It quarantines the papers of dissident but hardy groups like Marxist, Austrians and Feminists. And it silently disappears papers that break all moulds, rather like the secret police in the middle of the night disappear dissenters in dictatorships. Here is an example.

Looking at the contents of *Intersubjectivity in Economics*, a book I edited about intersubjective phenomena among economic agents and the macro structures they generate, one or more homes could be found for each of its seventeen chapters in the JEL Classification System. But in so doing the general topic, the one that lies behind the creation of the book, disappears without trace *and with it also the significance of the individual papers*. As will be shown later, classification systems do not need to be like this.

The importance of economics' introductory level **textbooks** tends to be under appreciated. In the United States alone more than a million young minds annually take a year long introductory course. For over 90 percent of them this experience is dominated by a textbook little changed from Paul Samuelson's 1948 text *Economics*. With few exceptions, their textbook fundamentally shapes how they think about economics and economic issues for the rest of their lives. As such, these books are a powerful and long-lasting cultural and political force. And of course their influence extends to the economics profession itself, because these textbooks also serve as the formative introduction to economics of that small minority of students who go on to become economists.

A dominant characteristic of these textbooks is that they treat all economic agents as subjectively autonomous from one another. This is a basic axiom upon which the economic reasoning taught the students and the exercises they are required to perform depend. Alternative textbooks exist but are rarely used. As things stand, there is no known way of getting economics departments to use for their first-year courses non-Samuelson textbooks.

The most powerful institution of all in economics is the **basic narrative** that shapes the conversation called "economics", including its textbooks, papers, departmental meetings, and perhaps most important of all, its dialogues with the rest of the world. It is all that which by convention is presumed to be true unless explicitly stated otherwise. This paper's final section will roughly sketch the main points of this narrative and point to how its overthrow could come about.

The vulnerability of the existing institutions

The American Economic Association has long reigned as the world's undisputed supreme ruling body of the economics profession. In influence and membership it outranks all other economics associations. In 2009 the AEA had 16,944 members. That compares to the 3,300 members of the Royal Economic Society, perhaps the AEA's closest rival.

However, membership in the AEA is in steady long-term decline. It reached a peak of 22,005 in 1993, since when it has been decreasing almost year by year. Its membership level is now below what it was in the late 1960s.

What does the AEA offer its rank and file members? Basically two things, journals and an annual meeting. Membership in the AEA includes a subscription to seven academic journals. Four of these are new publications beginning this year, introduced perhaps as an attempt to stop the loss of members. The traditional three journals, the *American Economic Review*, the *Journal of Economic Literature* and the *Journal of Economic Perspectives*, are generally regarded, along with perhaps two or three others, as the most prestigious economic journals in the world. Their prestige of course derives from many factors, but the overriding one is the size of their subscriber list, the 16,944 AEA members plus 3,383 institutional subscribers. The latter it should be noted are also year by year decreasing in number and even faster than members. Together they total to 20,327 subscribers.

I do not know what percent of those members are not based in the United States, but presume that their number is significant although not nearly as high as the 60 percent non-UK members for the Royal Economic Society. The AEA annual conference, traditionally the first week in January, attracts on average about 8,000 members. The meeting provides them with an opportunity to present papers, look for jobs and network in a pre-internet fashion.

There are two aspects of the way in which the AEA is constituted that make it highly vulnerable to having its power and influence in the wider world, including that of its journals, usurped by a new organization.

Firstly, what is most remarkable about the American Economic Association's global hegemony in this globalist age is its nationalist character. Membership may be open to economists from all countries, but the organization is run and tightly controlled by a small and unchanging segment of American educational society. Its nationalistic conception, which its name shouts, juxtaposed to its global power and aspirations, not only goes against the internationalist ethos of science that has prevailed since the Renaissance, but also, and more significantly for us, defies the globalist trends and sentiments of our age.

The second aspect of the AEA that makes its pre-eminent position in the world highly vulnerable is its business model, which was invented in Victorian times when hard copy and postal services were the only options, a whole century before the advent of email and broadband internet. Of course the AEA and other long-established economics associations have adapted themselves so as to employ the new technologies. The AEA's membership transactions are now primarily WEB and email based and it offers online access to its journals. But there remains a strategic difference between adapting a model from the past to cope with a new world and inventing a new model from scratch in light of present and future conditions.

By hard-copy standards, the AEA basic membership fees (which remember are also subscription fees) are extraordinarily good value. They range from \$35 dollars for students to \$98 for people with an annual income above \$88,000, plus \$15 per print title for people living outside the USA. By current standards the fees the AEA charges institutional subscribers are also excellent value. A print subscription to a US address to the seven journals is \$455 and a print subscription plus an electronic site license is \$910. Measured against other academic journals these prices are unbeatable. But let us have a look at how today, if one were starting from scratch, one might go about setting up an organization whose aim was to become the world's largest and most influential economics association and with journals with more subscribers and bigger readerships than any other in the world.

Firstly, it is important to focus on seven basic technological parameters.

1. Virtually all highly educated people in the world have email and broadband.
2. The cost of sending an email anywhere in the world is nearly zero.
3. The cost of replying to an email is also close to zero.
4. The times it takes to deliver an email is virtually instantaneous.
5. The unit cost of enabling a free downloading of a 10,000 word academic paper is virtually zero.
6. The time required for uploading a paper to a server is less than five minutes.
7. The time lapse between deciding to obtain a paper freely available online and having both an onscreen and a printed copy is usually less than ten minutes.

Secondly, the WEB has changed and continues to change the culture of organizational processes. These changes include the following:

1. The significance of nationality and national boundaries is greatly reduced.
2. Likewise geographical location.
3. The base of people actively participating is widened.
4. The moral authority of tradition and hierarchy are much reduced, which
5. opens the door to new and often previously unthinkable developments.
6. People expect things to be accomplished at a much faster pace.

Thirdly, there have been changes in cultural practices and expectations regarding the access and use of knowledge.

1. Internationally there is a fast growing belief that taxpayer and charity funded research, e.g., research papers authored by university staff, should be freely available to the public. Recently various top institutions, e.g. Harvard, have made it mandatory for staff to make all their papers, including those published in..... journals, freely and immediately available online. It seems likely that this practice will become widespread, especially as governments force the issue, as in Scotland where all university staff must now comply with this practice.
2. Authors have learned that when referring to other people's papers, especially when quoting, working from online copies rather than hard copies is faster and less open to error.
3. Increasingly young academics do not use libraries.
4. Young people generally expect information to be free and instantly available from home and work desk.

In light of these contemporary background factors, the next section outlines a rough plan that a small group of people might use if they did not know that achieving great things is impossible.

Rough plan for launching world association and journals

1. Compose an email summarizing intentions which will then be used to
2. Form a committee of 100 economists endorsing this plan for forming the **World Economics Association** and launching three journals.

3. Membership initially will be free, but donations will be encouraged at the time of joining and as needed periodically thereafter. A nominal membership fee, e.g. \$15 might be considered after two years.

4. Membership drive

Compose emails for soliciting members. Obtain commitments from various existing economics associations, journals, and newsletters to send emails to their members and subscribers informing them of the formation of the WEA and its plans for three quarterly journals, etc. In excess of 15,000 people should be directly reached this way. Repeat mailings at intervals, each telling of the growing membership. This project will quickly become a topic of conversation among economists, especially on economics blogs. Given that the Real-World Economics Review has 11,600 subscribers and that the appeal of the WEA will be much wider and stronger, it seems probable that a membership, and thereby subscribers to the journals, in excess of 20,000 can be reached within two years.

5. Draw up a rough constitution which includes guarantees that no country or continent can come to dominate the organization.

6. The journals

-- Make rough plans for the three journals. One to be called *World Economics Review*. What is to be their focus? Line up editors and editorial boards. In their first year each journal would have only two issues, but four in the second year.

-- Each time an issue of one of the journals is published, all members of WEA will receive via email the contents page with links for downloading the whole issue and/or individual papers as pdf documents. (Experience with the RWER shows that under this setup the immediate downloading rate is surprisingly high.) Each issue will also be available for a fee either as an ebook or as a hardcopy. These would be printed and distributed through a print-on-demand publisher. This means merely emailing to the publisher the pdf document for the whole issue, paying a set up fee, probably about \$600, and deciding on the cover price of the issue. Orders would be directed to the print-on-demand publisher who will then post the hardcopy, and collect payment of which roughly 60% would be remitted to the WEA. The publisher would also be expected to market issues through Amazon.

7. Website: worldeconomicsassociation.org (This domain name has been reserved for the WEA)

The three journals

Access would be free to all WEA journals

Continuous online conference

In addition to the three journals there would be a section where members could post papers. The idea would be to simulate paper giving sessions at conferences, but ongoing and *on a larger scale*. Each section would have a leader or leaders who vetted papers and perhaps a list of members. There would be provision for

people to comment and respond to comments on the papers. Subject perhaps to some vetting, individuals would be free to start up new sections that defined new topics at any time. They would be free to define them with relation to other topics as they see fit rather than fitting them into the JEL Classification System. In this way, through the continuous online conferencing and the three journals, a new and continually evolving classification system would emerge

Job Ads

There would be a classified section for economist employment openings of all kinds (academic, government, business and think tanks) and organized by country.

Classification system

See above.

Possibly a textbook section

8. Finance

Grant

The possibility of getting a grant to get the operation up and running could be explored. However, in the age of the internet grassroots funding is, as Obama's campaign showed, more than adequate and comes free of hidden agendas and obligations.

Revenue

streams

There are at least three eventual revenue streams: one, from donations and membership fees; two, advertising; and three, the sale of print copies of the journals, most likely mainly to libraries.

Changing the textbooks and the basic narrative

The sociology or social structure of heterodox economics and the current neoclassical mainstream are radically dissimilar. The cohesiveness of the latter should never be underestimated, but often is because the solidarity of the enterprise means its practitioners have little inhibition against displaying their differences in public. By contrast heterodox economists are today loath to criticize each other publicly and until recently rarely communicated with each other, even on a socio-tactical level.

By definition, each heterodoxy has a major quarrel with orthodoxy, with each having its own point of divergence, and from which, even if it was not the origin of its founding, it now forms its primary self-identity. As a consequence not only does each heterodox school begin in isolation from other ones, but its primary point of reference remains the neoclassical mainstream. Historically there has been little interchange between different branches of heterodox economics, instead where inter-school exchange has taken place it has been mostly between neoclassical economics and individual heterodox schools. Upon reflection this is not as surprising as it sounds. Because the members of the various schools come to identify themselves in terms of their points of divergence from the dominant school they retain a working awareness of the common ground, usually quite large, that exists between them and neoclassicism. Between heterodox schools, on the other hand, their common ground is

their outsider status, so that their commonality relates mainly not to economic ideas but to the position of those ideas and their holders in a socio-cultural-economic structure. It is my experience that nearly all heterodox economists are more conversant with neoclassical economics than they are with any heterodox school other than their own.

A recent bit of history shows that this characterization of heterodoxy's disparateness is far from being an exaggeration. In the mid-1990s some heterodox associations came together to create a pressure group named Confederation of Associations for the Reform of Economics. They did so under the banner "to promote a new spirit of pluralism in economics, involving critical conversation and tolerant communication among different approaches". That phrase "tolerant communication" is so telling because no groups would ever think to come together to for the purpose of endorsing that who were not accustomed to mutual enmity. When the post-autistic movement was internationalized and placed emphases on pluralism, the leaders of CARE took a keen and supportive, albeit initially somewhat incredulous, interest. And not long after that they changed the name of their organization to Confederation of Associations for *Pluralism* in Economics.

Pluralism, both its ethos and epistemology, is extremely important, but no matter how robust it may become among economists it will never be a sufficient basis for breaking the hegemony of neoclassical economics. That will require a new cohesion of underlying economic ideas other than the neoclassical ones and which heterodox schools will in the main accept and, even more importantly, which their members will become in the practice of relating to their particular school of thought as they currently do with neoclassical ideas. It is at this macro level of the project for which much ground work needs to be done. It is also this need for a shared common ground and a sense of community, a bottom-up one preferably, which makes the founding of a world association essential.

This journal's editing initially focused attention on the need and possibility of strategic alliance between heterodox groups. Later the journal especially sought papers which developed the idea, particularly its epistemology, of pluralism. One reason for doing so was the expedient one of satisfying a readership. From early on website statistics showed that papers **not** focused either on attacking neoclassical economics or in some way on the economics profession as a whole were by comparison little read. In other words, in the main readers would read a paper centred on their school but not ones on others. It is only in recent years that by seeking out papers from a range of schools that apply economic ideas to recent economic events that the whole readership appears to have become at least momentarily involved with trans-school sets of ideas. More recently still, and this for me is the most encouraging thing yet, one hears rumblings about the need for a common set of ideas that frames the broad heterodox or post-neoclassical project.

Knowing what this would entail requires an understanding of and appreciation of the force of the central ideas that underlie the neoclassical project, most especially as redefined by Samuelson's 1948 textbook *Economics*, which amazingly continues to serve as the model for all the introductory level textbooks in wide use today. Prior to Samuelson's book, Alfred Marshall's *Principles* (1890) had been the leading prototype for introductory economics textbooks. Its first page offered this definition of the subject and which underpinned the basic narrative that developed through the long book.

'Political Economy or Economics is the study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely

connected with the attainment and with the use of the material requisites of wellbeing.’

In 1932 the British economist Lionel Robbins in his *Essay on the Nature and Significance of Economic Science*, in effect redefined economics for the English speaking world as the “science” of individual choice, the individual being conceived atomistically, i.e., as a determinant self-contained entity. Samuelson then adopted Robbins’s redefinition of economics in his textbook, using it as the reference point from which he constructed a new narrative for academic economics, and with the result that it became and remains the standard narrative approach to economics. Because it is inculcated into the student’s mind from the first week and every week thereafter, many economists, including heterodox ones, seem unaware of its hold on and significance for their thought. It is this idea – which pervades the economist’s mindset – that economics is the “science” of the choices of *isolated individuals with fixed and quantified preferences* that, on the one hand, enables economics to proceed in a formalistic manner and, on the other, justifies its ignoring economic phenomena that do not fit its methodology and this narrow agenda.

Any broad and lasting redevelopment of economics requires an introductory level text that redefines economics no less radically than did Samuelson’s and that restores the socially formed *and continually reforming* individual not just to the perimeter of economics but to its centre. It is the conception and eventual acceptance of such an individual that is needed to provide a point of narrative orientation for all or most of the heterodoxies, rather than, as now, their diverse disagreements with the neoclassical mainstream.

This new prototype textbook, that will provide a unifying narrative for 21st century economics, is probably yet to be written. Oddly, until recently textbook publishing editors, who are unaccustomed to such static disciplines, have been more aware of the need and opening for a new Samuelson that have economists. Correspondences tell me that that now is changing. And anything that can be done that draws heterodox economists together, like a world association and multi-school or pluralist journals, will bring the post-Samuelson era forward. In the period of the world association’s initial founding, that is, in its first two years with its first 20,000 members, the membership will be overwhelmingly composed of economists who, if not strictly heterodox themselves are nonetheless disenchanted with the neoclassical orthodoxy. The new organization’s existence, therefore, will bear witness to the need for a new underlying narrative and for new textbooks with which to educate the young and re-educate the old.

Because of the tenure system and the longevity of staff, changes in the programs of university economics departments would be slower to come. But not nearly as long as actuarial tables suggest. Despite their atomist ideology, economists are, even more than most academics, herd animals. The site of a global organization larger than the AEA and with more subscribers to its journals will split the old herd, making the new one, with all its inherent diversity, economics’ new mainstream.

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Comment

The operative word here is "somehow"

Herman Daly

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Mr Smith, whose address is listed only as "USA", (Richard Smith, "[Beyond growth or beyond capitalism](#)", *RWER* issue no. 53, pp. 28-42) is unhappy with me for arguing for what he calls "steady state capitalism". I have never used that term, always speaking of a steady state economy, which in my view is something different from both capitalism and socialism. Remember that during the cold war both capitalists and socialists claimed that their system would grow faster--would be least like a steady state. The steady state was an idea hated by both. I am more accustomed to attacks from capitalists, so it is at least a change to be attacked by a socialist. Mr Smith's unhappiness derives from my preference for the market over centralized planning as a tool for dealing with the single problem of allocative efficiency. Even after steady state economics advocates constraining the throughput of resources so that the market can no longer determine the scale of the economy relative to the biosphere, and limiting the range of income inequality so that the market could not any longer generate huge inequalities of power and wealth, Mr Smith is still unhappy. He believes that even such ecologically and socially constrained markets are bound to be destructive and lead directly to all the evils of capitalism as it exists today, evils that are certainly real and that he thinks only socialism can somehow cure. The operative word here is "somehow" – perhaps wiping the slate clean of deep-rooted institutions of division of labor and decentralized exchange of goods, services, and property will abolish the evils inherent in markets which he thinks must always be masters and never servants. Instead of markets should we not have another go at centralized rationing of goods and resources, collectivization of agriculture, abolition of exchange and money? No, let's be fair--he does not say anything so radical. But neither does he say anything specific or helpful about moving to a steady state economy, whether capitalist or socialist or neither.

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Comment

Go forth and observe:

answer to Peter Radford's [Whither economics? What do we tell the students?](#)

Merijn Knibbe [Wageningen University, Netherlands]

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'Far from being disconnected from the market economy, poor households, including those living on less than one dollar a day, are deeply invested in financial transactions. Because these transactions are mostly informal, thus undocumented, they remain invisible to the one-time visitors and others who look at written records. But if one were to take the trouble of visiting households twice a month over the course of a year, recording the details of all financial transactions, then one would recognize how diligently poor people, using a variety of instruments, manage their portfolios'

Anirudh Krishna in his review of: Daryl Collins, Jonathan Morduch, Stuart Rutherford and Orlanda Ruthven, *Portfolios of the poor. How the world's poor live on \$ 2 a day*. Princeton University Press, Princeton, 2009. *Science* 326 (December 2009) 1634-1635.

Peter Radford asks us, in this journal, what we should tell our students, given the disarray of the science of economics (Radford, 2010). My answer is clear: "find the facts". Fact finding is pivotal to scientific progress. The December 2009 issue of *Science* lists a number of recent scientific breakthroughs. All of these concern the discovery and investigation of 'novel facts'. With this, I mean *empirical* 'novel facts', as well as new ways to observe and measure such data. It is telling, as well as sad, that, in an economics journal, 'empirical' has to be added. But it has. Radford rightly divides the present science of economics into the study of 'economics' and the study of 'economies'. This schism is not just a matter of the inclination, education and focus of different economists (as is stressed in McCloskey, 2002). To an extent, it seems to be embedded in the very fabric of present day theory. In an article in a 'Festschrift' for Paul Samuelson, Hal Varian for instance states that, since its conception in the thirties of the twentieth century, the idea of revealed preference has made significant contributions to economic theory. But after an exhaustive investigation of the many attempts to *measure* 'revealed preference' and at the end of a career largely devoted to such attempts, he tragically exclaims: "We anticipate that in the future, revealed preference analysis will make a significant contribution to *empirical* economics as well (emphasis added, M.K.)" (Varian 2006). The idea of 'revealed preference' somehow seems to defy measurement. Despite the obvious failure of using the idea to fit the facts²⁹, revealed preference still is one of the staples of microeconomic theory. And 'revealed preference' is no exception. Neurologists like Lamme have, implicitly, evaporated the very ideas of stable and transitive utility functions as well as of rational behaviour (Lamme, 2006; 2009).³⁰ This of course goes a long way to explain why textbooks discussing the (always quite vaguely

²⁹ Tellingly, the science of marketing, which investigates how and why real people buy real stuff from real companies makes no use at all of 'revealed preference' or the 'homo economicus' and explicitly denounces these concepts: you can't use them to sell nylons. (Kotler e.a., 2006, p. 227; Verhage, 2004, p. 41).

³⁰ Different and often competing parts of the brain take different decisions based on incomplete data and different algorithms and that which we call 'rational consciousness' only gets to know about these decisions after they have been made. In the language of the economists: even if all these competing decision centers would be maximizing in a neo-classical way, Arrow's impossibility theorem would prevent the existence of a 'meta' transitive and stable utility function. Again and again it is shown that, when in a supermarket, people make other choices than when they make a shopping list at the kitchen table – *the consumer plans, the shopper decides*.

defined) concept of 'utility' have, for many decades, contained little, if any, information on how to measure it – there is nothing to be measured.³¹ Despite the lack of empirical content and its seemingly a-empirical essence, the model is still around, even in spite of the findings of people like Lamme, though their ideas do seem to be gaining at least some influence at last.

Monetary theory is another example. In the real world, the macro costs of using money are quite high. The costs of the entire banking system, the stock markets, a sizeable part of the insurance industry, the whole IRS and its equivalents outside the USA as well as all accountants and the tens of millions all around the world operating cash registers have, among other costs, to be counted as part of the macro costs of our monetary system. But does anybody know a textbook of economics which even mentions this rather obvious fact, or discusses why we use money, *despite* these high costs? Instead of this, the a-historical and counter to the facts myth 'barter versus monetary exchange' still abounds in economics textbooks (and internet F.A.Q. sites). But just as we did not start to use gasoline to increase the efficiency and speed of horses, so the use of money did not spread because it enhanced the efficiency of non-monetary activities. The use of money spread because a thing called 'a monetary economy' grew next to the non-monetary economy, with new products and techniques. And important aspects of the non-monetary economy still linger on. About half of the stock of capital in modern economies consists of houses – which are of course mainly used by families in their different stages, which are largely organized on the basis of a non-monetary system of division of labor based on age, gender, skills, position in the family and moral values.³² But such well known findings and ideas on the history of money are ignored in the textbooks, and scientific articles on the essence of money show an appalling lack of knowledge of the historical record (an overview in Visser, 2009). Again, theory takes prominence over established fact. Sometimes I get the impression that part of theoretical economics is more about science fiction than about the real world: weird aliens hovering about in a strange universe where friction and gravity do not exist. But students do have to learn this science fiction, and are not taught how to measure and investigate the real world.

Of course, economics as a science has, during the last century and especially after about 1920, made great progress in measuring and investigating economic phenomena. Just think of the magnificent system of the National Accounts, which combines hundreds of thousands or even millions of micro-data into a coherent macro economic whole. To me, that's the real 'sound' or 'non-trivial' micro-foundation of macro economics, showing, unlike DSGE models, the results of real choices of real people. Psychologists and neurologists are making great progress in measuring and investigating how choices really are made (therewith unintentionally evaporating the notion of utility and the maximizing individual in the process). Websites with high quality in depth and/or comparative economic information have proliferated (among many, many others: www.cia.gov; www.census.gov; www.cbs.nl). Also, the GFC has made it clear that, as many data on recent economic phenomena are published much faster than some decades ago, governments can act much swifter to crises (a fast, effective and smart example of effective government intervention was the German 'Schrottpremie' or 'cash for clunkers' system).

³¹ Surprisingly, the title of the book in Dutch in which Lamme popularizes his idea has to be translated into English as either "There is no such thing as a free choice" or "There is no such thing as a free will". Lamme, 2009.

³² One could state this as follows: total production in an economy (monetary as well as non monetary) is equal to: $Y_{total} = f(a_1(K_1, L_1)) + f(a_2(K_2, L_2))$. a_1, K_1, L_1 being technology in the monetary economy and a_2, K_2, L_2 being technology, capital and labor in the non monetary economy. Empirically it seems that $K_1 \approx K_2$ (value) and $L_1 \approx L_2$ (hours) while Y_{total} is a multi-dimensional concept, consisting of money as well as amounts of non-priced goods and services and data on longevity, morbidity and the like.

So, we do measure the economy and we have become much better and much faster at doing it. Progress is made every day (Elekdag and Lall, 2008). But are our students even aware of this? Do they learn how economic phenomena are measured and do they learn to do this themselves? Do teachers tell their students the importance of knowing the details of definitions? In many sciences, students have to spend, from the first day on, long hours on the tedious process of acquiring the skill to observe, measure and catalogue facts. Textbooks of these sciences bristle with famous discoveries and students often have to acquire detailed knowledge of this kind of information. Not so in economics (a point also made in McCloskey, 2002). Do we teach them how to gather dependable, reliable, representative prices to construct the price index? Do we send them to companies to gain first hand experience with, among other things decisions on investments? Do they have to spend time with the travelling salesmen, this 'nervus vagus' of the modern market economy. I can assure you that all of these activities are very possible – and students love them! I do have to admit that, especially in business schools and the like, there seems to be some progress into this direction. Also, 'behavioral economics departments', which tend to attach much more importance to this, are spreading like wildfire.

But school is not always fun and exciting – and maybe we should, sometimes, make it even more boring. Students of 'old-fashioned' economics still do not have to devise and carry out measurements, to investigate the history of national accounting or of short term economic indicators or to discuss older and newer concepts of core concepts like 'households' or 'consumption' – let alone the development of households (number of people, income, stock of capital, spending, debts, household technology). All this, while such activities are of overriding importance to the work of non-university economists at the OESO or the IMF. Not coincidentally, the websites mentioned above always pay ample attention to details of definitions and methods of measurement, just like all the specialized organizations which assemble, digest raw economic data and publish the statistics which are our 'novel facts'. Our students – and teachers, and this does not only hold for the neo-classical inclined – have to know about this kind of work. Working at organizations like the OESO and the IMF, they will often have to use tons of statistics, and they do need to know about the way these are constructed and assembled. And yes, that makes for quite a boring part of the curriculum. Alas. And it also won't show up on the publication lists of their teachers. Alas.

But teaching our students how to gather and digest raw data gives them the implicit message that there is something to measure, that it's worthwhile to do this and that it is one of the tasks of university trained economists to be involved in the process of gathering data. We do have to think about definitions, about the questions that new companies often are not included in registers used to gather data, about the details of the comparison of price indexes of different countries (this led the European Union to the introduction of the Harmonized Index of Consumer Prices, the HICP – another advance in measurement). There is something better and, in the end, more interesting to do than quarreling about esoteric theories. Students have to study information and discuss definitions and methods as can be found on, among many other sites, <http://www.census.gov/wholesale/> - though I do admit that reading science fiction is more fun.

I do not advocate any kind of simple empiricism. To the contrary. The way variables are defined influences the outcome of the measurements and, therewith, our lives. Indices of consumer prices play an important role in wage negotiations. The HICP does not include owners' equivalent rent for the price of owner occupied houses, the Dutch (and the German,

and the USA) consumer price indices do. If rents rise faster than other prices, the Dutch consumer price index will show a higher rise than the HICP – and there will be more pressure to increase wages than if the HICP is used. And if we do not include environmental damage in GDP, China will in all probability surpass the USA as the largest economy of the world towards the end of Obama's second term (PPP-exchange rate). If we do, the current order might last four more years. But taken at face value, this is another reason to teach students how to find the facts – they have to be aware of such problems. And this may channel their, and our, attention away from silly quarrels about outdated concepts and towards real problems – like the costs of living of the elderly, which seem to rise faster than those of the general population (Bureau of Labor Statistics, 2010).

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