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CONTENTS

6 BookStore
14 Part 1: Modern Money Mechanics

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WHEN SMART GUYS GO WRONG — GOOD AND EVIL IN ECONOMICS

Milton Friedman and Conservative Economics: Gatekeeper Economics II

When Ivory Tower Theory and Practice Go Bad: The Milton Friedman Aberration – Capitalism as Fascism to Create a World that Fits Friedman's Idiosyncratic and Normative Theory of What the World We Live in Should Be

*By W. Robert Needham**

"A theory however elegant and economical must be rejected or revised if it is untrue; likewise laws and institutions no matter how efficient and well-arranged must be reformed or abolished if they are unjust."[1]

"The transition from an ordinary to a scientific attitude of mind coincides with ceasing to take certain things for granted and assuming a critical or inquiring and testing attitude."[2]

"…The idea of a self-adjusting market implied a stark utopia. Such an institution could not exist for any length of time without annihilating the human and natural substance of society; it would have physically destroyed man and transformed his surroundings into a wilderness."[3]

"It is very unlikely that…normal scientists would hold on to a theory which is logically inconsistent."[4]

"While the actors and instruments of economic repression are hidden in the "ethically neutral" and impersonal mechanisms of the market and of economic policy, the economists and the school of thought which inspired the application of the Military Junta's "neo-liberal" policy measures bear the moral and intellectual responsibility for the impoverishment and economic repression of more than three quarters of Chile's population."[5]

At one level this paper is an extension of documents on my web page[6] particularly of *Gatekeeper Economics I – Economy and Society – Conformance with Experience?*[7] And, *Profit as the Root of all Evil: The Devil is in the Details.*[8]

But it also has a background in: *The Current State of Economics as a Discipline: The Teaching of Economics – Introduction and Some Suggested Readings: Can Economics be Grounded in Reality?*[9] And in, *Reforming Economics – Ten Quick Steps to Reality Economics.*[9] And most recently *The War Functions of Mainstream Economics?*[10]

The original paper also had an immedi-

Continued on page 2

* Judith Miller made helpful comments on an earlier draft in 2008. Errors of any sort, then and now, are mine alone. This present version includes a lengthened bibliography and some additional citations. I came to the Warren Samuels 1975 *JEI* Symposium (see Bibliography) only with a reading in 2012 of Marjorie Turner's, *Nicholas Kaldor and the Real World.* I am pleased to note the consistency of my paper with the more door-to-door critiques of the Chicago School found in Samuels. I also read Melvin W. Reder, "Chicago Economics: Permanence and Change," *Journal of Economic Literature*, vol. 20 (March 1982). My argument about Freidman's hypocrisy stands unscathed.

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Friedman *from page 1*

ate purpose in supporting my letter, dated August 20, 2008, sent to Dr. Robert J. Zimmer, President of the University of Chicago opposing the establishment of the Milton Friedman Institute. The letter is in Appendix 1.[11]

The paper brings forward, again, many professional judgments, that, seemingly, have either been forgotten or ignored; (perhaps some were legitimately not known), and in any case not answered, that economists and political economists and theorists have made of mainstream economics[12] (as neo-classical micro-economics) and of monetarist thinking and practice. Discipline reform/revision is implied. Mainstream economics (as neo-classical micro-economics) and monetarist thinking and practice are linked through the assumptive notion of free markets. If, rather than *a priori* theory, reality and a real concern for science had dominated the discipline of economics, it might be held that both mainstream economics and real world economies would not be in the fragile states in which they currently find themselves. Such a concern implies a return to political economy as suggested by Wootton in 1938.

Perhaps the best starting point for understanding markets and individuals in markets is given in terms of *slavery not freedom* in the sense that: "The dominant consideration in our economic system is not what people want, either as consumers or workers, but what people can afford or be persuaded to buy, and what they can be persuaded by force of circumstance to do for money, as a job. To put the matter another way, the modern economy is driven, not by the aggregate desires of what people want out of the economy, but by what the economy can get out of them. The only fitting word for this is slavery."[13]

To emphasize, economic problems stem from uncritical indeed seemingly *blind* adherence to, and religious faith in the market god of laisser-faire economics of the Friedmanite and mainstream sort.[14]

In my *Profit as the Root of all Evil,* the link between capitalism and fascism is given. It is asserted: "Capitalism as Fascism: "Fascism should more appropriately be called corporatism because it is a merger of state and corporate power."[15]

And asserted: "Private enterprise capitalism in control of the state is the root cause of problems. Never privatize! There is no free market only power and always shirking of social responsibility by those with power. [including those who attempt to exercise a right-wing monopoly of knowledge in the definition of what is to be taught in the teaching of economics]"[16]

The economic and social system of the fantasy world, competitive capitalism, to which Friedman[17] adheres was fabricated[18] and presented to the world in 1962 in the book *Capitalism and Freedom.* In 1968 CB Macpherson's review of that book was titled *Elegant Tombstones: A Note on Friedman's Freedom.* Macpherson's review is a devastating comment about Friedman's book that stands to this day. Macpherson's last two sentences read: "The logical liberal will reject his [Friedman's] fallacious proof that freedom of the capitalist market is individual economic freedom, his undemonstrated case that political freedom requires capitalism, and his fallacious defense of the ethical adequacy of capitalism. The logical humanist liberal will regret that the postulate and the fallacies make *Capitalism and Freedom* not a defence but an elegant tombstone of liberalism."[19]

Professor of Corporate Law Harry Glasbeek has written: "…Macpherson's critique of Freidman is that workers are compelled participants in labour markets, not voluntary ones. The insight into Freidman's reasoning undermines it completely. There are many other persuasive critiques of market modeling."[20]

Related and emphasizing the positive freedom concept that Friedman ignores in his sole and maniacal reliance on negative freedom Macpherson said: "So far the market view has prevailed: 'liberal' has consciously or unconsciously been assumed to mean 'capitalist.' This is true even though *ethical liberals*, from Mill on, tried to combine market freedom [freedom from coercive constraint] with *self-developmental [that is positive] freedom*, and tried to subordinate the former to the latter. They failed…."[21]

It is interesting that in 1962 while Friedman published *Capitalism and Freedom* Macpherson published his scholarly treatise *The Political Theory of Possessive Individualism.*[22] "Elegant Tombstones" appeared in the fist issue of the new *CJPS* in 1968 (after the split between CEA and CPSA which meant the disappearance of CJEPS) and was republished in 1973 in *Democratic Theory: Essays in Retrieval.* This suggests that Friedman either did not read or, if he had read, he chose to ignore Macpherson's indisputable logic. Retrospectively had Friedman read *The Political Theory of Possessive Individualism* (the origins and logic of market liberalism) *and revised his thinking* the great damage done in Chile in 1973 and later and in other countries might have been avoided.

But timing is not the main issue. Andre Gunder Frank put his finger on the issue in his letters to Friedman and Harberger. There Frank informs us[23] that Chicago economics students were not advised to read widely and in effect to raise no question but take what was taught in the classroom as the "gospel" truth (seeking no other truths not even their own). This is one reason why *smart guys can go bad*. Friedman ignored (1) the truth in Macpherson, and in Polanyi (1954) and (2) the real science that is involved in asking the big critical questions (see Dewey's 1903 Chicago publication "Logical Conditions of a Scientific Treatment of Morality"). He did so, it can be held, because it would have meant a challenge to his *a priori* classroom assumptions. Assumptions deliberately designed to define and fabricate the abstract world he wanted to work with. This practice carries over into mainstream courses everywhere. And it is found in the unanswered arguments of Joan Robinson in her debates with Paul A. Samuelson on a fundamental flaw in neo-classical theory.[24] It seems that such practices do not reflect role models that should be emulated.

At the heart of Macpherson is the corollary moral implication of capitalism – that: "…a capitalist society…*compels* a continual net transfer of part of the power of some men to others, thus diminishing rather than maximizing the equal individual freedom to use and develop one's natural capacities which is claimed [by the proponents of capitalism]."[25]

Elsewhere Macpherson writes that in liberal capitalism, "…property as a right needed by all to enable them to express their human essence is denied to many."[26]

And he stated: "…when the liberal property right is written into law as an individual right to the exclusive use and disposal of parcels of the resources provided by nature and of parcels of capital created by past work on them, and when it is combined with the liberal system of market incentives and rights of free contract, it leads to and *supports a concentration of ownership and a system of power between individuals and classes which negates the ethical goal of free and independent individual development.*"[27]

In short, "Those who in a market society have no land or capital have no extractive power. They also may be said to have, at any given time, no power (or only negligible power) of any kind. For their productive power, their ability to use their energies to produce goods, has continuously to be sold to someone who has land or capital, and sold for a wage which goes to replenish the energy which makes their capacities saleable next week. They are left continuously with no productive power of their own. If they have any leisure, and any energy left for leisure pursuits, they have indeed some power left, some ability to use and develop their own capacities for themselves. But…with wages always tending to a subsistence level and energies tending to be fully absorbed by the productive work for which their energies have been purchased, the amount of such power could be treated as negligible. Thus the whole power of each non-owner could be taken to be virtually the same amount as his extractive power; the latter is zero, the former is negligible. Those who have the land and capital [the means of existence] have extractive power [essentially, control over others and their positive and negative freedoms]. In a full capitalist society, with its substantial concentration of ownership of capital and productive land, a few men have extractive power over many; hence each of the few has extractive power equivalent to the whole (or virtually the whole) power of several other men. The greater the concentration of capital, the greater the proportion of each owner's entire power consists of his extractive power. This can be readily seen…[by]…expressing the amount of benefit a man is able to extract from others as the (whole or fractional) number of men he is able to 'oppress.'"[28]

Mainstream neoclassical economists generally engage in *a priori* theoretical fabrication – or *fabrication by assumption* – specifically to be of a free-market laissez-faire, minimalist government world, and, like Friedman, they ignore Macpherson's contributions. What is assumed *is not just to be taken as given*, but, as it turns out, is *to be taken as right and appropriate for all times and places and peoples*. So down with the concerns of Rawls with truth and justice and Dewey with moral science.

Moreover, it is regarded as right and proper that instructors of mainstream economics take the neo-classical micro model, generally known as *the theory*, as the starting point for economics instruction. Since students are *forced*[29] to start off on the wrong foot it is no wonder that the world's problems are so severe, cumulative and, as George Stigler (former Chicago Economist and a Nobel Prize winner) has said, *conservative*! Note that this implies that *mainstream economics has in fact been normative economics from the very start.* Milton Friedman's mistake was blinding, it led him to go beyond merely taking the system as given to take his *a priori* and/or *normative* vision[30] to be what all governments and (the discipline) should be trying to create through real world policies.[31] This made Friedman what is called an extreme *outlier* or *aberration,* in the set of data points of conservative economists.[32]

Friedman's blindness[33] also meant he missed the major inconsistency in his argument and practice. He defined freedom only in terms of negative freedoms (freedom from coercion). Yet. the Junta, Pinochet and by implication Friedman and the Chicago boys, ignored that the negative freedoms of the Chilean people were denied to them by the very people running under that banner. Not having the negative freedom to be free from Friedman *et. al.* they died or lived lives in repression.[34]

Stigler's seemingly mild words, below, provide perhaps more normal data point positions for mainstream economists. In retrospect there can be no doubt that Friedman, too, was wanting to do anything but *contribute to the wind* in a progressive sense.

"…to maintain or preserve the existing system…[at least in] the basic structure of society…in a period of considerable social changes…conservatives possess less than they want of the past…. More broadly one can say that economists have not been among the leaders of any important movement for the adoption of policies incompatible with the conservative position. They have not been leaders in the sense of being active public propagandists for the non-conservative policies nor in the sense of providing a blueprint of reform or even a trenchant indictment of the real or alleged failures of conservative economic policy. They have been camp-followers, when not critics, in the area of egalitarian policies, in the areas of state intervention in competitive markets, including agriculture, labor, and housing. In fact *they have been leaders only in the areas of freer trade policy and antitrust policy, two traditional elements of the conservative position, and in the fields of monetary and fiscal policy, where the paramount role of the state has always been acknowledged although the script for that role has been much debated.* …Once violent debates over questions like the propriety of free public libraries have vanished from discussion, and once absurd heresies like governmental support of an agricultural class have won, if not our support, at least a measure of tolerant resignation. We [conventional economists] shall no doubt continue to bend before a strong wind, but I consider it a remarkable effect of our professional [conservative] discipline that we shall not be contributing to the wind."[35]

The point is that if and when they assert that, they, mainstream economists are morally neutral and non-normative this seems to be mere deceptive pretense, for the opposite is true. For all their protests of value free neutrality, many, but certainly not all, neo-classical[36] economists agree that capitalism is an immoral system. Their agreement clearly cannot be seen as constituting value-free positions. It seems that explicit agreement with the moral judgment implies the moral necessity to take a deliberate approach to discipline change/reform that would clarify and make explicit the social/moral nature of capitalism and of proposed reforms. The fact that some neo-classical economists would argue that capitalism is not immoral seems an indefensible refuge in light of both facts and definition.

To illustrate: I have had an unanswered debate on "neutrality" in economics with a micro-economics theorist, who just happens to have been a former President of the Canadian Economics Association. He "does not agree that capitalism is an immoral system." Moreover, he argues that neo-classical economists practice a discipline that is *amoral* "because it does not take a position on moral issues" and that *being amoral* is different from being "deliberately blind to right and wrong."

Note that the assertion that capitalism is not an immoral system is not an amoral and value-free statement – so that the former CEA President has implicitly committed himself to holding a moral position. Moreover, the assertion seems to imply he has a definition of capitalism that has, or may have, implications that are different from those of the standard scholarly definition of capitalism used by political economists (Paul Sweezy, Maurice Dobb, Joan Robinson, John Eatwell, for example) and political philosophers and theorists (for example, C.B. Macpherson, Gerald Cohen, John McMurtry, Michael Walzer).[37] The response to a request for his definition of capitalism has so far been that "that is difficult to say." One inference that can be drawn from this exchange is that mainstream economists, as Friedman illustrates, are playing useless games – irrelevant (except in the sense of dangerous) to the world in which we live. They are not teaching students the fundamental things they need to know.[38] The exchange also provides some explanation of the fact that the vast majority of Honours graduates from economics programs leave without knowing the standard scholarly definition of capitalism and the logical moral/human implications of it.[39] In this way the 'other world' contrived by neo-classical economics serves the purpose of diverting attention from this world.[40] It can be said that neo-classical economics dulls social consciousness through, in effect, a form of 'brainwashing.'[41] Economists contribute more than enough to bankrupt society in value terms. The same point is to be made with respect to Milton Friedman but he took attempts to dull social consciousness outside the classroom by controlling the lab, for example, in Chile.

Prescribed policies by conservatives are biased in favour of the ruling capitalist class and inevitably perpetuate what is wrong. In other words conservative policies cannot, except in the breach, by definition address the broad social problems[42] experienced by the people at large as victims of the system. This is because the system is taken as a given, it is also taken as the end. It can be held that people are *uncaringly* taken as means to be used by the government/business control apparatus.[43] In the process, the victims come to be blamed for the problems they experience. Indeed, *the theory* suggests that each person gets exactly what he or she deserves at the margin of his or her contribution…that is, *justice is done or served by assumption.*[44] So just why it is that real injustices actually arise is not a question that economics students are asked to address; this goes along with ignoring our mutual obligations (under the UN UDHR) to teach and respect human rights,[45] let alone contributing to any progressive expansion of human rights.[46]

In teaching economics, one of the nonsense claims, sometimes used as an excuse by perpetuators of the mainstream's revealed-by definition *truth*, is that *there is no alternative*. In other words it is as if there is no alternative but to let evil beget evil, and to let injustices pile on injustices for we must uphold the system of man-made private property rights no matter the UN UDHR.[47] But this is blatant nonsense. In fulfilling its function as the system's self-appointed Gatekeeper the mainstream of the discipline deliberately turns its back on truth and alternatives[48] and chooses to work with the free-market model though it has been rejected by so many.[49] The gatekeeper function carries beyond policing the discipline so that only the *right sort of material* is taught, to rejecting out of hand substantive contributions to knowledge arising from non-discipline and perhaps trans-disciplinary perspectives that raise questions about the capitalist system and the validity of economic theory and practice.[50] One can note that not all students at the University of Chicago have succumbed to the coercive forces placed on them by their instructors. World famous development economist Andre Gunder Frank, when he was a graduate student at Chicago left Friedman's workshop because he "… could not swallow the necessary measure of Friedman's scientific standards" and was told by Friedman that he, Frank, "…would never do as an economist [at least of the Friedman scientific persuasion – to measure the world in partial equilibrium]…and would do well to go look for a job teaching somewhere in a small liberal arts college."[51]

In the case of Friedman it appears that no matter that the theory doesn't work the theory is nevertheless right (because it is his classroom logic and obsession), thus the world of reality is wrong so the world of reality must be bent to conform to the idiosyncratic normative theory that he likes and believes in. Such arrogance seems to mirror that of Hitler and Mussolini in advancing their *corporatist vision.*[52] In practice real world application of Friedman's normatively given view of *what the world should be* has meant trying to wipe the slate clean of socializing influences, progressive measures and left wing gradualist governments.[53] So, away with the UN-UDHR. Communitarian individualism, according to the Friedman edict has to be replaced by the unconstrained laissez-faire market individualism agreeable to the Friedmanist capitalist. After the application of *shock therapy* of manipulated crisis and violence, including torture and its attendants,[54] people on the spot are not very likely to question and/or notice the laisser-faire lack of logic. Moreover children born into the system, and knowing no other are more easily trained to passive uncritical acceptance, that is, to take the system as given (and so it is with neo-classical theory). Shock therapy ties Friedman and his Chicago Boys to the CIA[55] and to state sponsored murder. Indeed genocide.[56] Friedman, like mainstream economic theory, clearly fails both Rawls and Dewey, cited at the outset. World famous economist John Kenneth Galbraith, whose work is also ignored by many in the mainstream, has said: "Milton's [Friedman's] misfortune is that his economic policies have been tried…. If all else fails, immortality can always be assured by spectacular error."[57]

And James Galbraith, more recently, tells us that, "Serious people should not concern themselves with these ideas any more."[58]

In fact, it can be emphasized, if classroom *mis-education through brainwashing* (including the necessary repetition of unthinking rote learning of mathematical formulations) constitutes a form of slate cleaning this sort of passive uncritical acceptance to teaching seems to be what dominates instruction in mainstream economics – with or without Friedman (but consistent with his normative approach). Joan Robinson made this point in 1960 in saying: "The prestige of the teachers and the books bears down on the serious student with a heavy weight. He learns to distrust his native common sense and to curb his generous impulses. He submits himself to [or is subjected to] a course of mis-education and comes out, not 'by the same door wherein he went' but by another door, in the wrong street."[59]

As suggested earlier, Friedman's commitments have led to his association with the attempt to establish and prop up the evils of right-wing governments around the world.[60] Probably the best and most thorough work on this is that of Naomi Klein cited above (but see also Susan George,[61] and earlier Andre Gunder Frank and Chossudovsky cited before).

Frank Cunningham also wrote: "The government of Thatcher and Reagan advocated using state power to enforce market capitalism, while limiting the state itself, but instead they have expanded the state, mainly into the military. Post 1973 Chile, with a state economic policy specifically designed for it by Milton Friedman (shortly after the democratically elected President Allende was machine gunned to death in his office by soldiers of the government that replaced him), is a more grotesque example. The existing 'free' market, in addition to bringing economic chaos, has coexisted with one of the most coercive police states in our times."[62]

Overall, the Friedmanist and mainstream projects are inconsistent with both the concept of University and science and with human rights advancement. In reality there is no free market.[63] Institutional economic power, still lingering slavery, and ubiquitous wage and debt slavery make the point, along with the fact that associated political and military power and persuasion trumps morality, fairness and democracy and thus human rights. (Human rights extensions represent an extension of *substantive democracy.*) Though market power dictates, in fact race, culture and history still matter and morality, fairness and democracy[64] are recognized, at least amongst intellectuals, as values that preserve and strengthen local and wider communities along progressive lines consistent with the UN UDHR.

Even earlier: Keynes' indictment of monetary policy from the 1930s is an apt general description of monetary and free market policy and should have forewarned us as to the nature of results to be expected from Friedman's dangerous and maniacal goals some 40 years later.

"…monetary policy (is) "simply a campaign against the standard of life of the working classes" operating through the "deliberate intensification of unemployment 'by using the weapon of economic necessity against individuals and particular industries" a policy which the country would never permit if it knew what was being done.'"[65]

Joan Robinson diagnosed the discipline of mainstream economics as having *mumpsimus* (persistence in an error long after it has been revealed).[66] while Kaldor described the manifestations of the disease in the following terms: "…the prevailing theory of value…"equilibrium economics" is [fabricated to be] barren and irrelevant as an apparatus of thought to deal with the manner of operation of economic forces, or as an instrument for non-trivial predictions concerning the effects of economic changes, whether induced by political actions or by other causes…. The powerful attraction of the habits of thought engendered by 'equilibrium economics' has become a major obstacle to the development of economics as a *science* 'meaning by the term "science" a body of theorems based on assumptions that are *empirically* derived (from observations) and which embody hypothesis that are capable of verification both in regard to assumptions and the predictions…. 'In fact equilibrium theory has reached the stage where the pure theorist has successfully (though perhaps inadvertently) demonstrated that the main implications of this theory cannot possibly hold in reality, but has not yet managed to pass his message down the line to the textbook writer and to the classroom. Yet without a major act of demolition – without destroying the basic conceptual framework – it is impossible to make any real progress. On the one hand it is increasingly recognized that abstract mathematical models lead nowhere. On the other hand it is also recognized that "econometrics" leads no where' the careful sifting of statistics and the development of refined methods of statistical inference cannot make up for the lack of any basic understanding of how the actual economy works…. Sudden bursts of fashion are a sure sign of the "pre-scientific" stage, where any crazy idea can get a hearing simply because nothing is known with sufficient confidence to rule it out."[67]

Note that Kaldor and Dewey (cited at the outset) would seem to be at one with respect to science in economics.

Additionally from B. McFarlane: "…the general equilibrium economists' pretensions to have established 'uniqueness' have been destroyed by P. Sraffa; their claim to have established 'stability' has been destroyed by Kaldor..., while the whole exercise of establishing 'optimality' has also been undermined thoroughly by K.J. Arrow, a pioneer of the theory. It remains to be said that no convincing replies to Cambridge theory have come yet from the other side. University lecturers plough on, teaching mainstream economics regardless."[68]

More generally the entire logical positivist apparatus in all sciences – social and physical – has been open to question. The critique is far more than based simply on alternative approaches with different ideological bases.[69] Many scientists now agree that: "…when the history of science is studied, we see that scientists make concrete achievements through relying on intuition, guessing, imagination, hunches, lucky accidents, bluffs, propaganda, myth, metaphysics, induction and falsification; [everywhere,] says Feyerband, 'science is enriched by unscientific methods and unscientific results.'"[70]

The social scientist must have wider interests than those of discipline specialists. In the view of the philosopher Popper, at stake is science itself.

"The growth of normal science, which is linked to the growth of Big Science is likely to prevent, or even destroy, the growth of knowledge, the growth of great science. I regard this situation as tragic if not desperate; and the present trend in the so-called empirical investigations into the sociology of the natural sciences is likely to contribute to the decay of science. Superimposed upon this danger is another danger, created by Big Science: its urgent need for scientific technicians. More and more PhD candidates receive a merely technical training, a training in certain techniques of measurement; they are not initiated into *the scientific tradition, the critical tradition of questioning, of being tempted and guided by great and apparently insoluble riddles rather than the solubility of little puzzles.* True, these technicians, these specialists, are usually aware of their limitations. They call themselves specialists and reject any claim to authority outside their specialties. Yet they do so proudly and proclaim that specialization is a necessity. But this means flying in the face of the facts which show that great advances still come from those with a wide range of interests. If the many, the specialists, gain the day, it will be the end of science as we know it – of great science. It will be a spiritual catastrophe comparable in its consequences to nuclear armament."[71]

Nobel Prize winner[72] John Polanyi's words are relevant: "…*It is the moral force of science* – evident in such individuals as Bertrand Russell and Andre Sakharov – that makes it effective…. Scientists must support human rights, because if democracy dies so does free enquiry. [And he uses the words], "commonality of people's experience, …commonality of human worth, … we must treasure the experience of others. All are discoverers, and if we disenfranchise any, all suffer…. Academies of Science use their influence around the world in support of human rights. They should do the same for democracy, for the death of democracy is the death of free enquiry. The bell tolls for us."[73]

In the same vein the late Professor Edward Said, University Professor of English and Comparative Literature at Columbia University, and Noam Chomsky, Institute Professor Emeritus and Professor Emeritus of Linguistics at the Massachusetts Institute of Technology, provided succinct and relevant statements when the University of Toronto presented them with honorary degrees at the June 2000 Convocation. From Said: "…there can be no standing aside and refusing to enter a controversy just because one isn't an expert or directly involved. *As searchers after truth*, we must…raise questions when docility is often required, make trouble when submissiveness is expected, and express dissatisfaction when a sort of lobotomized passivity is aimed at."

[And from Chomsky, consistently.]

"Virtually every-dynamic component of the modern economy, from computers and the Internet to the biology-based industries, is to a considerable extent an outgrowth of university research, one of the many ways in which costs and risk [of private business] are socialized in *what is misleadingly described as a free-enterprise market economy.*"[74]

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So Milton Friedman is or was an aberration. Freidman, accompanied on the low road to laissez-faire markets by mainstream neoclassical economics, has contributed to the discipline's on-going mis-education of students and to mis-directed national policy, with a full range of human rights abuses and other social costs both at home and abroad. Items under my name given before and in the bibliography point the way to reform in ways that would avoid criticism by Rawls and Dewey, Cohen and Popper and by the many in the discipline already noted here and elsewhere. My web page is a more complete outline that looks to transcend *disciplinolatry*. One might best start with the Political Economy Table.[75] It is multi-dimensional, trans-disciplinary, open-ended and it makes no assumptions. It is a base for starting with the truth consistent with Rawls and Dewey.

In the way of an aside I offer the following as a start to a Reformation Economics Project.

Some Specific Suggestions for Teaching Reform

From the outset correct Friedman's mistake with respect to reading by asking students to read as widely as possible. One good way to assist in this is to acquaint students with the History of Economic Thought Website: http://cepa.newschool.edu/~het. You might ask them to find someone that looks interesting and write a paper on the chosen he or she and/or School of Thought within which he or she is placed.

Briefly, and as a partial overview, one should assure that students understand the UN UDHR and its implications. Ask them as a term project, to be vigilant to assess whether, and if so, in what regard, what you teach violates, the UDHR.

This should go hand in hand with a study of the definitions of economic and social systems and their implications. My Political Economy Table noted above and the Essentials of Capitalism in Definition: From Adam Smith to the Present Day: https://artsonline.uwaterloo.ca/rneedham/sites/ca.rneedham/files/needhdata/CapitalismsEssentialsREV4290307.pdf will assist in this.

In this connection, for Canadians and, perhaps particularly others, John Ralston Saul's book, *A Fair Country: Telling Truths About Canada*, should be essential reading in economics and other areas. Saul demonstrates that we Canadians do not have to, and ought not to, import ideas from others[76] to understand ourselves. Our cultural roots are found, on the ground as it were, and directly stem from what we have learned from the aboriginal peoples of Canada.

"…Our deep roots are indigenous, and there lie the most interesting explanations for what we are and what we can be…. What we are doing is building a philosophy of minorities…a Canadian approach to philosophy…. The difficulty is that much of this work is being done by people whose references in political philosophy, to say nothing of sociology and economics, are drawn almost entirely or entirely from the Euro-US models. The words and concept[s] they are attempting to rearrange to support what they are doing in Canada were actually developed in the first place to do the opposite. They attempt to attach the Canadian phenomenon unto those liberal or conservative models, and in that way abort their own process…. If our elites remain imprisoned in an inferiority complex that tells them we can only do what we derive from elsewhere, and if we continue to organize our education and our research to give comfort to this insecurity, then no language will be developed to describe what we are actually doing…. At the heart of the idea of minimal impairment is an embracing of complexity as a strength. Learning to live with complexity and uncertainty is all about reinventing social tension as a positive. And out of that comes the idea that a clear resolution of complex situations often leads to injustice. It is wiser therefore to accept that complexity is a strength and that authority must be used in a spirit of minimal impairment."[77]

Ask students about every day concepts, for example, democracy and freedom. Are they/we free? In what sense(s)? What is the meaning of *Freedom is just another word for nothing left to lose*? Use such a discussion to assure they appreciate the meanings of slavery, wage slavery and debt slavery.

Joan Robinson's *Teaching Economics* is important at every level. Her 1973 book with John Eatwell (*An Introduction to Modern Economics*, Toronto: McGraw-Hill Book Company, Limited, 1973), is informed by her *Teaching Economics* from 1960.

Major attention should be given to upsetting the myths of neo-classical economics by replacing them with accounts of reality, (*many, in fact, known since the time of Adam Smith*). For example, the reality of prices determined in relation to costs. In this regard one might usefully ask students to take walks along the main street of any town and ask what happens in each enterprise and institution. This will assure they start off knowing that *prices and outputs are administered to markets* with the primary purpose of *taking*, as Rowbotham said earlier (Rowbotham, Michael *The Grip of Death: A Study of Modern Money, Debt Slavery and Destructive Economics*). But Rowbotham's argument seems a version of Macpherson's moral corollary to the system's standard definition specifically: "...a *capitalist society…compels* a continual net transfer of part of the power of some men to others, *thus diminishing* rather than maximizing the *equal individual freedom* to use and develop one's natural capacities which is claimed [by the proponents of capitalism]."[78]

Friedman's efforts contributed to coercion beyond the system's normal unjust compulsions; so, in agreement with Galbraith, Friedman's error was indeed *spectacular*.

Link this to a discussion of the distribution of income and the inequality, and the poverty that goes unattended and that will surely be observed on their respective walks along some of their Main Streets. Get them thinking about solutions and the GAI as an *arterial solution*.[79] This can be held over until the macro material is developed but there ought to be a seamless correspondence between micro and macro. (As there is in my "A Family of Capitalist Values," *COMER, 24(11)*, 3-9).

I think that the book by corporate lawyer and Emeritus Professor of Corporate Law, Harry Glasbeek's *Wealth By Stealth: Corporate Crime, Corporate Law, and the Perversion of Democracy* is essential reading for everyone. It can be attached perhaps particularly to Industrial Organization courses but at any level.

The micro material approached, in this way, will correspond automatically (without any contradiction) with the macro presentation of the national accounts. One can go quickly then to Keynes and Kalecki. Consumption, savings and investment are tied to the distribution of income. Advanced treatment will go on to Nicholas Kaldor[80] and Luigi L. Pasinetti.[81] Some where along the way Piero Sraffa[82] may be dealt with.

In doing macro policy material I suggest using James K. Galbraith, *The Predator State*. This book is consistent with and advances the arguments made by many against monetarism and supply side economics.

Always be willing, indeed anxious, to inform students about the work of others using citations. For example, Gerald Cohen and C.A. Reich (see items under their names listed in the bibliography and others). Ask students to explain why their contributions are relevant to economics and the course you are building.

You might ask your Chair and Dean for a term or two – without assigned teaching and research – to prepare – or ask them to assign the preparation of a reformation course along the above lines. Be forewarned it took me much of a good summer to absorb C.B. Macpherson's *The Political Theory of Possessive Individualism*.

Now, back from the above aside.

In his exceptional no-nonsense book, *The Limits of Power,* Andrew J. Bacevich argues that the United States has only to look inside itself to see the homegrown seeds of its own destruction. The seeds were sown in the capitalist system long before George W. Bush.[83] On the page preceding his table of contents Bacevich[84] admonishes and warns all Americans to *Set thine house in order*.[85]

One might hope that this warning to *Set thine house in order* would also serve to invigorate the discipline of economics and the ideologically biased universities[86] in which mainstream Departments of Economics are housed – to look within themselves at the seeds of their own destruction found in untenable assumptions and givens, and in goals that lack *Enlightenment quality*. It is all too easy to bend operations towards larger and larger quantities of money/product/endowment obtained by more in the way of technological fads, not excluding investments in space, many of which come from the universities' technical labs. While these may keep the system going for a while they constantly require new things to be found to keep the old game alive, they do little or nothing to directly address economic and social problems and the real needs of the people. *The problems that exist in the world today cannot be solved by the level of thinking that created them.*[87] Yet it seems hardly recognized that we need to re-orient or transform the economy and government and society to putting people first and using the transformed system as means to those ends. It is disconcerting that the real needs of the people could be so easily met through, say, an unconditional basic income. The UBI is a means to a degree of *real freedom for all*. Yet, instead, ordinary people are put at the bottom of the ladder and are largely ignored in favour of propping up and supporting the entrepreneurial initiatives of the next fad or the old fad that is or has failed or is failing.

The universities could be re-mandated to devote more resources to open and trans-disciplinary teaching and do research focused on meeting economic and social problems and the real needs of the people. The point is that corporate entities seem to want universities and economists to be uncritical and, to, rather, sing free enterprise tunes extolling the profitability and benefits, at least to them, of unregulated markets. In the clamour, the fact of systemically generated injustices and other social costs are ignored. Consistency with the concept of university and science requires more.

One has reason to be pessimistic about the possibility of serious reform of economics as a discipline. The power of the gate-keeping function of administrative vested interests holding the monopoly on knowledge is great in economics (people do what they were hired to do, particularly the short term hires, but even with tenure[88] few have any real interest in broader views of their proper intellectual roles[89] in society). Moreover narrow institutional power is not independent of vested interests in the capitalist's system generally.[90] Globalization,[91] which many agree has failed, has highlighted the low road of American inspired and led international fascism and terrorism; optimistically that sad record[92] will increasingly be compared to what can be achieved peacefully and in accord with the progressive advance of human rights through the practices of international socialism.[93]

Again, Rawls points the way: *A theory however elegant and economical must be rejected or revised if it is untrue;* likewise *laws and institutions no matter how efficient and well-arranged must be reformed or abolished if they are unjust.*[94]

Morality, human rights, democracy and science are intimates in this. Reform, it is suggested, requires starting early with fulfilling our mutual obligations with respect to human rights[95] and substantive democracy. C.B. Macpherson defines democracy for us.

"…As soon as democracy is seen as a kind of society, not merely a mechanism of choosing and authorizing governments, the egalitarian principle inherent in democracy requires not only 'one man, one vote' but also 'one man, one equal effective right to live as fully and humanly as he may wish.' Democracy *is* now seen, by those who want it and by those who have it (or are said to have it) and want more of it, as a kind of society – a whole complex of relations between individuals – rather than simply a system of government. So any theory which is to explicate, justify, or prescribe for the maintenance or improvement of, democracy in our time must take the *basic criterion of democracy to be that equal effective right of individuals to live as fully as they may wish. This is simply the principle that everyone ought to be able to make the most of himself, or make the best of himself…* This not only *was* the principle introduced into pre-democratic liberal theory in the nineteenth century to make it liberal-democratic, but…it is now an essential principle of any democratic theory. Moreover… this principle requires (as Mill and Green thought it did) a concept of man as at least potentially a doer, an exerter and developer and enjoyer of his human capacities, rather than merely a consumer of utilities."[96]

Economists might reflect on Joan Robinson's concern with what they are doing: "I would like to believe that I earn my living honestly, but I often have doubts…. We must try as best we may to do a little good here and there to set the scales against all the harm."[97]

The *harm* starts with *mis-education* imposed by an uncaring conservative and mainstream discipline seemingly interested only in technique and the safety found in technical specialization.[98] But as Beed, citing Feyerband, has indicated earlier, other disciplines, not explored here, are involved.[99] Neo-Conservatives/Neo-Liberals and their respective policies supporting capitalism everywhere serve to repress people adversely affecting their negative freedom (freedom from coercions) and their positive freedoms (the freedom to do or become all that each person is capable of as a human being – and, with Adam Smith, *while doing no harm to others*[100]). Note that the positive freedom concept negates the mainstream economists' treatment of labour – as if workers were just like any other factor of production, that is, as mere means, or fodder, for the system's engines. Positive freedom requires that we put people first, as ends. Positive Freedom asks us to be consistent with, if not superior, to the Universal Declaration of Human Rights. Persistence by mainstream economists in continuing the sole and general use of negative freedom is tantamount to continued complicity in the harm done by Freidman's error. It also implies that *market freedom* is a misnomer; clearly, absence of positive and negative freedoms by many implies *market slavery and repression.* In effect Friedman dictated to the market, at least in Chile, the policies that would achieve the results he wanted to see installed to create his version of a pure capitalist economy. Again, Joan Robinson noted the harm done by *mis-education in economics' teaching* in 1960 even before the mis-education by Milton Friedman. *The Gate-keeping function enforces the continuation of mis-education.*

There has been much harm done in allowing the ultra-conservative Milton Friedman and his Chicago Boys and their camp-followers in Canada and elsewhere to test and have imposed on people at home and abroad[101] Friedman's noxious ideas about what the capitalist world should be.

The implications of the argument presented here seem profound. It seems clear that Friedman was living a lie with his hypocrisy; he allowed it to continue from country to country as the Chicago boys spread their influence. It seems to me we are complicit in the same big lie when we blithely go on teaching as if it doesn't matter, or, as one disinterested colleague put it as a question: *what has this to do with me/us*?

One thing Hitler did get right was that… *the bigger the lie, the greater the likelihood that it will be believed.*

Unfortunately this has a parallel in the words of a Dean that "it doesn't matter if everybody does the same thing [neo-classical economics]." But it does matter, and as far back as 1938, for Barbara Wootton, who simply walked away from it, and it mattered for Andre Gunder Frank, in his walk away from and critique of Friedman *et. al.*, and above all with respect to events in Chile.

Mainstream economics builds in the same notion of free markets and of negative freedom, ignoring positive freedom and human rights (substantive democracy) as Friedman, and so, along with Friedman, Macpherson's contributions to system analysis are ignored. Indeed Macpherson is not read and most students, even Canadian students, have not heard of this powerful Canadian political economist, theorist, philosopher and humanitarian.

Departments of Economics and the institutions in which they are housed, it may be said, continue to perpetuate and institutionalize the big lie through *a priori* fabrication. Must that continue?[102]

Appendix 1

www.miltonfriedmancores.org/wp-content/uploads/2008/09/needham.pdf

August 20, 2008

Dear Dr. Zimmer,

I am writing to register my opposition to the establishment of a Milton Friedman Institute and to make a suggestion.

Simply put the ideological commitments of a *Friedman* institute would contribute to perpetuating the problems for economies and societies of the same sort that so many mainstream economists, including Milton Friedman, have foisted on the unsuspecting at home and abroad.

As I see it. John Dewey made the essential point. Dewey said "The transition from an ordinary to a scientific attitude of mind coincides with ceasing to take certain things for granted and assuming a critical or inquiring and testing attitude."[103]

The economic and social system to which Friedman adheres is fabricated by him and those associated with him – by assumption – to be of a free-market minimalist government sort. What is assumed *is not just taken as given* by him and others of his stripe, but as *appropriate for all times and places* *and peoples*. This renders Friedmanist and mainstream projects inconsistent with both the concept of University and with that of science. In reality there is no free market,[104] institutional power dictates and race, culture and history matter.

The way out is to make the economic and social systems that exist in reality the subject of interdisciplinary investigation that is open ended, inquiring and critical.[105] Such investigations will inevitably require a proper intellectual base in human values that are acceptable at home and abroad. The United Nations Universal Declaration of Human Rights, in the construction of which Eleanor Roosevelt was prominent, would seem to have such acceptance.

While I am sure that some of what is suggested here is already taking place. I nevertheless recommend that the University of Chicago formally turn its attention and resources to this wider university humanitarian perspective and away from the establishment of a Friedman Institute.

I attach two documents you might find of relevance.

Yours sincerely,

W. Robert Needham, Professor Emeritus

Department of Economics,University of Waterloo

End Notes

1. Rawls (1971), p. 3.

2. Dewey (1903).

3. Polanyi (1957), p. 44.

4. Katouzian (1980), pp. 118-119.

5. Chossudovsky (1975), p. 55.

6. http://artsonline.uwaterloo.ca/rneedham – personal web page for additional links.

7. http://artsonline.uwaterloo.ca/rneedham/sites/ca.rneedham/files/download_doc/Gatekeeper%20Economics%201-%20EconSociety_1.pdf and *COMER*, September 2012.

8. *COMER, 24(12),* December 2012, pp. 7-11.

9. *COMER, 20(7)*, July 2008, pp. 5-7.

10. *COMER, 24(9),* September 2012, pp 7-9.

11. The MF institute proposal seems to have been abandoned by Chicago in agreement with the wishes of many faculty members, at least beyond the Economics Department. Wrapping his name into an existing institute with Gary Becker seems to have allowed the Administration to save face to some extent.

12. It seems significant that Barbara Wootton's book, *Lament for Economics* (published in 1938), has been largely ignored. Wootton led the way with this unanswered critique. It seems a characteristic of mainstream economics to ignore the truth in criticism in favour of unswerving allegiance to religious belief in one's own fabrications based on *a priori* assumptions. See Needham (2012).

13. Rowbotham (1998), p. 73.

14. "In 1947, Friedman and Hayek had called together a group of thirty-nine economists, all of whom [according to Friedman] "were known as *strong believers* in [conservative notions of] political economic and moral freedom." Afterward Freidman reported his satisfaction at being at the founding of the Mont Pelerin Society, a group devoted, "as intellectuals and citizens: to stemming and reversing the tide of what they *believed* to be threats to freedom. They were to meet annually "to renew our *spirits and faith* among a growing company of *fellow-believers*." Warren Samuels concluded (1976, 392) that in order to carry out their self appointed mission, the Chicago school converts – Friedman was hired in 1948 and Hayek in 1950 – practiced "a mixture of science, social control, and psychic balm, including myth, all in the service of the explication and canonization of the market." Turner (1993), p. 175. Turner's reference to Warren Samuels is: Samuels, W. (1976). *The Chicago School of Political Economy.* East Lansing, Michigan State University, and also The Chicago School of Political Economy, *Journal of Economic Issues, 9* (December 1975) and *10* (March 1976).

15. Note the fascist lineage: "It was actually Italian philosopher Giovanni Gentile who wrote the entry in the *Encyclopedia Italiana* that said: "Fascism should more appropriately be called corporatism because it is a merger of state and corporate power." Mussolini, however, affixed his name to the entry, and claimed credit for it. Hartmann (2006). See also McMurtry (1984) and *Harper's Magazine*: "We Now Live in a Fascist State," cited in *Organic Consumers Association*, October 11, 2005, www.organicconsumers.org/Politics/harpers101205.cfm. This article "Living in a Fascist State" was written by *Harper's* Editor Lewis Lapham for the October 2005 issue. Lapham prefaced his article with the words of Franklin Roosevelt: "But I venture the challenging statement that if American democracy ceases to move forward as a living force, seeking day and night by peaceful means to better the lot of our citizens, then Fascism and Communism, aided, unconsciously perhaps, by old-line Tory Republicanism, will grow in strength in our land." Franklin D. Roosevelt, *Radio Address on the Election of Liberals*, November 4, 1938. www.fdrlibrary.marist.edu/php11438.html.

16. But note what is right and what is wrong, what is good and what is evil. Gerald Cohen says of the socializing state: "…the socialist objection of justice to the market economy is that it allows private ownership of means of existence which no one has the right to own privately, and therefore rests upon an unjust foundation…. The socializing state is not violating rights, or even overriding them in the interests of something more important, but righting wrongs; it is rectifying violations of rights, violations inherent in the structure of private property" Cohen (1981).

17. In particular for Friedman's ideas at Chicago, it was "in the 1950s and '60s at this school [the ideas] were largely in the realm of theory. They were academic ideas, and it was easy to fall in love with them, because they hadn't actually been tested in the real world, where mixed economies were the rule" (Klein, 2008).

18. Barbara Wootton (1938) was at least one of the first to emphasize that neo-classical economics is a *fabrication*. She did so and cited an apt bit of poetry with an apple-pie like fantasy. In the case of Friedman and Chile the apple pie in the poem, was made with poisoned apples. See John King's review (2003). See also Chapter 10 in Oakley (2011).

19. Macpherson (1968).

20. Glasbeek (2002), p. 23.

21. Macpherson (1977), p. 2.

22. Macpherson (1962).

23. "This gratuitous advice [for Frank to seek employment in a small liberal arts college] reflected more than your mere personal judgment. It reflected and coincided with that of the Department of Economics at the University of 'Chicago under the lead and directed by Milton Friedman and Ted Schultz *(Transforming Traditional Agriculture* into Agri-Business), who have sought to inculcate upon generations of students the conviction that they should not read to inform themselves about the world (or not read beyond Chapter 3 in Adam Smith's *Wealth of Nations* or read anything but the footnotes in Alfred Marshall's *Principles of Economics)* and instead should only acquire and master the kit of tools required to measure the world in partial equilibrium." See https://artsonline.uwaterloo.ca/rneedham/andre-gunder-franks-letters-friedman.

24. See Needham (2012).

25. Macpherson (1973), pp. 10-11. Italics added.

26. Macpherson (1978), p. 205.

27. Macpherson (1978), pp. 199-200. Note the consistency with Cohen (1981).

28. Macpherson (1973), pp. 43-44.

29. Note too "In a society that theoretically gives its professors academic freedom to study and teach…most of these "free" intellectuals are unaware that they are being controlled…. "Slowly but surely one political economist after another moved closer and closer to the solution to the age old problem of poverty. The picture became clearer with each new writing by men like David Ricardo, N.W. Senior, James Mill and his son John Stuart Mill, Frederic Bastiat, J.B. Say, H.C. Carey, and other political economists. The possibility of a world without poverty and war was within humanity's grasp, when quite suddenly the world's scholars stopped short – just as if they had come unexpectedly face-to-face with some terrifying, fire spitting, blood-soaked monster blocking their path…. That it was very real, powerful, and dangerous cannot be doubted, because political economists even to this day have stopped prying into the causes of poverty – and gone back to less embarrassing Mercantilism…. In order to live wisely, agreeably and well, it is necessary to know how to structure societies to their maximum efficiency. To do that we must understand the excessive rights of property which for centuries the powerful have embedded in law…[through] the subtle monopolization of land, technology, finance capital, and information.… It is battles over world wealth that keep the world impoverished…. The over-capitalized world has the knowledge, capital and labor – as well as the moral obligation – to capitalize the Third World, eliminate most poverty, and protect the air, water, and earth that sustain life. Smith, J.W. (1994). *The World's Wasted Wealth 2: Save our Wealth, Save our Environment*, pp. 333-334, 326, 288, 297. Cambria, California; The Institute for Economic Democracy. Interior quotation from: Grant, Phil (1953). *The Wonderful Wealth Machine,* p. 24. New York: Devon-Adair Company.

30. Friedman (2001, 2002). In practice the Chilean test of Friedman's and Harberger's ideas are neatly summarized in Frank (1976). This book contains two letters their former student Andre Gunder Frank (PhD Chicago 1957) wrote to Milton Friedman and Arnold Harberger. The letters are available on Line: Letter #1: www.rrojasdatabank.org/genoc1a.pdf; Letter #2: www.rrojasdatabank.org/genoc2.pdf and see also Frank (1984).

31. "So, this plan was cooked up – it was between the head of USAID's Chile office and the head of the University of Chicago's Economics Department – to try to change the debate in Latin America, starting in Chile, because that's where developmentalism had gained its deepest roots. And the idea was to bring a group of Chilean students to the University of Chicago to study *under a group of economists who were considered so extreme that they were on the margins of the discussion in the United States*, which, of course, at the time, in the 1950s, was fully in the grips of Keynesianism. But the idea was that there would be – this would be a battle to the – a counterbalance to the emergence of left-wing ideas in Latin America, that they would go home and counterbalance the pink economists. And so, the Chicago Boys were born" (Klein, 2008). Italics added. What was occurring in democratic Chile before Friedman and the Military dictatorship of Pinochet was widely known and indeed Allende invited the world to comment and make suggestions for progressive advance, see Zammit (1973).

32. But clearly, I want to emphasize, I am tying the *conservative* descriptor to perverse economic and social policy everywhere (as many have done). Thus Kaldor's epitaph to Margaret Thatcher "They create a desert and call it stability" (see "Nicholas Kaldor's Epitaph") also applies to Friedman and his Chicago boys and to Ronald Reagan and supply-siders everywhere, and to the likes of George Bush. Note that Kaldor's words echo those of Karl Polanyi, cited at the outset. Kaldor provides the epitaph for the tombstone provided by Macpherson (1968), pp. 143-156, and Joan Robinson gave a diagnosis of the disease as *The Mumpsimus of Economists* (Arouh [1987], p. 395) that contributed to the internment. Consistently see Lewis (1998), Camp (2000), Frank (2008). Does it seem too much to argue that such tied-to-the-past Conservatives, seem not fully evolved as human beings? They seem to be unaware of the UN UDHR. This is clearly related to taking the system as given in policies as in economics as a discipline. Stephen Lewis seems to make the same point: "…almost always when I was there, [at Queen's Park] there was a Tory horde of massive proportions, on the other side of the House. You've never seen so many pre-paleolithic, antediluvians in one place, at one time. It was like a Neanderthal's convention. And there were so many of them they sometimes slopped over onto our side of the House. The operative verb being "slop." *The Rise and Fall of Social Justice.*

33. Was Friedman blind to his hypocrisy? "False face must hide what the false heart doth know," Shakespeare, *Macbeth*, 1. 7. Macbeth to his wife. www.novelguide.com/macbeth/toptenquotes.html. I have no reason to suspect Friedman felt for the people of Chile any remorse of the sort experienced by Macbeth at the prospect of killing King Duncan. Related: "Dishonesty is the foundation of the hypocrite's character. www.cvillechurch.com/Sermons/TheDangerOfHypocrisy.pdf. "Hypocrisy is the necessary burden of villainy – detestation the just consequence of hypocrisy." Samuel Johnson: *Rambler* #20 (May 26, 1750). www.samueljohnson.com/hypocris.html.

34. Macpherson, C.B., Berlin's Division of Liberty. In Macpherson (1973). See also Cohen (1995).

35. Stigler (1959). Emphasis added. Stigler points out that the main reason for the economist's conservatism is to be found in his training in a resource allocation model [neo-classical eco-

nomics] that suggests the perfectly competitive free-enterprise market price system is an objective mechanism. This is the same competitive/marginalist apparatus that Schumpeter said should be the first thing to go in reforming economics because: "…the problem that is usually being visualized is how capitalism administers existing structures, whereas the relevant problem is how it creates and destroys them. As long as this is not recognized, the investigator does a meaningless job. As soon as it is recognized, his outlook on capitalist practice and its social results changes considerably." [Schumpeter (1962), p. 83.]

36. The term *neo-classical* is in fact a misnomer. It is more accurate to say *neo-classicals are anti-classical*.

37. The bibliography is of books that are consistent with the use of the scholarly definition of capitalism. I think this is true even of the conservative writers. for example, I think, Andrew Bacevich. Note the many items that are concerned with violations of law and human rights – for example Jane Mayer's *Dark Side*, and Naomi Wolf's *The End of America.* One should always equate the concept of power over others as related to the property rights (and wrongs) that are embedded in capitalism. The substantive democratic struggle is to advance *human rights and freedoms* against *capitalist property rights*. It can be argued that Friedman and his ilk saw the latter as being preferred to the former so that his freedom was the greater freedom of capital with labour subservient. Market rules are rules of property rights. The efforts of the Chicago boys always seemed to define the rules of the game…the game they wanted to play…in effect they dictated to the market and under its cover.

38. I agree with a colleague who has said that the mainstream has "a comparative advantage in teaching mathematics not economics." That too is clearly part of the discipline's problems.

39. To assist in definition and critical evaluation, see Needham, *The Essentials of Capitalism through Definitions*.

40. See also: *Gatekeeper Economics I – Economy and Society – Conformance with Experience?* http://artsonline.uwaterloo.ca/rneedham/sites/ca.rneedham/files/download_doc/Gatekeeper%20Economics%201-%20EconSociety_1.pdf. *COMER, 24(9)*, September 2012, pp. 3-4.

41. While I grant the point that use of the word brainwashing, which "is a very specific form of torture the horror of which should not be diminished by casual use," I will persist because I think my use is not casual. I have no intention of diminishing the horror of physical torture. Naomi Klein (*The Shock Doctrine: The Rise of Disaster Capitalism*) and Jane Mayer (*The Dark Side: The Inside Story of How the War on Terror Turned into a War on American Values*) make the horrors of such torture all too clear. I use the word not to stress process but what seems to be the similarity of end result – that of creating beings with a set of values, and substantively altered thinking, that are in accord with someone else's presumed doctrine, however noxious that might turn out to be. Joan Robinson, (see ahead) referred to students being mis-educated in economics programs. She politely says that students exit from economics programs as mis-educated beings and through a door that leads them into a different street from that though which they entered. We may all hope that students indoctrinated by years of exposure to, and passive acceptance of, the main line theory of laissez-faire markets (repeated from the earliest undergraduate year though graduate school with increasing refinement, and with faults intact…and, again, in that sense brainwashed, will not repeat the errors of Friedman and the *Chicago boys*. But errors are committed daily, and in the name of the same ideology, at home and abroad. See also: Forrester, Viviane (1999). *The Economic Horror.* Oxford: Blackwell Pub.

42. But there has always been an alternative that works *for good rather than evil*. With respect to teaching economic theory see Robinson (1965), pp.1-6. More generally see, Galbraith (2004) and Galbraith (1996).

43. And the point is beginning to register. The 2008 Nobel Prize award to Paul Krugman of Princeton University is one signal that laissez-faire economics is in free fall and the so-called Washington Consensus is now dead. Gallagher (2008). www.guardian.co.uk/commentisfree/2008/oct/14/economy-development. Also see Klein's (2007) discussion of the Washington Consensus and Galbraith (2008).

44. And no one points out that the total product in excess of the wage, say (AP – w).N, though produced by labour, is claimed as a right by the owners of property or *the means of existence*. This easily allows escape from any treatment of the issue raised above in the citation from Gerald Cohen. "… the market economy…allows private ownership of means of existence which no one has the right to own privately, and therefore rests upon an unjust foundation…. The socializing state is not violating rights, or even overriding them in the interests of something more important, but righting wrongs; it is rectifying violations of rights, violations inherent in the structure of private property."

45. In its Preamble the UN UDHR says "…every individual and every organ of society, keeping this Declaration constantly in mind, shall strive *by teaching and education* to promote respect for these rights and freedoms and by *progressive measures, national and international*, to secure their universal and effective recognition and observance, both among the peoples of Member States themselves and among the peoples of territories under their jurisdiction." www.un.org/Overview/rights.html. Bold italics added.

46. See Klug (2008). Ms. Klug is a Research Fellow at the London School of Economics.

47. This seems to be true independently of the fact that UDHR Article 17.1 says "Everyone has the right to own property alone as well as in association with others." And 17.2 "No one shall be arbitrarily deprived of his property.

48. A critical example of mainstream gate-keeping that bends economics away from the truth has to do with increasing returns; "…Allyn Young, Joseph Schumpeter and Nicholas Kaldor argued that it was statistical equilibrium theory that had to be dumped or at least pushed to the sidelines in economics – proved less [than] palatable. The leading neoclassical theorists marched down the second of Sraffa's suggested avenues. *If increasing returns posed a problem for perfect competition and the optimality conditions that it implied, then increasing returns would have to go*!" Italics added. *Innovation, Resource Allocation, and Governance*: http://fds.oup.com/www.oup.co.uk/pdf/0-19-829346-1.pdf. Note the parallel with Friedman's unscientific approach to changing the world to suit his normative predilections of what the world should be. Schumpeter in *Capitalism, Socialism and Democracy* said The usual theorist's paper and the usual government commission's report practically never try to see that behavior, on the one hand, as a result of a piece of past history and, on the other hand, as an attempt to deal with a situation that is sure to change presently – as an attempt by those firms to keep on their feet, on ground that is slipping away from under them. In other words, the problem that is usually being visualized is how capitalism administers existing structures, whereas *the relevant problem is how it creates and destroys them. As long as this is not recognized, the investigator does a meaningless job. As soon as it is recognized, his outlook on capitalist practice and its social results changes considerably*." *CSD, VII,* 83. And pointedly: "The first thing to go is the traditional conception of the modus operandi of competition. Economists are at long last emerging from the stage in which price competition was all they saw. [It is not clear that mainstream economics has emerged in the sense of continued adherence to the marginalist apparatus]. As soon as quality competition and sales effort are admitted into the sacred precincts of theory, the price variable is ousted from its dominant position. However, it is still competition within a rigid pattern of invariant conditions, methods of production and forms of industrial organization in particular, that practically monopolizes attention. *But in capitalist reality as distinguished from its textbook picture, it is not that kind of competition which counts but the competition from the new commodity, the new technology, the new source of supply, the new type of organization (the largest-scale unit of control for instance) – competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives.* This kind of competition is as much more effective than the other as a bombardment is in comparison with forcing a door, and [p. 85] so much more important that it becomes a matter of comparative indifference whether competition in the ordinary sense functions more or less promptly; *the powerful lever that in the long run expands output and brings down prices [as with, for example, the Apple Macintosh computer] is in any case made of other stuff." CSD, VII,* 84-85. Emphasis added. http://artsonline.uwaterloo.ca/rneedham/sites/ca.rneedham/files/download_doc/Profit%20as%20the%20Root%20of%20All%20Evil.pdf.

49. See particularly: Wootton (1938) and Keen (2000). And the partial list in *The Current State of Economics as a Discipline: The Teaching of Economics – Introduction and Some Suggested Readings: Can Economics be Grounded in Reality?* https://artsonline.uwaterloo.ca/rneedham/sites/ca.rneedham/files/needhdata/CurrentStateofEcon241103.pdf.

50. This is clear from reactions by some proponents of the so-called Milton Friedman Institute at Chicago to the substantive criticisms of Milton Friedman's Chicago School who seemed to refuse to examine and comment on Naomi Klein's book *The Shock Doctrine*: *The Rise of Disaster Capitalism* apparently because she is a journalist and therefore a non-economist of the right sort, that is not a believer in neo-classical economics and Friedmanite intoning. This seems equivalent to arguing that *if she agreed with our assumptions she would see it our way* and its our way or no way. This seems to reflect the view expressed as a *faux cowboy-ism*, in November 2001, by the Bush White House, that you're either with us or against us. Specifically "Over time it's going to be important for nations to know they will be held accountable for inactivity," he said. "You're either with us or against us in the fight against terror." http://archives.cnn.com/2001/US/11/06/gen.attack.on.terror.

51. Frank (1976), pp. 9-10. Frank's is a sad account that would be amusing if it was not also frighteningly accurate of the unscientific state of the disciplines under Friedman and Arnold Harberger. Frank also singles out Theodore Schultz for special mention. In particular it is they "who have sought to inculcate upon generations of students that they should not read to inform themselves about the world." Note that this seems to parallel recent uses of the age old saying, "your either with us or against us." Frank's 1976 account is also a reflection, over 30 years later, of the on-going gatekeeper function served by the conservative biases with free markets held by mainstream economics Departments everywhere, To be perfectly clear it is Frank who is the intellectual and scientific superior. Even at the time he had left his professors behind him. Now see http://cepa.newschool.edu/~het/ and for examples: Frank (1984a), Frank (1998), Frank & Gillis (1993).

52. Ken Livingston, Mayor of London, taking the wide view asserts: "World-wide capitalism kills more people everyday then Hitler did. And he was crazy." http://en.thinkexist.com/quotes/ken_livingstone. Friedman and his Chicago boys contributed their measures to the toll.

53. See Klein (2007) and Munoz (2008).

54. See also Mayer (2008) and Wolf (2007). Though books such as these may not mention Friedman they connect through commitment in the US to free market and laissez-faire capitalism. But clearly Friedman, Pinochet and the Junta, in *grotesque* fashion, forgot about the negative freedom of Chileans, in bringing repressive policies to bear against them (including of course the assassination of democratically elected Chilean President Salvadore Allende.

55. "…The Chicago boys, as they are known in Chile, convinced the generals that they were prepared to supplement the brutality, which the military possessed, with the intellectual assets it lacked. The US Senate Select Committee on Intelligence has disclosed that CIA collaborators helped plan the economic measures that Chile's junta enacted immediately after seizing power (A Draconian Cure for Chile's Economic Ills, *Business Week*, January 12, 1976, 33). Orlando Letelier, "The Chicago Boys in Chile: Economic Freedom's Awful Toll," *The Nation*, 28 August 1976. www.ditext.com/letelier/chicago.html. Andre Gunder Frank, a student of Friedman's at Chicago put his views of what Freidman meant to Chile in two letters. See https://artsonline.uwaterloo.ca/rneedham/andre-gunder-franks-letters-friedman. One may characterize the descent of the Chicago boys on Chile and elsewhere to be like members of the group known as the *Four Horsemen of the Apocalypse* – War, Famine, Pestilence and Death.

56. Gunder (1976).

57. See Galbraith at www.softpanorama.org/Skeptics/Quotes/famous_galbraith_quotes.shtml.

58. Galbraith (2008).

59. Robinson (1965).

60. It seem disingenuous to argue that the idea was that right-wing authoritarian governments were much better bets for conversion to democracy than left-wing totalitarian ones. The truth would rather seem to require admitting that what

was done was fascist and that totalitarians at home and abroad have no interest in promoting the democracy that will be their ultimate downfall.

61. George (2003, 2004, 2008).

62. Cunningham (1987), p. 106. Cunningham refers to Dworkin, P. (November 2, 1981), Chile's Brave New World of Reaganomics. *Fortune*, 136-144.

63. See Reich.

64. See, for example, Amartya (1999), p. 3-17.

65. Kaldor, N., *The Scourge of Monetarism*, p. 1, and quoting Keynes from J.M. Keynes, "The Economic Consequences of Mr. Churchill," and reprinted in *The Collected Writings of John Maynard Keynes*, *IX*, London, 1972, pp. 207-230.

66. Robinson (1979), and see Arouh (1987), p. 395.

67. Kaldor (1972), pp. 1237, 1240.

68. McFarlane (1982), p. 64. Related: "…Allyn Young, Joseph Schumpeter and Nicholas Kaldor argued that it was statistical equilibrium theory that had to dumped or at least pushed to the sidelines in economics – proved less [than] palatable. The leading neoclassical theorists marched down the second of Sraffa's suggested avenues. If increasing returns posed a problem for perfect competition and the optimality conditions that it implied, then increasing returns would have to go!" Innovation, Resource Allocation, and Governance: http://fds.oup.com/www.oup.co.uk/pdf/0-19-829346-1.pdf.

69. See, for example, Beed (1975), pp. 459-494, and Routh (1975).

70. Beed (1975), p, 470, quoting Feyerband (1975).

71. Popper (1976), p, 131. Emphasis added.

72. 1986 Nobel Prize in chemistry – his chemistry research is known as dynamics of chemical reactions.

73. See John Polanyi, "Quest for a truly social science," *The Globe and Mail*. (April 29, 2000), A19, Emphasis added.

74. As cited by Siddiqui, Haroon (June 18, 2000). Chomsky and Said stir the soul. *The Toronto Star*, p. A13. Emphasis added.

75. https://artsonline.uwaterloo.ca/rneedham/sites/ca.rneedham/files/needhdata/PETable1.pdf. This table is reproduced in Profit as the Root of All-evil: The Devil is in the Details, *COMER*, *24(12)*, December 2012, pp. 7-11.

76. Note there seems to be consistency of Saul with H.A. Innis who argued that: "It is the essence of my case that a country, especially Canada, cannot afford to rely on the theory borrowed from old industrialized countries [neo-classical theory] but she attack with all the skill and industry she can command the task of working out a theory adapted to the situation in which she is able to defend herself against exploitation, against the drawing off of her large resources and against the violent fluctuations which are characteristics of exploitation without afterthought. Not only will such a policy serve as a protection to Canada but it will also serve eventually as protection against over-industrialization in the highly industrialized countries." Innis, H.A. Snarkov Island in Neill (1972), p. 149. See also the similar 1929 statement: "…there is evidence to show that the application of the economic theories of old countries [Mainstream marginalist analysis] to the problems of new countries results in a new form of exploitation with dangerous consequences. The only escape can come from the development of a philosophy of economic history or an economic theory suited to Canadian needs," Innis (1956), p. 3. Innis also stated as I recall that "when the university enters the market place it ceases to be a university." See also: Symons (1975), Drache (1969), Drache (1976), Drache (1983), pp. 25-49, and Kroker (1980).

77. Saul (2008), pp. 63, 79-80.

78. Macpherson (1973), pp. 10-11. Emphasis added.

79. Matt Fair, *Guaranteed Livable Income is Arterial*. (November, 2006): www.livableincome.org/amarterial.htm.

80. Kaldor (1955-1956), pp. 83-100.

81. Pasinetti (1962).

82. Sraffa (1975).

83. Clearly G.W. Bush seems as much an outlier amongst American Presidents as Friedman is amongst economists.

84. Bacevich's book seems consistent with the arguments of Andre Gunder Frank. See Frank (2005) and Frank (2004).

85. *2 Kings, Chapter 20, Verse 1* "In those days was Hezekiah sick unto death. And the prophet Isaiah the son of Amoz came to him, and said unto him, Thus saith the LORD, Set thine house in order; for thou shalt die, and not live. www.illuminatedbible.com/2kings/chapter020verse001.htm.

86. Indeed many seem to have passively accepted the notion that we are at the end of history – as envisioned by Fukuyama (1992). The mainstream economics argument continues to support what has long been the fallacy of American economics. Related see Berman (2001 and 2006).

87. Albert Einstein, www.brainyquote.com/quotes/authors/a/albert_einstein.html.

88. One might recall Sinclair: "It's difficult to get a man to understand something, when his salary [*and tenure in Departments of Economics*] depends on him not understanding it. [*ignoring inconvenient truths*]" Upton Sinclair, *I, Candidate for Governor: And How I Got Licked* (1935).

89. See Saul (1996).

90. "The Neoliberal University in Ontario: Dynamics of Change at York." *The Bullet* Socialist Project • E-Bulletin No. 165. December 5, 2008: www.socialistproject.ca/bullet/bullet165.html#continue, Not inconsistently: "Donald Thain, an emeritus professor who for four decades taught at what is now the Ivey School of Business at University of Western Ontario, agrees that *he and his colleagues must shoulder some of the responsibility for the moral decay of contemporary business*…. "We should have seen this whole culture becoming dysfunctional. We [like mainstream economics] didn't take the big position against it." *(Pitts, Gordon, "Schools stand trial along with disgraced alumni: Corporate scandals touch some of North America's best alma maters," The Globe and Mail,* (March 8, 2004), B6. See also: Skidelsky, Robert "The monstrous conceit of modern economics," The Star.com, (January 02, 2009), www.thestar.com/comment/article/560449.

91. Simpson (2006).

92. See the articles by Frank cited before.

93. On socialism, see Crick (1984). Also as https://artsonline.uwaterloo.ca/rneedham/sites/ca.rneedham/files/needhdata/CrickSVT2.pdf.

94. Rawls (1971), p. 3.

95. Conservative led Canada, provincially and federally, has problems in this regard. In Conservative Ontario under Premier Mike Harris see: LIFT (Low Income Families Together), *The Ontario People's Report to the United Nations on Violations of the International Covenant on Economic, Social and Cultural Rights in the Province of Ontario, Canada*, (Toronto: Low Income Families Together (LIFT), 1998). This document was submitted to the UN Committee on Economic, Social and Cultural Rights, Geneva in November 1998). The cutbacks have made neo-conservatives killers. See: Dalton Camp, (May 28, 2000), Blame for Walkerton at Tories' Door, *The Toronto Star*, p. A15; Mackie, Richard, Bourette, Susan & Alphonso, Carolyn (May 30, 2000), Ontario Admits role in deaths: Water Guidelines not followed in Walkerton pollution tragedy, minister says, *The Globe and Mail*, pp. A1, A9; Urquhart, Ian (May 31, 2000), Cutbacks to blame: Mike Harris's attempt to bail out of the Walkerton water disaster does not wash, *The Record*, p. A13. And, related, in Alberta, in a Canadian Press article (April 27, 2000), Calgary. Premier Ralph Klein is not immune to civil litigation over his government's cuts to health care, the province's top court has ruled, *The Globe and Mail*, p. A8. This article reports: "The Alberta Court of Appeal, in a split decision released yesterday, said Mr. Klein should be a party to three lawsuits claiming damages for injuries or deaths caused by the cuts between 1993 and 1996. During that period, the Conservatives slashed $750 million from the system." Overall the issue may be expressed in the following terms: "It seems all too easy for many politicians, [and their apologists] and not just those who are currently in power, to unwittingly link themselves to, first, the notion that democracy is a self-justifying system and, second, the notion that the market solves all problems. In fact neither notion is true. Though fallacies both notions are used as rhetorical devices to escape…from the social responsibility of governments to advance the common good through human based policies [that will strengthen our communities, promote cooperative efforts to solve our many problems and further the ends of equality and fairness in the treatment of people]. To make this point clear, while it is true Premiers and Prime Ministers may hold a democratically given power of majority, a power of majority is not ever the end of the matter when that power is used, consciously or unconsciously, deliberately or in ignorance, for ends that are patently immoral. There are higher values, normal secular human values of justice, and there are feasible and realistic human based policies that are alternatives to the immoral aims of the business/corporate dominated drive [of] market forces [and policies] that are being imposed by your government in the name of deficit reduction [and a limited role for government]." (From a modified letter from W.R. Needham to the Premier of Ontario, November 7, 1996). Federally see: (December 11, 2007), Amnesty group slams Canada over human rights, *The Record,* http://news.therecord.com/article/281077; Mercer, Greg (December 11, 2008) Canada sending "wrong message" on human rights," *KW Record*; Perkel, Colin (September 29, 2008) Harper government abruptly abandoned Canadian on US death row, court told, *The Canadian Press,* http://news.therecord.com/article/421529. Legalizing Terror: The Canada-Colombia Free Trade Agreement, *Ten Top Reasons why Canada Should stop the Free Trade Deal with Columbia*, http://canadianlabour.ca/sites/clc/files/ColombiaCartoonEng.pdf. Bruce Campbell writes: "Back in 1984, Mulroney said, 'Give us 20 years and you won't recognize this country.' Canada today has certainly changed. It wears the scars of neo-liberal policies. The Canadian welfare state is still standing, but battered and bruised, and under continuing attack. We now have in power the most conservative prime minister [S. Harper] in our history – one whose long term goal is to roll back the Canadian social state." Campbell, Bruce (December 2008-January 2009). Now is the time to advance a progressive policy agenda. *The CCPA Monitor, 15(7)*, 1.

96. Macpherson (1973).

97. Robinson (1965).

98. Others may also have heard a student or students say such things as "All we ever learn around here is the calculus" and "why do you take courses that make you think, (Economic History and History of Thought)…all I want is to be given the formula to be memorized and repeated on the examination."

99. Jacobsen (2008): "Objections to the HTS (Human Terrain System) programme range from the inherent secrecy of mission-oriented research to, as eminent anthropologist Marshall Sahlins observes, "manipulating local culture, imposing [our governments objectives] on them, transforming anthropologists into spies and putting people you work with [in the local area] at risk."

100. Smith (1759). Taken with positive freedoms, Smith's idea of fairness in the realization of one's personal goals (without doing injustice to others) seems consistent with the notion that what we humans ought to be doing is creating the conditions for the free and full development of each person, as the condition(s) for the free and full development of all persons. Note too, the consistency of Smith with Macpherson, Rawls, and with the UN UDHR. There is a smooth transition/correspondence of the micro notion of each individual with and to the macro notion of all individuals in *the nation*. Moral and logical consistency further requires equality rights of citizenship on a world basis. Note too *Friedman's inconsistency with Smith*! Friedman seems not to have read *The Theory of Moral Sentiments*, or, perhaps, if he had read it, he didn't want his students to read it (so he could get away with using the mad metaphor of the market – *as if directed by an invisible hand*). *The Theory of Moral Sentiments* must be assumed as background when we read Smith's later book *The Wealth of Nations*. This speculation is consistent with A.G. Frank's letters to Friedman and Harberger, noted earlier, and with Friedman's reliance on negative freedom.

101. For example, abroad: "For Argentines who know their history, the mall [Galerias Pacifico the crown jewel of Buenos Aires] stands as a chilling reminder that just as an older form of capitalist conquest [compulsion] was built on the mass graves of the country's indigenous peoples, the Chicago School Project in Latin America was quite literally built on the secret torture camps where thousands of people who believed in a different country disappeared." Klein (2007), p. 137.

102. See Kaldor (1972, 1975) and Targetti (1989).

103. Dewey (1903).

104. Reich (1995).

105. See further: Needham (2008).

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Modern Money Mechanics

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Introduction

The purpose of this booklet is to describe the basic process of money creation in a "fractional reserve" banking system. The approach taken illustrates the changes in bank balance sheets that occur when deposits in banks change as a result of monetary action by the Federal Reserve System – the central bank of the United States. The relationships shown are based on simplifying assumptions. For the sake of simplicity, the relationships are shown as if they were mechanical, but they are not, as is described later in the booklet. Thus, they should not be interpreted to imply a close and predictable relationship between a specific central bank transaction and the quantity of money.

The introductory text contain a brief general description of the characteristics of money and how the US money system works. The illustrations in the following two sections describe two processes: first, how bank deposits expand or contract in response to changes in the amount of reserves supplied by the central bank; and second, how those reserves are affected by both Federal Reserve actions and other factors. A final section deals with some of the elements that modify, at least in the short run, the simple mechanical relationship between bank reserves and deposit money.

Money is such a routine part of everyday living that its existence and acceptance ordinarily are taken for granted. A user may sense that money must come into being either automatically as a result of economic activity or as an outgrowth of some government operation. But just *how* this happens all too often remains a mystery.

What is Money?

If money is viewed simply as a tool used to facilitate transactions, only those media that are readily accepted in exchange for goods, services, and other assets need to be considered. Many things – from stones to baseball cards – have served this monetary function through the ages. Today, in the United States, money used in transactions is mainly of three kinds – currency (paper money and coins in the pockets and purses of the public); demand deposits (non-interest bearing checking accounts in banks); and other checkable deposits, such as negotiable order of withdrawal (NOW) accounts, at all depository institutions, including commercial and savings banks, savings and loan associations, and credit unions. Travelers checks also are included in the definition of transactions money. Since $1 in currency and $1 in checkable deposits are freely convertible into each other and both can be used directly for expenditures, they are money in equal degree. However, only the cash and balances held by the nonbank public are counted in the money supply. Deposits of the US Treasury, depository institutions, foreign banks and official institutions, as well as vault cash in depository institutions are excluded.

This transactions concept of money is the one designated as M1 in the Federal Reserve's money stock statistics. Broader concepts of money (M2 and M3) include M1 as well as certain other financial assets (such as savings and time deposits at depository institutions and shares in money market mutual funds) which are relatively liquid but believed to represent principally investments to their holders rather than media of exchange. While funds can be shifted fairly easily between transaction balances and these other liquid assets, the money-creation process takes place principally through transaction accounts. In the remainder of this booklet, "money" means M1.

The distribution between the currency and deposit components of money depends largely on the preferences of the public. When a depositor cashes a check or makes a cash withdrawal through an automatic teller machine, he or she reduces the amount of deposits and increases the amount of currency held by the public. Conversely, when people have more currency than is needed, some is returned to banks in exchange for deposits.

While currency is used for a great variety of small transactions, most of the dollar amount of money payments in our economy are made by check or by electronic transfer between deposit accounts. Moreover, currency is a relatively small part of the money stock. About 69 percent, or $623 billion, of the $898 billion total stock in December 1991, was in the form of transaction deposits, of which $290 billion were demand and $333 billion were other checkable deposits.

What Makes Money Valuable?

In the United States neither paper currency nor deposits have value as commodities. Intrinsically, a dollar bill is just a piece of paper, deposits merely book entries. Coins do have some intrinsic value as metal, but generally far less than their face value.

What, then, makes these instruments – checks, paper money, and coins – acceptable at face value in payment of all debts and for other monetary uses? Mainly, it is the confidence people have that they will be able to exchange such money for other financial assets and for real goods and services whenever they choose to do so.

Money, like anything else, derives its value from its *scarcity* in relation to its usefulness. Commodities or services are more or less valuable because there are more or less of them relative to the amounts people want. Money's usefulness is its unique ability to command other goods and services and to permit a holder to be constantly ready to do so. How much money is demanded depends on several factors, such as the total volume of transactions in the economy at any given time, the payments habits of the society, the amount of money that individuals and businesses want to keep on hand to take care of unexpected transactions, and the forgone earnings of holding financial assets in the form of money rather than some other asset.

Control of the *quantity* of money is essential if its value is to be kept stable. Money's real value can be measured only in terms of what it will buy. Therefore, its value varies inversely with the general level of prices. Assuming a constant rate of use, if the volume of money grows more rapidly than the rate at which the output of real goods and services increases, prices will rise. This will happen because there will be more money than there will be goods and services to spend it on at prevailing prices. But if, on the other hand, growth in the supply of money does not keep pace with the economy's current production, then prices will fall, the nation's labor force, factories, and other production facilities will not be fully employed, or both.

Just how large the stock of money needs to be in order to handle the transactions of the economy without exerting undue influence on the price level depends on how intensively money is being used. Every transaction deposit balance and every dollar bill is part of somebody's spendable funds at any given time, ready to move to other owners as transactions take place. Some holders spend money quickly after they get it, making these funds available for other uses. Others, however, hold money for longer periods. Obviously, when some money remains idle, a larger total is needed to accomplish any given volume of transactions.

Who Creates Money?

Changes in the quantity of money may originate with actions of the Federal Reserve System (the central bank), depository institutions (principally commercial banks), or the public. The major control, however, rests with the central bank.

The actual process of money creation takes place primarily in banks.[1] As noted earlier, checkable liabilities of banks are money. These liabilities are customers' accounts. They increase when customers deposit currency and checks and when the proceeds of loans made by the banks are credited to borrowers' accounts.

In the absence of legal reserve requirements, banks can build up deposits by increasing loans and investments so long as they keep enough currency on hand to redeem whatever amounts the holders of deposits want to convert into currency. This unique attribute of the banking business was discovered many centuries ago.

It started with goldsmiths. As early bankers, they initially provided safekeeping services, making a profit from vault storage fees for gold and coins deposited with them. People would redeem their "deposit receipts" whenever they needed gold or coins to purchase something, and physically take the gold or coins to the seller who, in turn, would deposit them for safekeeping, often with the same banker. Everyone soon found that it was a lot easier simply to use the deposit receipts directly as a means of payment. These receipts, which became known as notes, were acceptable as money since whoever held them could go to the banker and exchange them for metallic money.

Then, bankers discovered that they could make loans merely by giving their promises to pay, or bank notes, to borrowers. In this way, banks began to create money. More notes could be issued than the gold and coin on hand because only a portion of the notes outstanding would be presented for payment at any one time. Enough metallic money had to be kept on hand, of course, to redeem whatever volume of notes was presented for payment.

Transaction deposits are the modern counterpart of bank notes. It was a small step from printing notes to making book entries crediting deposits of borrowers, which the borrowers in turn could "spend" by writing checks, thereby "printing" their own money.

What Limits the Amount of Money Banks Can Create?

If deposit money can be created so easily, what is to prevent banks from making too much – more than sufficient to keep the nation's productive resources fully employed without price inflation? Like its predecessor, the modern bank must keep available, to make payment on demand, a considerable amount of currency and funds on deposit with the central bank. The bank must be prepared to convert deposit money into currency for those depositors who request currency. It must make remittance on checks written by depositors and presented for payment by other banks (settle adverse clearings). Finally, it must maintain legally required reserves, in the form of vault cash and/or balances at its Federal Reserve Bank, equal to a prescribed percentage of its deposits.

The public's demand for currency varies greatly, but generally follows a seasonal pattern that is quite predictable. The effects on bank funds of these variations in the amount of currency held by the public usually are offset by the central bank, which replaces the reserves absorbed by currency withdrawals from banks. (Just how this is done will be explained later.) For all banks taken together, there is no net drain of funds through clearings. A check drawn on one bank normally will be deposited to the credit of another account, if not in the same bank, then in some other bank.

These operating needs influence the minimum amount of reserves an individual bank will hold voluntarily. However, as long as this minimum amount is less than what is legally required, operating needs are of relatively minor importance as a restraint on aggregate deposit expansion in the banking system. Such expansion cannot continue beyond the point where the amount of reserves that all banks have is just sufficient to satisfy legal requirements under our "fractional reserve" system. For example, if reserves of 20 percent were required, deposits could expand only until they were five times as large as reserves. Reserves of $10 million could support deposits of $50 million. The lower the percentage requirement, the greater the deposit expansion that can be supported by each additional reserve dollar. Thus, the legal reserve ratio together with the dollar amount of bank reserves are the factors that set the upper limit to money creation.

What Are Bank Reserves?

Currency held in bank vaults may be counted as legal reserves as well as deposits (reserve balances) at the Federal Reserve Banks. Both are equally acceptable in satisfaction of reserve requirements. A bank can always obtain reserve balances by sending currency to its Reserve Bank and can obtain currency by drawing on its reserve balance. Because either can be used to support a much larger volume of deposit liabilities of banks, currency in circulation and reserve balances together are often referred to as "high-powered money" or the "monetary base." Reserve balances and vault cash in banks, however, are not counted as part of the money stock held by the public.

For individual banks, reserve accounts also serve as working balances.[2] Banks may increase the balances in their reserve accounts by depositing checks and proceeds from electronic funds transfers as well as currency. Or they may draw down these balances by writing checks on them or by authorizing a debit to them in payment for currency, customers' checks, or other funds transfers.

Although reserve accounts are used as working balances, each bank must maintain, on the average for the relevant reserve maintenance period, reserve balances at their Reserve Bank and vault cash which together are equal to its required reserves, as determined by the amount of its deposits in the reserve computation period.

Where Do Bank Reserves Come From?

Increases or decreases in bank reserves can result from a number of factors discussed later in this booklet. From the standpoint of money creation, however, the essential point is that the reserves of banks are, for the most part, liabilities of the Federal Reserve Banks, and net changes in them are largely determined by actions of the Federal Reserve System. Thus, the Federal Reserve, through its ability to vary both the total volume of reserves and the required ratio of reserves to deposit liabilities, influences banks' decisions with respect to their assets and deposits. One of the major responsibilities of the Federal Reserve System is to provide the total amount of reserves consistent with the monetary needs of the economy at reasonably stable prices. Such actions take into consideration, of course, any changes in the pace at which money is being used and changes in the public's demand for cash balances.

The reader should be mindful that deposits and reserves tend to expand simultaneously and that the Federal Reserve's control often is exerted through the market place as individual banks find it either cheaper or more expensive to obtain their required reserves, depending on the willingness of the Fed to support the current rate of credit and deposit expansion.

While an individual bank can obtain reserves by bidding them away from other banks, this cannot be done by the banking system as a whole. Except for reserves borrowed temporarily from the Federal Reserve's discount window, as is shown later, the supply of reserves in the banking system is controlled by the Federal Reserve.

Moreover, a given increase in bank reserves is not necessarily accompanied by an expansion in money equal to the theoretical potential based on the required ratio of reserves to deposits. What happens to the quantity of money will vary, depending upon the reactions of the banks and the public.

A number of slippages may occur. What amount of reserves will be drained into the public's currency holdings? To what extent will the increase in total reserves remain unused as excess reserves? How much will be absorbed by deposits or other liabilities not defined as money but against which banks might also have to hold reserves? How sensitive are the banks to policy actions of the central bank? The significance of these questions will be discussed later in this booklet. The answers indicate why changes in the money supply may be different than expected or may respond to policy action only after considerable time has elapsed.

In the succeeding text, the effects of various transactions on the quantity of money are described and illustrated. The basic working tool is the "T" account, which provides a simple means of tracing, step by step, the effects of these transactions on both the asset and liability sides of bank balance sheets. Changes in asset items are entered on the left half of the "T" and changes in liabilities on the right half. For any one transaction, of course, there must be at least two entries in order to maintain the equality of assets and liabilities.

Bank Deposits — How They Expand or Contract

Let us assume that expansion in the money stock is desired by the Federal Reserve to achieve its policy objectives. One way the central bank can initiate such an expansion is through purchases of securities in the open market. Payment for the securities adds to bank reserves. Such purchases (and sales) are called "open market operations."

How do open market purchases add to bank reserves and deposits? Suppose the Federal Reserve System, through its trading desk at the Federal Reserve Bank of New York, buys $10,000 of Treasury bills from a dealer in US government securities.[3] In today's world of computerized financial transactions, the Federal Reserve Bank pays for the securities with an "telectronic" check drawn on itself.[4] Via its "Fedwire" transfer network, the Federal Reserve notifies the dealer's designated bank (Bank A) that payment for the securities should be credited to (deposited in) the dealer's account at Bank A. At the same time, Bank A's reserve account at the Federal Reserve is credited for the amount of the securities purchase. The Federal Reserve System has added $10,000 of securities to its assets, which it has paid for, in effect, by *creating* a liability on itself in the form of bank reserve balances. These reserves on Bank A's books are matched by $10,000 of the dealer's deposits that did not exist before. See Illustration 1.

How the Multiple Expansion Process Works

If the process ended here, there would be no "multiple" expansion, i.e., deposits and bank reserves would have changed by the same amount. However, banks are required to maintain reserves equal to only a fraction of their deposits. Reserves in excess of this amount may be used to increase earning assets – loans and investments. Unused or excess reserves earn no interest. Under current regulations, the reserve requirement against most transaction accounts is 10 percent.[5] Assuming, for simplicity, a uniform 10 percent reserve requirement against all transaction deposits, and further assuming that all banks attempt to remain fully invested, we can now trace the process of expansion in deposits which can take place on the basis of the additional reserves provided by the Federal Reserve System's purchase of US government securities.

The expansion process may or may not begin with Bank A, depending on what the dealer does with the money received from the sale of securities. If the dealer immediately writes checks for $10,000 and all of them are deposited in other banks, Bank A loses both deposits and reserves and shows no net change as a result of the System's open market purchase. However, other banks have received them. Most likely, a part of the initial deposit will remain with Bank A, and a part will be shifted to other banks as the dealer's checks clear.

It does not really matter where this money is at any given time. The important fact is that *these deposits do not disappear*. They are in some deposit accounts at all times. All banks together have $10,000 of deposits and reserves that they did not have before. However, they are not required to keep $10,000 of reserves against the $10,000 of deposits. All they need to retain, under a 10 percent reserve requirement, is $1000. The remaining $9,000 is "excess reserves." This amount can be loaned or invested. See Illustration 2.

If business is active, the banks with excess reserves probably will have opportunities to loan the $9,000. Of course, they do not really pay out loans from the money they receive as deposits. If they did this, no additional money would be created. What they do when they make loans is to accept promissory notes in exchange for credits to the borrowers' transaction accounts. Loans (assets) and deposits (liabilities) both rise by $9,000. Reserves are unchanged by the loan transactions. But the deposit credits constitute new additions to the total deposits of the banking system. See Illustration 3.

Deposit Expansion

Illustration 1. When the Federal Reserve Bank purchases government securities, bank reserves increase. This happens because the seller of the securities receives payment through a credit to a designated deposit account at a bank (Bank A) which the Federal Reserve effects by crediting the reserve account of Bank A.

FR BANK		BANK A	
Assets	Liabilities	Assets	Liabilities
US govt. securities: +10,000	Reserve acct Bank A: +10,000	Reserves with FR Banks: +10,000	Customer deposit: +10,000

The customer deposit at Bank A likely will be transferred, in part, to other banks and quickly loses its identity amid the huge interbank flow of deposits.

Illustration 2. As a result, all banks taken together now have "excess" reserves on which deposit expansion can take place.

Total reserves gained from new deposits	10,000
less required against new deposits (at 10%)	1,000
equals excess reserves	9,000

Expansion – Stage 1

Illustration 3. Expansion takes place only if the banks that hold these excess reserves (Stage 1 banks) increase their loans or investments. Loans are made by crediting the borrower's account, i.e., by creating additional deposit money.

STAGE 1 BANKS

Assets		Liabilities	
Loans	+9,000	Borrower deposits	+9,000

This is the beginning of the deposit expansion process. In the first stage of the process, total loans and deposits of the banks rise by an amount equal to the excess reserves existing before any loans were made (90 percent of the initial deposit increase). At the end of Stage 1, deposits have risen a total of $19,000 (the initial $10,000 provided by the Federal Reserve's action plus the $9,000 in deposits created by Stage 1 banks). See Illustration 4. However, only $900 (10 percent of $9000) of excess reserves have been absorbed by the additional deposit growth at Stage 1 banks. See Illustration 5.

The lending banks, however, do not expect to retain the deposits they create through their loan operations. Borrowers write checks that probably will be deposited in other banks. As these checks move through the collection process, the Federal Reserve Banks debit the reserve accounts of the paying banks (Stage 1 banks) and credit those of the receiving banks. See Illustration 6.

Whether Stage 1 banks actually do lose the deposits to *other* banks or whether any or all of the borrowers' checks are redeposited in these *same* banks makes no difference in the expansion process. If the lending banks *expect* to lose these deposits – and an equal amount of reserves – as the borrowers' checks are paid, they will not lend more than their excess reserves. Like the original $10,000 deposit, the loan-credited deposits may be transferred to other banks, but they remain somewhere in the banking system. Whichever banks receive them also acquire equal amounts of reserves, of which all but 10 percent will be "excess."

Assuming that the banks holding the $9,000 of deposits created in Stage 1 in turn make loans equal to their excess reserves, then loans and deposits will rise by a further $8,100 in the second stage of expansion. This process can continue until deposits have risen to the point where all the reserves provided by the initial purchase of government securities by the Federal Reserve System are just sufficient to satisfy reserve requirements against the newly created deposits. (See Illustrations 8–10.)

The individual bank, of course, is not concerned as to the stages of expansion in which it may be participating. Inflows and outflows of deposits occur continuously. Any deposit received is new money, regardless of its ultimate source. But if bank policy is to make loans and investments equal to whatever reserves are in excess of legal requirements, the expansion process will be carried on.

How Much Can Deposits Expand in the Banking System?

The total amount of expansion that can take place is illustrated in Table 1. Carried through to theoretical limits, the initial $10,000 of reserves distributed within the banking system gives rise to an expansion of $90,000 in bank credit (loans and investments) and supports a total of $100,000 in new deposits under a 10 percent reserve requirement. The deposit expansion factor for a given amount of new reserves is thus the reciprocal of the required reserve percentage (1/.10 = 10). Loan expansion will be less by the amount of the initial injection. The multiple expansion is possible because the banks as a group are like one large bank in which checks drawn against borrowers' deposits result in credits to accounts of other depositors, with no net change in the total reserves.

Expansion through Bank Investments

Deposit expansion can proceed from investments as well as loans. Suppose that the demand for loans at some Stage 1 banks is slack. These banks would then probably purchase securities. If the sellers of the securities were customers, the banks would make payment by crediting the customers' transaction accounts, deposit liabilities would rise just as if loans had been made. More likely, these banks would purchase the securities through dealers, paying for them with checks on themselves or on their reserve accounts. These checks would be deposited in the sellers' banks. In either case, the net effects on the banking system are identical with those resulting from loan operations.

Illustration 4. As a result of the process so far, total assets and total liabilities of all banks together have risen 19,000.

ALL BANKS

Assets		Liabilities	
Reserves with FR Banks	+10,000	Deposits: Initial	+10,000
Loans	+9,000	Stage 1	+9,000
Total	+19,000	Total	+19,000

Illustration 5. Excess reserves have been reduced by the amount required against the deposits created by the loans made in Stage 1.

Total reserves gained from initial deposits	10,000
less: Required against initial deposits	–1,000
less: Required against Stage 1 requirements	–900
equals: Excess reserves	8,100

Why do these banks stop increasing their loans and deposits when they still have excess reserves…

Illustration 6. …because borrowers write checks on their accounts at the lending banks. As these checks are deposited in the payees' banks and cleared, the deposits created by Stage 1 loans and an equal amount of reserves may be transferred to other banks.

STAGE 1 BANKS

Assets		Liabilities	
Reserves with FR Banks	–9000	Borrower deposits	–9,000
(matched under FR bank liabilities)		(shown as additions to other bank deposits)	

FEDERAL RESERVE BANK

Assets		Liabilities	
		Reserve accounts: Stage 1 banks	–9,000
		Other banks	+9,000

OTHER BANKS

Assets		Liabilities	
Reserves with FR Banks	+9,000	Deposits	+9,000

Deposit expansion has just begun!

Illustration 7. Expansion continues as the banks that have excess reserves increase their loans by that amount, crediting borrowers' deposit accounts in the process, thus creating still more money.

STAGE 2 BANKS

Assets		Liabilities	
Loans	+ 8100	Borrower deposits	+8,100

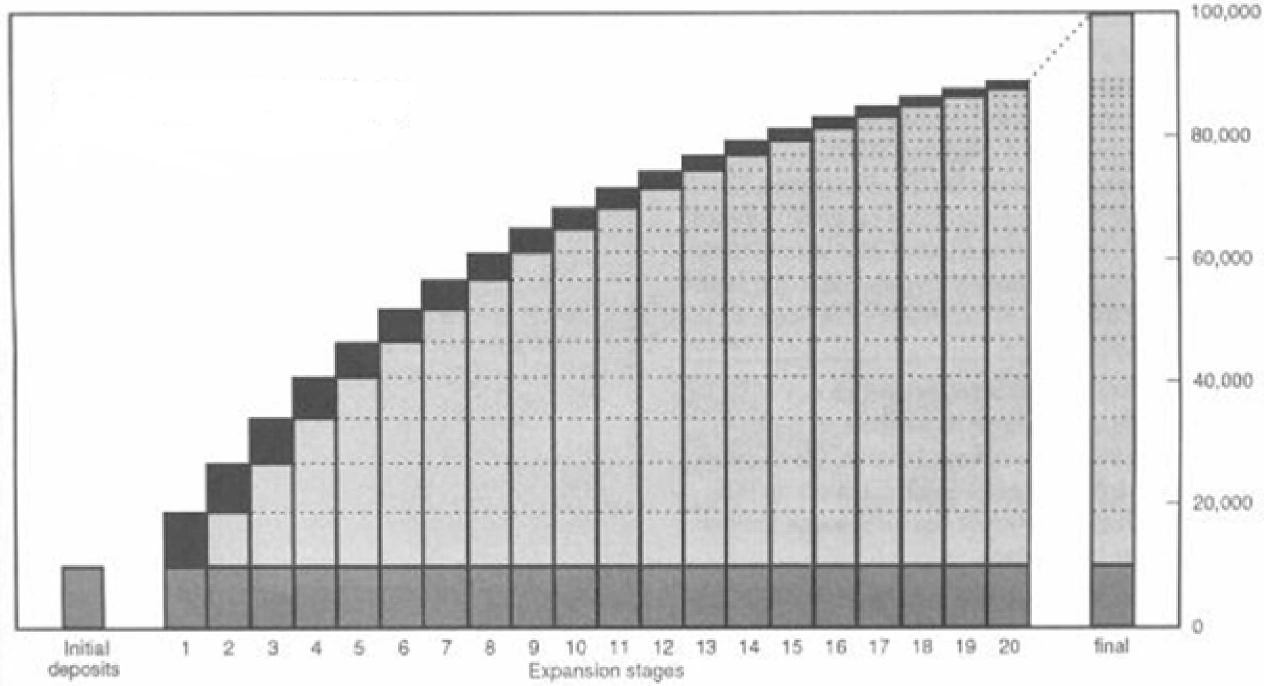
Illustration 8. Now the banking system's assets and liabilities have risen by 27,100.

ALL BANKS

Asset		Liabilities	
Reserves with FR Banks	+10,000	Deposits: Initial	+10,000
Loans: Stage 1	+ 9,000	Stage 1	+9,000
Stage 2	+ 8,100	Stage 2	+8,100
Total	+27,000	Total	+27,000

Illustration 9. But there are still 7,290 of excess reserves in the banking system.

Figure 1: Cumulative Expansion in Deposits on Basis of 10,000 of New Reserves and Reserve Requirements of 10 percent



Total reserves gained from initial deposits 10,000
less: Required against initial deposits.......................................–1,000
less: Required against Stage 1 deposits.......................................–900
less: Required against Stage 2 deposits.........................–810 …2,710
equals: Excess reserves...............................7,290 –> to Stage 3 banks

Illustration 10. As borrowers make payments, these reserves will be further dispersed, and the process can continue through many more stages, in progressively smaller increments, until the entire 10,000 of reserves have been absorbed by deposit growth. As is apparent from the summary in Table 1, two-thirds of the deposit expansion potential is reached after the first ten stages.

It should be understood that the stages of expansion occur neither simultaneously nor in the sequence described above, continuous. Some banks use their reserves incompletely or only after a considerable time lag, while others expand assets on the basis of expected reserve growth. The process is, in fact, continuous and may never reach its theoretical limits.

Thus through stage after stage of expansion, "money" can grow to a total of 10 times the new reserves supplied to the banking system as the new deposits created by loans at each stage are added to those created at all earlier stages and those supplied by the initial reserve-creating action. See Figure 1.

TABLE 1

Assets					Liabilities
	[	Reserves	]		
	Total	(Required)	(Excess)	Loans and Investments	Deposits
Reserves provided	10,000	1,000	9,000	–	10,000
Exp. Stage 1	10,000	1900	8,100	9,000	19,000
Stage2	10,000	2,710	7,290	17,100	27,100
Stage 3	10,000	3,439	6,561	24,390	34,390
Stage 4	10,000	4,095	5,905	30,951	40,951
Stage 5	10,000	4,686	5,314	36,856	46,856
Stage 6	10,000	5,217	4,783	42,170	52,170
Stage 7	10,000	5,695	4,305	46,953	56,953
Stage 8	10,000	6,126	3,874	51,258	61,258
Stage 9	10,000	6,513	3,487	55,132	65,132
Stage 10	10,000	6,862	3,138	58,619	68,619
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
Stage 20	10,000	8,906	1,094	79,058	89,058
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
Final Stage	10,000	10,000	0	90,000	100,000

How Open Market Sales Reduce bank Reserves and Deposits

Now suppose some reduction in the amount of money is desired. Normally this would reflect temporary or seasonal reductions in activity to be financed since, on a year-to-year basis, a growing economy needs at least some monetary expansion. Just as purchases of government securities by the Federal Reserve System can provide the basis for deposit expansion by adding to bank reserves, sales of securities by the Federal Reserve System reduce the money stock by absorbing bank reserves. The process is essentially the reverse of the expansion steps just described.

Suppose the Federal Reserve System sells $10,000 of Treasury bills to a US government securities dealer and receives in payment an "electronic" check drawn on Bank A. As this payment is made, Bank A's reserve account at a Federal Reserve Bank is reduced by $10,000. As a result, the Federal Reserve System's holdings of securities and the reserve accounts of banks are both reduced $10,000. The $10,000 reduction in Bank A's deposit liabilities constitutes a decline in the money stock. See Illustration 11.

Contraction Also Is a Cumulative Process

While Bank A may have regained part of the initial reduction in deposits from other banks as a result of interbank deposit flows, all banks taken together have $10,000 less in both deposits and reserves than they had before the Federal Reserve's sales of securities.

The amount of reserves freed by the decline in deposits, however, is only $1,000 (10 percent of $10,000). Unless the banks that lose the reserves and deposits had excess reserves, they are left with a reserve deficiency of $9,000. See Illustration 12. Although they may borrow from the Federal Reserve Banks to cover this deficiency temporarily, sooner or later the banks will have to obtain the necessary reserves in some other way or reduce their needs for reserves.

One way for a bank to obtain the reserves it needs is by selling securities. But, as the buyers of the securities pay for them with funds in their deposit accounts in the same or other banks, the net result is a $9,000 decline in securities and deposits at all banks. See Illustration 13. At the end of Stage 1 of the contraction process, deposits have been reduced by a total of $19,000 (the initial $10,000 resulting from the Federal Reserve's action plus the $9,000 in deposits extinguished by securities sales of Stage 1 banks). See Illustration 14.

However, there is now a reserve deficiency of $8,100 at banks whose depositors drew down their accounts to purchase the securities from Stage 1 banks. As the new group of reserve-deficient banks, in turn, makes up this deficiency by selling securities or reducing loans, further deposit contraction takes place.

Thus, contraction proceeds through reductions in deposits and loans or investments in one stage after another until total deposits have been reduced to the point where the smaller volume of reserves is adequate to support them. The contraction multiple is the same as that which applies in the case of expansion. Under a 10 percent reserve requirement, a $10,000 reduction in reserves would ultimately entail reductions of $100,000 in deposits and $90,000 in loans and investments.

As in the case of deposit expansion, contraction of bank deposits may take place as a result of either sales of securities or reductions of loans. While some adjustments of both kinds undoubtedly would be made, the initial impact probably would be reflected in sales of government securities. Most types of outstanding loans cannot be called for payment prior to their due dates. But the bank may cease to make new loans or refuse to renew outstanding ones to replace those currently maturing. Thus, deposits built up by borrowers for the purpose of loan retirement would be extinguished as loans were repaid.

There is one important difference between the expansion and contraction processes. When the Federal Reserve System adds to bank reserves, expansion of credit and deposits *may* take place up to the limits permitted by the minimum reserve ratio that banks are required to maintain. But when the System acts to reduce the amount of bank reserves, contraction of credit and deposits *must* take place (except to the extent that existing excess reserve balances and/or surplus vault cash are utilized) to the point where the required ratio of reserves to deposits is restored. But the significance of this difference should not be overemphasized. Because excess reserve balances do not earn interest, there is a strong incentive to convert them into earning assets (loans and investments).

Deposit Contraction

Illustration 11. When the Federal Reserve Bank sells government securities, bank reserves decline. This happens because the buyer of the securities makes payment through a debit to a designated deposit account at a bank (Bank A), with the transfer of funds being effected by a debit to Bank A's reserve account at the Federal Reserve Bank.

FEDERAL RESERVE BANK		BANK A	
Assets	Liabilities	Assets	Liabilities
U.S govt. securities.....–10,000	Reserve Accts. Bank A . –10,000	Reserves with FR Banks ....–10,000	Customer deposits . –10,000

This reduction in the customer deposit at Bank A may be spread among a number of banks through interbank deposit flows.

Illustration 12. The loss of reserves means that all banks taken together now have a reserve deficiency.

Total reserves lost from deposit withdrawal	10,000
less: Reserves freed by deposit decline (10%)	1,000
equals: Deficiency in reserves against remaining deposits	9,000

Contraction – Stage 1

Illustration 13. The banks with the reserve deficiencies (Stage 1 banks) can sell government securities to acquire reserves, but this causes a decline in the deposits and reserves of the buyers' banks.

STAGE 1 BANKS

Assets	Liabilities
US government securities–9,000	
Reserves with FR Banks ...+9,000	

FEDERAL RESERVE BANK

Assets	Liabilities
	Reserve Accounts:
	Stage 1 banks ....+9,000
	Other banks .... –9,000

OTHER BANKS

Assets	Liabilities
Reserves with FR Banks ... –9,000	Deposits .... –9,000

Illustration 14. As a result of the process so far, assets and total deposits of all banks together have declined 19,000. Stage 1 contraction has freed 900 of reserves, but there is still a reserve deficiency of 8,100.

ALL BANKS

Assets	Liabilities
	Deposits:
Reserves with FR Banks . –10,000	Initial .... –10,000
US government securities–9,000	Stage 1 .... –9,000
Total .... –19,000	Total .... –19,000

Further contraction must take place!

Bank Reserves — How They Change

Money has been defined as the sum of transaction accounts in depository institutions, and currency and travelers checks in the hands of the public. Currency is something almost everyone uses every day. Therefore, when most people think of money, they think of currency. Contrary to this popular impression, however, *transaction deposits* are the most significant part of the money stock. People keep enough currency on hand to effect small face-to-face transactions, but they write checks to cover most large expenditures. Most businesses probably hold even smaller amounts of currency in relation to their total transactions than do individuals.

Since the most important component of money is transaction deposits, and since these deposits must be supported by reserves, the central bank's influence over money hinges on its control over the total amount of reserves and the conditions under which banks can obtain them.

The preceding illustrations of the expansion and contraction processes have demonstrated how the central bank, by purchasing and selling government securities, can deliberately change aggregate bank reserves in order to affect deposits. But open market operations are only one of a number of kinds of transactions or developments that cause changes in reserves. Some changes originate from actions taken by the public, by the Treasury Department, by the banks, or by foreign and international institutions. Other changes arise from the service functions and operating needs of the Reserve Banks themselves.

The various factors that provide and absorb bank reserve balances, together with symbols indicating the effects of these developments, are listed in Table 2. This tabulation also indicates the nature of the balancing entries on the Federal Reserve's books. (To the extent that the impact is absorbed by changes in banks' vault cash, the Federal Reserve's books are unaffected.)

Independent Factors Versus Policy Action

It is apparent that bank reserves are affected in several ways that are independent of the control of the central bank. Most of these "independent" elements are changing more or less continually. Sometimes their effects may last only a day or two before being reversed automatically. This happens, for instance, when bad weather slows up the check collection process, giving rise to an automatic increase in Federal Reserve credit in the form of "float." Other influences, such as changes in the public's currency holdings, may persist for longer periods of time.

Still other variations in bank reserves result solely from the mechanics of institutional arrangements among the Treasury, the Federal Reserve Banks, and the depository institutions. The Treasury, for example, keeps part of its operating cash balance on deposit with banks. But virtually all disbursements are made from its balance in the Reserve Banks. As is shown later, any buildup in balances at the Reserve Banks prior to expenditure by the Treasury causes a dollar-for-dollar drain on bank reserves.

In contrast to these independent elements that affect reserves are the policy actions taken by the Federal Reserve System. The way System open market purchases and sales of securities affect reserves has already been described. In addition, there are two other ways in which the System can affect bank reserves and potential deposit volume directly; first, through loans to depository institutions, and second, through changes in reserve requirement percentages. A change in the required reserve ratio, of course, does not alter the dollar volume of reserves directly but does change the amount of deposits that a given amount of reserves can support.

Any change in reserves, regardless of its origin, has the same potential to affect deposits. Therefore, in order to achieve the net reserve effects consistent with its monetary policy objectives, the Federal Reserve System continuously must take account of what the supplement them as the situation may require.

By far the largest number and amount of the System's gross open market transactions are undertaken to offset drains from or additions to bank reserves from non-Federal Reserve sources that might otherwise cause abrupt changes in credit availability. In addition, Federal Reserve purchases and/or sales of securities are made to provide the reserves needed to support the rate of money growth consistent with monetary policy objectives.

In this section of the booklet, several kinds of transactions that can have important week-to-week effects on bank reserves are traced in detail. Other factors that normally have only a small influence are described briefly in "Miscellaneous Factors Affecting Bank Reserves" in Part 2 of the article.

Part 2 will appear in the next issue of the Journal.

Table 2: Factors Changing Reserve Balances — Independent and Policy Actions

FEDERAL RESERVE BANKS

	Assets	Liabilities	
		Reserve balances	Other
Public actions			
Increase in currency holdings		–	+
Decrease in currency holdings		+	–
Treasury, bank, and foreign actions			
Increase in Treasury deposits in FR Banks		–	+
Decrease in Treasury deposits in FR Banks		+	–
Gold purchases (inflow) or increase in official valuation*		+	–
Gold sales (outflows)*		–	+
Increase in SDR certificates issued*		+	–
Decrease in SDR certificates issued*		–	+
Increase in Treasury currency outstanding*		+	–
Decrease in Treasury currency outstanding*		–	+
Increase in Treasury cash holdings*		–	+
Decrease in Treasury cash holdings*		+	–
Increase in service-related balances/ adjustments		–	+
Decrease in service-related balances/ adjustments		+	–
Increase in foreign and other deposits in FR Banks		–	+
Decrease in foreign and other deposits in FR Banks		+	–
Federal Reserve actions			
Purchases of securities	+	+	
Sales of securities	–	–	
Loans to depository institutions	+	+	
Repayment of loans to depository institutions	–	–	
Increase in Federal Reserve float	+	+	
Decrease in Federal Reserve float	–	–	
Increase in assets denominated in foreign currency	+	+	
Decrease in assets denominated in foreign currency	–	–	
Increase in other assets**	+	+	
Decrease in other assets**	–	–	
Increase in other liabilities**	–	+	
Decrease in other liabilities**	+	–	
Increase in capital accounts**	–	+	
Decrease in capital accounts**	+	–	
Increase in reserve requirements	–***		
Decrease in reserve requirement	+***		

** These factors represent assets and liabilities of the Treasury. Changes in them typically affect reserve balances through a related change in the Federal Reserve Banks' liability "Treasury deposits."*

*** Included in "Other Federal Reserve accounts" as described in Illustration 27 in Part 2.*

**** Effect on excess reserves. Total reserves are unchanged.*

Note: To the extent that reserve changes are in the form of vault cash, Federal Reserve accounts are not affected.