

## POSTSCRIPT 2008

### **P1 Recent events of relevance**

Part I of this study yielded the conclusion that human society is on the verge of self-destruction because of ecological damage caused by excessive energy use. The cause of this excessive energy use in turn was identified in Part II as unrelenting growth in economic production. The upshot of the first twelve chapters (Parts I and II together), accordingly, is that continuing economic growth has brought human society to the brink of self-destruction.

Chapter 13 argues that the driving force behind economic growth is desire on the part of corporate managers and investors. Cooperating with this desire for wealth is a set of social values that encourage consumption of the goods and services produced by corporations in pursuit of profit. Subsequent chapters in Part III argue that the most effective way to curtail economic growth may be to replace these consumer values with other social values more conducive to ecological health.

Chapter 18 ends the book by suggesting a series of steps individuals might take to help bring about ecologically friendly social values. If this goal were accomplished, the effect would be a retrenchment of economic growth to a point compatible with the recovery of a healthy biosphere. And with the recovery of a healthy environment would come a reprieve from the threat of self-destruction by human society.

All this sounds great for the environment but rather dismal for the economy. Continuing decline in economic growth is tantamount to economic recession. And the consequences of recession are sufficiently dire that steps leading in that direction cannot

be taken lightly. Could it be that the measures taken to avoid environmental catastrophe would precipitate economic disaster instead?

A partial response to this potential economic threat is contained in section 17.7, which argues that the average contentment level in a society 50 years hence that had adopted a set of social values congenial to the environment would be much higher than in a society still burdened with today's consumer values. This by itself shows the long-term wisdom of moving toward an ecologically sustainable social order, regardless of economic hardships encountered along the way.

Abstract arguments of this sort, however, say nothing about the nature or the severity of the hardships in question. As chance would have it, the world economy last year (2008) found itself a deep recession that many (particularly in the U.S.) have described as the worst since the Great Depression of 1929. Although the proximate causes of this down-turn had little to do with a shift toward environmentally-friendly values, the hardships that came with it must be similar to those we would encounter if such a shift were actually underway. This gives us something concrete to think about in considering the economic consequences of giving up our present set of consumer-oriented values.

The purpose of this postscript is to show that a transition to an ecologically responsible set of values not only would be advantageous in the long run (as argued in 17.7) but moreover that it could be accomplished with less hardship than might be expected. With this end in view, let us adopt the following tactic. Let us imagine – counterfactually – that the current economic downturn is the result of our already having set out on a path toward ecological sustainability. Then let us consider possible

economic adjustments that might make continued progress in that direction less onerous for most of society.

To the extent that this tactic proves useful, it should show that the economic hardships of replacing consumer-oriented with ecologically-oriented values are not socially intolerable. It will also indicate, as an added bonus, various ways in which we can take advantage of the current recession by treating it as an opportunity to take substantial steps toward an ecologically sustainable social order. The task of the postscript thus begins with a brief account of the current recession.

## **P2 The Recession of 2008**

Precipitated by the collapse of the subprime mortgage market and sharp rises in energy prices, the U.S. economy was already in recession by the early months of 2008. As the financial crisis worsened, it spread to other national economies in Europe and Asia. By the end of the year the recession that began in the U.S. had spread to market-based economies across the world.

Subprime mortgages are loans issued to borrowers whose credit ratings do not qualify them for conventional (lower interest) loans. Since subprime loans are prone to default, their terms tend to be unfavorable to the borrower. Not only are interest rates high initially, but they are commonly “adjustable” (meaning likely to increase) and often involve payment of interest exclusively for extended periods without repayment of principle. Despite such unfavorable terms, millions of low-income families were attracted to such loans as a way of participating in the “American Dream” of homeownership.

But why would lending institutions make loans that are inherently prone to default? One reason is that subprime mortgages, no less than the conventional variety, bring profit to the lender in the form of closing costs, mortgage points, and other surcharges. Another reason is that (as with conventional loans) the property bought by the borrower serves as collateral which can be seized in case of default. As long as property value holds steady (or increases) the lender can regain the principle of the loan by foreclosing.

Prior to 2008, at least, there was a further inducement for banks to make subprime loans that was less straightforward. This incentive involved a relatively new kind of financial instrument that enabled primary lending institutions (like banks) to insure themselves against loss in foreclosure by transferring the risk to another party. The financial instrument in question is known as a credit derivative or CDO (Collateralized Debt Obligation).

For a simple example, suppose a bank B has issued a mortgage to a subprime borrower A to purchase a certain property and is concerned that A may default on the loan. B may then enter into a contract with a second-tier lender C who undertakes to reimburse B for any losses sustained in dealing with A. Rather than wait for actual defaults, C calculates probabilities of default over a class of As and issues B a line of credit which is secured by the properties involved. B can then use this credit to provide further mortgages. In effect, B is selling foreclosure rights to C at a price C wagers will turn out to be profitable. Financial firms playing the role of C (prior to 2008) included pension funds, hedge funds<sup>1</sup>, and investment banks such as JPMorgan and Bear Stearns.

But mortgages do not become less risky when packaged (often with other loans) and sold to a second-tier (C level) institution. Second-tier firms would maintain their credit ratings in turn by passing the risk on to higher-level insurers. These third-tier underwriters might be either private or public (governmental). An example of the former is the American Insurance Group (AIG), which prior to the subprime collapse held mortgage packages with face values totaling in the trillions of dollars.

Upper-tier lending institutions backed by the federal government include the Federal National Mortgage Association (“Fannie Mae”) and the Federal Home Mortgage Corporation (“Freddie Mac”). Both organizations are privately owned and are operated for the profit of their stockholders. At the same time, however, both are government sponsored, which means that they are exempt from state and local income taxes, are free from over-sight by the Securities and Exchange Commission (SEC), and have access to a federal line of credit in case their investments go sour. Before the collapse of 2008, “Fannie” and “Freddie” held over 100 billion dollars worth of subprime mortgages and were insured against loss by the federal government.<sup>2</sup>

“Fannie” and “Freddie” were set up initially to help lower-income people buy houses, and until it began to fall apart the system we have been describing still served that purpose. As it grew in complexity, however, with tier upon tier of participants, the primary function of the system became one of generating profit for investors on its several levels. Banks and other first-tier lenders made money from closing costs and interest payments. Second-tier investment firms like Bear Stearns made money by selling stocks to mutual funds and retirement plans. And top-tier players like AIG made money from fees charged for their underwriting and other financial services.

The role of mortgages in this evolving system, accordingly, shifted from one primarily enabling people to finance houses to one enabling lenders to generate cash flow and to create collateral for further loans. The more mortgages issued by a given bank, the more collateral it had to secure loans enabling it to issue yet more mortgages in turn. Similar feedback mechanisms operated on upper tiers of the system. The more derivatives a firm like Bear Stearns purchased from mortgage lenders, the more substantial its credit rating, the more credit it could extend to first-tier lenders, and the higher the dividends it could pass on to its stockholders. In one way or another, mortgages purchased by low-income families fueled the activities generating profit on other levels of the system.

This means, in effect, that the entire system operated primarily on credit and that this credit was based on assets no more substantial than foreclosure-rights on high-risk mortgages. Seen from another perspective, the system operated on loans secured by other loans, with built-in incentives at each stage to leverage these loans (that is, to increase the ratio of loans to assets) as far as possible.<sup>3</sup> Seen either way, the investment system in question was highly unstable, based on credit rather than solid assets (some have likened it to a Ponzi scheme).

Another source of instability lies in the fact that credit derivatives are traded in over-the-counter transactions between buyer and seller, which exempts them from regulation. A consequence is that no one is looking after the interests of other parties involved, such as the homeowners whose properties are in jeopardy. As long as home values hold firm and sub-prime owners can meet their payments, this highly leveraged system can keep on growing. But when property values plummet, driving owners into

foreclosure without equity to pay their mortgage principle, the entire system collapses like a house of cards.

This, of course, is exactly what happened in the aftermath of the rapid decline in home values beginning late in 2006. As lower-level lenders were left with increasing numbers of properties now worth less than the defaulted loans they secured, upper-level insurers had to absorb the losses. And inasmuch as the insuring firms were highly leveraged, claims upon them began to exceed the resources they had available for payment. Some were able to obtain cash infusions from other sources, and some fell headlong into legal insolvency.

Merrill Lynch was the first financial giant to stumble. Burdened with subprime losses totaling \$51 billion,<sup>4</sup> it was taken over in a \$50 billion stock transaction by Bank of America. Next to fall was Bear Stearns, which was bought by JPMorgan Chase for a mere \$240 million. By April, Citigroup had sustained a subprime loss of \$40 billion and had received \$45 billion in government bailout. Lehman Brothers was not so lucky, falling into bankruptcy (the biggest in U.S. history) in September after pleading unsuccessfully for bailout by the Federal Government.

Given AIG's key role as a third-tier lender, Secretary Paulson of the U.S. Treasury and Chairman Bernanke of the Federal Reserve decided they could not let it founder. Previously an icon of free-market capitalism, AIG was effectively nationalized in September with a \$95 billion loan from the government. After Congress authorized the infamous \$700 billion bailout plan in early October, an additional \$77 billion was promptly transferred to AIG in a renewed effort to keep it afloat. By mid-October, another \$250 billion in bailout money had been earmarked for several of the nation's

largest banks, including Bank of America (which had absorbed Merrill Lynch), Goldman Sachs, and JPMorgan Chase (which had bought Bear Stearns).<sup>5</sup>

While these things were happening in the U.S., similar measures were being taken in Europe and Asia. By mid-October several European countries, including Britain, Germany, Spain, Sweden, Denmark, Austria, and Ireland, had announced plans either to guarantee bank debts, to support major banks with loans, or to acquire ownership through stock purchases. And by mid-November, China had followed the U.S. lead by announcing a stimulus plan infusing \$586 billion into its national economy. By year-end, the upheaval spawned by the U.S. subprime debacle had spread to the rest of the financial world.

### **P3 Reviving the system**

People who don't qualify for standard mortgages need housing like everyone else. When banks responded to the up-swell of housing prices early in the decade (the "housing bubble") by encouraging these people to take out adjustable rate and interest-only mortgages, it may have looked initially as if the lenders were doing their low-income borrowers a favor. As the system evolved into one of packaging these mortgages and selling them to higher-tier lenders in exchange for credit to issue more underqualified mortgages, however, it became clear that the system was being driven by a desire for quick profit on the part of the lenders.

Described in a manner made famous by a recent presidential candidate, the whole business of peddling high-risk mortgages to poorly qualified borrowers was motivated by greed. Those who benefited most were the relatively few investors and managers of the various financial firms involved in the upper tiers of the system. Those who benefited

least were the large numbers of impoverished people forced to abandon run-down properties they could neither sell nor afford to keep. Add to these the millions of workers laid off in the massive recession that followed. Rather than “trickling down” from higher to lower income groups, the wealth generated by the subprime market resulted in financial ruin for legions of hapless victims.

Although factors leading to the financial collapse are reasonably clear, no one seems quite sure how to repair the damage. One thing on which analysts seem to agree is that the market will not resume normal operations until loans flow more freely among financial institutions. A standard way of controlling credit liquidity is for the Federal Reserve to adjust the prime interest rate, the general idea being that institutions take out loans more (or less) freely at lower (or higher) rates of interest. During 2008 the Fed cut the prime rate some six or seven times, ending the year with a rate hovering between zero and one-quarter percent. But while things might have been worse without these measures, lowering the prime rate has done little to stem the crisis.

Another aspect of the frozen-credit problem is that banks now are extremely cautious in making new loans, tending to conserve their assets to cover their own debts. The remedy called for here seems to be infusions of cash enabling these institutions to make new loans more freely. A large portion of expenditures from the \$700 billion bailout fund before the end of 2008 were given over to this purpose (recall the \$77 billion infusion from this fund to AIG). Contrary to government intent, however, recipients of this largess used it mostly to pay off their own debts rather than to make loans available to outside borrowers.<sup>6</sup>

An often-cited statistic these days is that some 70% of economic activity in the U.S. is driven by consumer spending. Although most consumers are not active players in the financial market, many are directly affected by the financial downturn through loss of jobs and dwindling retirement accounts. The effect is a massive decline in consumer spending which has repercussions through the entire economy. Another measure aimed at ameliorating the recession was the Economic Stimulus Act of February 2008, providing rebates on taxes paid for 2007 and costing the government some \$170 billion. A much larger stimulus package is anticipated after the Obama Administration takes over in January 2009. While the recession might be even more severe without such stimuli, however, experience shows that most of the rebate goes toward paying off old debt rather than making new purchases. Despite the 2008 rebate, the year ended with consumer spending at one of its lowest levels ever recorded (declining 6.2% in the fourth quarter).

Quite apart from the dubious efficacy of these various measures, it should be noted that they all seem to be aimed at reviving the system brought to its knees by the subprime mortgage debacle. To be sure, changes to the system already are in the works as part of the recovery effort. Because of government bailouts, financial institutions no longer can be said to operate exclusively on free-market principles. A consequence is that over-the-counter trading among these institutions is likely to become subject to stricter governmental oversight. And efforts are currently underway to impose enforceable limits on executive salaries and bonus packages. Nonetheless, even if such recovery efforts are successful, we will still have a system in which health of the economy depends upon people buying things they do not need, in which availability of

jobs depends upon health of the overall economy, and in which jobs at the top of the economic scale pay several hundreds of times more than those at the bottom.

Most significantly, we will still have an economy geared to the profit of a few rather than one serving the needs of the many. Because of the value it attaches to profit at the expense of environmental integrity, moreover, we will still have an economy working at odds with a healthy biosphere. An urgent question arising at this point is whether there are other recovery strategies that might lead to an economic order more compatible with a sound environment. We now turn to that question.

#### **P4 Economies geared to need rather than profit**

In the U.S. currently (early 2009), more than 7% of available workers are unemployed and many others are overqualified for the jobs they hold. Among those still employed, increasing numbers lack adequate health care, have defaulted on their mortgage payments, are deep in credit-card debt, and face hard choices between putting food on the table and keeping their cars running. For much of the workforce, recession has imposed a ruinous burden of deprivation and distress.

As it stands, the situation obviously calls for remedial action. Among remedies currently being proposed are tax breaks for industries providing jobs and rebates to stimulate consumer spending. As already noted, such remedies are not assured of success and at best promise little relief for our beleaguered environment.

To put the situation in perspective, we should observe that the current recession has brought on these ruinous consequences in the context of a particular economic system – the very system our economic planners are trying to resuscitate. Other economic arrangements, had they been in place, might have resulted in less adverse consequences.

What arrangements? Let us begin with a very general description. Whereas the current economy in the U.S. (as elsewhere) is geared to generate profit, an alternative system of the sort in question would be geared to serve genuine human needs. It goes without saying that the distinction between genuine needs and “mere wants” is not easy to draw precisely.<sup>7</sup> However the distinction is made, nonetheless, there is a clear difference between an economy set up to provide lucrative returns on investments and one arranged to deliver goods and services needed for a decent human existence. The alternative system we want to delineate is of the latter sort.

To take the differentiation a step forward, we may observe that a profit-driven economy, in order to generate a favorable return on investment, must produce income beyond the resources committed to its productive processes. When profit declines, one way for management to compensate is to cut back on production costs. And one way of cutting back on production costs is to reduce the cost of labor, which typically amounts to reducing wages, eliminating jobs, and curtailing fringe benefits like health insurance. Thus is that the current recession has led to hardship on the part of the working population.

In an economy geared to the needs of individuals, on the other hand, overall profitability of business is not an overriding concern. Business enterprises in such an economy will flourish or wane depending on their success in delivering needed goods and services. And their success in doing this will not inevitably be compromised by declining stock prices, by frozen credit in financial markets, or by failure of the economy overall to maintain steady growth. For these and similar reasons, recession (failure of growth in GDP) in a need-based economy can leave ordinary people relatively unscathed.

To add detail to this general description, it would help to have experience with actual need-based economies. Although small-scale approximations probably exist (or have existed) in so-called “indigenous” societies,<sup>8</sup> no clear instances can be found among today’s major economic systems. Lacking clear precedents, let us proceed by elaborating specific points of difference from economies geared to profit.

### **P5 Satisfying basic needs without profit incentives**

As already observed, the current recession has precipitated many problems for working people, including mortgage default, raising food prices, inadequate health care, and credit-card debt. Although such problems result directly from job loss and underemployment, there is a more fundamental cause. The underlying cause is that people have become subject to economic arrangements that other people have learned to manipulate for their own profit.

Put otherwise, the basic source of these problems is that resources people need to lead decent lives have been made into commodities. As such, they are available only in return for money. This means that they are unavailable when the wherewithal to purchase them is lacking.

Because cash is needed under these arrangements to acquire these basic commodities, the ordinary household must maintain a steady cash inflow. Lacking significant income from dividends and investments, loss of employment amounts to interruption of cash inflow for most working people. Loss of employment thus leaves people unable to acquire necessary commodities such as food, shelter, and adequate health care.

A constant temptation in the face of insufficient income, of course, is to borrow money against possible future earnings. This is where credit cards come into the picture. Within limits, credit cards provide loans without collateral. For persons unable to pay their balances promptly, however, use of credit cards only increases the price of commodities purchased (initial price plus interest). Use of credit cards to fill in for lost income thus only exacerbates the other consequences of unemployment. The credit-card industry is just one more business in our current economy set up to profit from the plight of those who rely on its services.

Unlike the case of food markets and health care providers, however, the services offered by credit card companies do not respond to genuine human needs. To the extent that electronic transfer of consumer funds is essential to a modern economy, that role can be played by debit cards (or like facilities) instead. To the extent that credit-card debt is a separate problem for people seriously affected by the current economic downturn, that problem can be managed by taking steps to opt out of the credit-card system.

The other problems we have been discussing, however, are not so straightforward. As already noted, these problems stem from the fact that provisions required to meet basic human needs have been made into commodities. A consequence is that necessary provisions such as housing, food, and health care are available to most people only in exchange for money, often at prices including substantial profit for providers.

In the alternative economy we are attempting to delineate, these basic necessities could be obtained directly in exchange for labor. Money would not be required as a medium of exchange. Although money would still be used routinely for many purposes,

it would not be necessary for access to bare essentials. Let us take a practical look at how that might work, beginning with the basic need for a place to live.

### **P6 Housing in exchange for labor**

If a comprehensive history of human habitation were ever written, the variety of arrangements to be covered would be practically endless. Dwellings can be constructed or naturally formed (caves, natural hollows). If constructed they can be made from materials as diverse as stone, wood, brick, sod, fabrics, and hides. They can be temporary (tents, sod houses) or relatively permanent. And they can be constructed for occupation by individuals, families, or communal groups.

Most relevant for our purposes, however, is the manner in which people secure access to the dwellings they occupy. Some gain access by inheritance or political role (kings, heads of state). Some qualify for special accommodations (poorhouses, old people's homes). In developed societies today, however, a large majority gain access in exchange for money. Renting or leasing is accomplished by upfront cash, while ownership usually involves a mortgage.<sup>9</sup> As indicated previously, profiteering in the mortgage industry was a major factor leading to the current recession.

Exchanging money is one way of acquiring a dwelling; and taking out a mortgage is one way of getting together the necessary cash. But there are other ways of acquiring dwellings than exchange for currency. Consider the age-old alternative of fabricating one's own living quarters. Inuits, for example, constructed igloos from blocks of snow, Navahos made hogans from logs and dirt, settlers of the American plains made soddies from turfs of prairie grass, and so forth. In such cases, access to living quarters was gained in exchange for labor rather than cash.

Although it is unusual for people to build their own homes in today's industrial societies, let us imagine practical circumstances in which housing could be acquired in exchange for labor. To help this exercise in imagination along, think of the Amish tradition of barn raising where a community comes together to assemble a barn for one of its households.<sup>10</sup> The basic idea is that of a group of able-bodied volunteers who cooperate in building houses for each other.

Modern construction requires the services of specialists like electricians, bricklayers, and plumbers. Such craftsmen might be part of the cooperating group, combining their special skills with the labor of other members. Another possibility would be to pay these specialists regular wages financed by nonprofit lending societies set up for this purpose. These societies might follow the pattern of the original building societies in the UK that enabled working people to pool their savings in support of each other's home-building efforts.<sup>11</sup>

Building supplies could be provided by similar cooperative ventures. Instead of purchasing materials and equipment from profit-making outlets, participating members could obtain these through purchasing cooperatives (perhaps comprised of several building associations) which buy supplies in bulk and pass the savings on to their members. These purchasing organizations might be similar in operation to cooperatives like True Value and Ace Hardware, which are prominent among hardware retailers today.<sup>12</sup>

What we have been describing is basically a system of interacting cooperative ventures (co-ops for short). Able-bodied people pool their labor in building houses for each other. These are the primary co-ops of the system being described. Necessary

supplies and equipment are obtained through secondary co-ops (co-ops of co-ops) which purchase them at discount prices. And necessary financing is handled through other secondary co-ops, which manage money for their members on a non-profit basis. In cases where primary co-ops have no financial resources of their own, they might earn money by hiring their services out to various profit-making companies (such as commercial construction firms and developers).

By way of upshot, whereas in our current economic system working people can obtain housing only in return for cash, in this alternative system labor will sometimes do as well. In the current system, accordingly, an unemployed person typically is unable to acquire a home, or if already a homeowner is likely to lose it. In the alternative system, on the other hand, a person without wages can still work for home ownership by contributing labor in exchange for the value of a house.

The parts of this alternative system are already available in prototype—barnraising communities, building societies, cooperative supply stores. What is needed to put them together is escaping from the grips of the profit-motive in the provision of necessities along with the political will to enact legislation enabling cooperating groups of people to meet their housing needs by themselves.

Similar advantages are available in the areas of food supply and health care. We turn next to possible arrangements in which food can be gained without exchange of cash.

## **P6 Profit built into food prices**

Discussion of curtailed access to food often focuses on the topic of world hunger. Our concern of the moment is not with world hunger. Although food shortages are being

experienced in several parts of the world today and pose problems in their own right, these shortages are not directly connected with problems encountered by ordinary workers as a result of the current recession. Our present concern is that food prices in the U.S. and other industrialized countries are rising to the level where ordinary people are having trouble paying their food bills.

In this setting, at least, the reason food prices are increasing is not a general food shortage. Nor is it inflation of the currency in which prices and wages tend to go up simultaneously. The reason food prices are high and growing higher is that recession is squeezing profits at each juncture of the food-supply chain.

To gather a sense of how that happens, let us compare the way food reaches the consumer today with the typical food-supply system of a century ago. A century or so ago, the standard process for getting food from producer to consumer involved (1) local farmers, who trucked their own produce to market, (2) local grocers, who sold their merchandize for cash or credit (no credit cards), and (3) local customers, who could buy fresh meat and produce within a day or two after it left the farm. Although vestiges of this simple system remain (fruit stands, farmer's markets), food reaches most consumer's tables today through a much more diversified process.

Today, the typical sequence begins with (1) chemical companies that sell genetically modified seeds, fertilizers, and pesticides to industrial farms, along with (2) factory farms themselves that use heavy equipment to grow a few standard food products. These products then are transported to (3) processors that make them tasty and increase their shelf-life, employing the services of (4) container corporations that provide packaging, (5) marketing specialists who make the packages attractive, and (6)

advertising firms that bring the packaged product to public attention. Next in line come (7) wholesalers and warehouses that supply large food chains, (8) the food chains themselves, and (9) their local outlets where the products are retailed. Providing transport along the way are (10) various trucking firms, railways, airlines, and shipping companies. At the end of the line, of course, is the hapless consumer, often equipped with credit cards to make the transaction more convenient.

One way of viewing the overall process is to see the consumer as *beneficiary* of all these auxiliary enterprises. For someone with ample means, to be sure, it is relatively easy to rely on the local supermarket to meet all one's food needs. From the perspective of an average wage earner, however, the food-supply chain is a long sequence of profit-making businesses each accounting for a portion of the price he or she pays for food.

Given the competitive economic environment in which these businesses operate, moreover, each is trying to maximize its share of the money changing hands as part of the process. And in times of recession, when business lags and profits dwindle, each will do what it can to maintain an acceptable profit margin. The cumulative result is that prices increase at each stage of the process, all adding to the final price paid by the consumer.

Here we have a typical example of what happens when an economy is keyed to profit rather than to genuine human needs. When the going gets rough, the profits of business are protected by rising prices. And as more and more wage earners lose jobs, more and more people experience difficulty finding the money needed to put food on the table.

## **P7 Getting food for oneself**

It seems safe to say that the current food-supply system is not optimal for the average consumer. In addition to its financial hazards, it tends to deliver low quality food. And both the production and the transport of the food it delivers are hard on the environment. These latter drawbacks are discussed in sections 5.8 and 18.7 of the text.

How can these shortcomings be remedied? One strategy would be to pursue legislation curtailing the kind of profit-taking that makes it difficult for people to meet their basic needs. For this to succeed, of course, would threaten key players in the current food-supply system. Since several of these players (notably the chemical industry and agribusiness) have enormous political clout, as matters stand this strategy has little likelihood of success.

A more promising strategy would be to foster arrangements that bring producer and consumer into closer contact. Success in this approach would have the side effect of eliminating various middlemen, which in turn would amount to cutting various profit-making enterprises out of the food-supply network. Since this approach could be implemented at the grassroots level, it might succeed without precipitating major political battles. Let us consider a few models this approach might follow.

One model worth imitating goes by the label “Community Supported Agriculture” (CSA) (or “Subscription Farming”). In a CSA venture, a group of individual teams with a local farm to share both benefits and risks of food production. Member of the group pledge to cover the cost of the farm’s operation, including the farmer’s salary, and in return share designated portions of the farm’s produce. In contrast with buying food at the supermarket, members benefit by receiving high quality food (often organically grown) at lower-than-market prices. And farmers benefit by not losing income in years

of crop failure, by receiving better return on their crops (with middlemen eliminated), and by avoiding the extra burden of having to find markets for them.

Of particular interest at the present moment is that some CSA projects encourage members to work on the farm in exchange for a portion of their membership costs.<sup>13</sup> Here is a case in which someone can pay for food by labor instead of money, parallel to the case discussed previously of exchanging labor for housing. In the context of the current recession, a person without regular income could still put wholesome food on the table as a working member of a CSA community.

Flexibility in such transactions could be enhanced by integrating CSA farms into systems of so-called “local currency.” Local currencies (also referred to as “community currencies”) are currencies that are issued and traded within circumscribed communities and that are not backed by a national government. Such currency typically can be used in exchange for labor and merchandise in participating stores, and sometimes can be used to pay local taxes. Not uncommonly, local currencies are supported by local banks where they can be exchanged for national currency and deposited in savings accounts.

Currently there are over 2500 local currencies operating worldwide, including about 100 in the U.S. alone.<sup>14</sup> Among those in the U.S., one of the better known is Ithaca Hours.<sup>15</sup> The Ithaca Hours system (where ‘hour’ signifies an hour’s labor) began in 1991 and initially was associated with CSA farms around Ithaca, New York, along with a number of local stores. It has since been expanded to include a local credit union and a health insurance program, in which some local doctors participate.<sup>16</sup> More will be said about this health insurance program momentarily.

Another well-known local currency is issued by BerkShares, Inc., operating in Berkshire County, New York. Within less than 2 years after its founding in 2006, BerkShares was supported by five local banks, had issued shares of its own currency amounting to 1.5 million dollars, and was aligned with over 350 local businesses.<sup>17</sup> Issued in denominations ranging from one to 50 shares (all attractively printed bills), it exchanges with U.S. dollars at the ratio of 10:9 in participating banks. Inasmuch as the currency system itself operates without profit, no interest is charged on these bank transactions.

In well-established systems, local currency seems to benefit business and customers alike. Businesses benefit by attracting customers away from nonparticipating competitors, and customers benefit by the presence of numerous local stores that cater to their needs. But the main beneficiaries are probably the local communities as such. For one thing, local currencies encourage the purchase of locally produced goods and locally provided services. A correlative effect is that a large portion of money spent locally remains within the community rather than being extracted by corporations centered elsewhere. Another community benefit is that local economies with their own currency tend to be buffered from the vagaries of national economies. In times of national recession, for example, business conducted in local currency can continue to flourish.<sup>18</sup>

Perhaps needless to say, another way of eliminating profit-taking middlemen from the food-supply chain is to grow one's own food. Examples ready at hand are the Victory Gardens grown in the U.S. during WW2 and the gardens many people still plant in their own backyards. Food gleaned from a backyard garden is food acquired in

exchange for labor, a means commonly available to employed and unemployed persons alike.

At first blush, the suggestion that an average working person could grow enough food to stay healthy in a backyard garden seems rather implausible. One problematic factor is the amount of growing space available. In communities where most people live in freestanding houses, the average backyard is relatively small; and in cities many people have no backyards at all. There are also problems regarding climate, growing season, and soil fertility. Supporting oneself by agriculture tends to be more problematic the further one gets from the equator. And even in warmer climates, soil degraded by urban activity often is not suitable for growing food.

There are various ways of addressing the problem of growing space. In communities featuring individual dwellings with large lawns, for example, homeowners could be encouraged to replace lawns with well-tended gardens. There is no ironclad requirement, furthermore, that people own the land where their gardens are located. During WW2, Victory Gardens were often located in vacant lots, city parks, and other municipally owned property. In a well-ordered community (the kind, for instance, that would support CSA farms and local currency), provisions might be made to allow all interested parties access to publicly owned plots large enough to grow food for their personal use.<sup>19</sup>

Even in densely packed cities, space can usually be found for growing edible fruits and vegetables. Typical among such are building tops, road berms, and space occupied by abandoned buildings. According to one recent estimate, Havana (Cuba)

produces 90% of its vegetables within its city limits, using gardens, home containers, and various municipal spaces.<sup>20</sup>

As far as problems of soil fertility are concerned, they can often be overcome with informed resource management. Soil quality can usually be improved by vermicomposting or other ways of composting organic wastes. And even contaminated city land can often be reclaimed by bioremediation techniques.<sup>21</sup>

Reclaiming contaminated soil is part of a land-management approach in which people try to maintain technological control of natural processes for their own expediency. Other approaches are available that rely more fully on the internal dynamics of natural ecosystems. One such is known by the title “permaculture,” for permanent agriculture. By one concise definition, permaculture is “the development of perennial agricultural systems that mimic the structure and interrelationship found in natural ecologies.”<sup>22</sup>

Whereas industrial farming uses fossil-fuel-driven technology and petroleum-derived additives (fertilizers, pesticides) to produce high yields of single crops, permaculture relies on natural energy-flows and stresses diversity in products harvested. This orientation assures that its products are organic, and that the production process has minimal impact on surrounding ecosystems.

Inaugurated during the 1970s, the permaculture movement<sup>23</sup> now is represented by projects in over 100 countries, with sites as far south as Australia and as far north as Great Britain. Although fruitful sites in frigid climates seem unlikely, spokespersons for permaculture advertise that it can be practiced anywhere in the world. At the very least,

it seems credible that the permaculture approach is applicable in a wider range of climatic circumstances than that of the standard backyard garden.

### **P8 Profits in health care**

In 2000, the World Health Organization ranked the U.S. health system 37<sup>th</sup> among those of 190 nations worldwide.<sup>24</sup> Ranking higher were France (1), Italy (2), Spain (7), the UK (18), Germany (25), Canada (30), Australia (32), and Costa Rica (36). A Commonwealth Fund ranking in 2004 showed that the U.S., despite spending twice as much per capita (\$6,102) than other countries covered, ranked last in health care behind the UK, Germany, Australia, New Zealand, and Canada. Why is the U.S. getting such a poor return on its health-care dollar?

Part of the answer comes with another salient difference among the six countries involved. The U.S. is the only one without a universal health care plan. Instead, it relies heavily on private health insurance coverage. In 2004, the nation's health insurers gained \$10.2 billion in profit. During that year, their gain in net profit margin was 3.78%, up from 0.38% in 1999.<sup>25</sup> This trend continued up to the time of the current recession.

Insurers are not the only parties making profit as part of the nation's enormous health-care industry. Another sector contributing substantially to our health-care costs are the tens of thousands of hospitals and clinics that operate on a profit-making basis. Although a majority of health-care facilities in the U.S. are legally nonprofit (and thus receive tax breaks), the actual combined profits of the 50 largest nonprofit U.S. hospitals in 2006 was more than \$4 billion.<sup>26</sup> This amounts to an average of about \$800 million profit per hospital. These institutions operate like profit-making corporations in other

respects as well. In 2006, the retiring CEO of Chicago's Northwestern Memorial Hospital (one of the top 50) received a \$16.4 million "golden parachute."

According to the 2006 *Fortune 500* survey, the pharmaceutical industry was identified as the most profitable of all businesses in the U.S.<sup>27</sup> With \$289 billion in U.S. sales that year and a profit margin of 17%, it gleaned close to \$50 billion in profit. The industry is also known for the exceedingly generous compensation of its top executives. In 2000, Pfizer's Chairman made \$40.2 million exclusive of stock options, and Bristol-MyersSquibb's CEO held \$227.9 million in unexercised options.

In response to public complaints about such profligacy, the industry's defensive mantra is that high drug prices are needed to underwrite research and development of new drugs. Contrary to that rhetoric, however, a recent report by the consumer health organization Families USA documents the fact that drug companies are spending twice as much on marketing and advertising than on research and development.<sup>28</sup> The high drug prices that have exacerbated the health-care crisis for U.S. workers are due, not to R&D efforts, but to record-breaking profits and to exorbitant compensation for top executives.

Other factors contributing to the high cost of medical care are diagnostic technologies (including MRI equipment), prosthetic applications, laboratory testing, nursing homes, and of course medical care itself. With the occasional exception of the latter, all these services are supplied and delivered by profit-making enterprises. The involvement of so many businesses that operate for a profit goes a long way toward explaining our current health crisis.

Moreover, the economy that supports these many profit-making enterprises is a text-book example of an economy that is keyed to profit. Let us next consider what health care might be like in an alternative economy geared to genuine human needs.

### **P9 Health care in an economy geared to human needs**

What would it be like to have a health-care system focused on the mission of keeping people healthy rather than on making large profits for its providers? A detailed answer, of course, would involve comparison with existing systems (some mentioned in section P8), which is beyond our present reach. But at least we may consider some general principles that a detailed answer would exemplify.

Preservation of health, like food and shelter, is a basic human need. The first and most fundamental principle is that, in a well-ordered society, meeting a basic need will not depend on being able to pay the price demanded by commercialized providers.

This is not to say that items designed to help people meet their basic needs should not be available as commodities. Nor is it to say that commodities (like medicines) necessary for meeting basic needs should be provided free to those unable to pay. A society organized according to this first principle is not a traditional welfare state, which is to say a state that itself is primarily responsible for its citizen's well-being.

The intent of this principle rather is that ways should be available of meeting basic needs that do not involve financial transactions in the first place. In the case of dwellings (section P5), the recommendation that people be able to acquire housing in exchange for labor rather than money is an application of this principle. Similarly, in the case of food (section P7), the principle dictates that people have access to nutritious

produce in return for their labor rather than having to buy all their food at the supermarket.

In the case of food, one way of complying with the principle is that communities encourage CSA (Community Supported Agriculture) cooperatives in which people can participate by contributing work. In the case of housing, likewise, the possibility was explored of cooperative housing societies in which workers pool their labor in building dwellings for each other. Arrangements along similar lines are possible in the case of health care.

Proof of this possibility comes with the Ithaca Health Alliance associated with the Ithaca Hours program discussed previously (section P7). Included as parts of the Health Alliance are the Ithaca Health Fund and the Ithaca Free Clinic. The Fund offers its members interest-free loans for dental procedures and eye care, whereas the Free Clinic provides general health-care services to uninsured residents of the local community. The Clinic is staffed on a voluntary basis by health professionals among its membership. In addition to free care by volunteers, the Clinic also provides its members access to discounted health-care services by over 100 providers throughout the state of New York.

Like most local currencies, the Ithaca Hours program is not a branch of local government. A generally more advantageous arrangement would be for local government to sponsor health cooperatives open to the entire community. Health care might well join garbage disposal and police protection as services people expect from their local communities (as distinct from national governments).

A second principle applying to health services in particular is that prevention should be emphasized over corrective care. The idea here certainly is not that corrective

care is unimportant, but rather that the more prevention is exercised the less correction is needed. Since corrective care is usually far more expensive than prevention, moreover, another reason behind this principle is that people with low incomes will be less at risk in communal settings where prevention is emphasized.

The sense of preventive care here intended, it should be noted, is not limited to such matter as vitamins and regular check-ups. Broadly speaking, prevention means the avoidance of circumstances producing unhealthy results. Increasingly evident causes of health problems in western societies today are sedentary life-styles and lack of exercise. With this in view, preventive health care should be understood to include community-sponsored playing fields, bicycle paths, and jogging trails, along with shopping centers located to be accessible by walking.

Another cause of poor health in recent decades is a diet high in fat and carcinogenic additives (like benzene in processed food preservatives). Since diets of fast food (mostly fatty) and soda pop (high in calories) tend to be cheaper than healthy food, people with low incomes are particularly prone to obesity.<sup>29</sup> In addition to sponsoring CSA programs to make fresh food readily available, communities might impose special taxes on food known to cause health problems (analogous to special taxes on cigarettes).<sup>30</sup>

A third principle is that health care practitioners should not be limited to licensed doctors of medicine. Although this varies from country to country and region to region, medical doctors tend to have a monopoly in the industrialized West. As with monopolies generally, a consequence is that health care in many countries (the U.S. included) tends to operate for profit, rather than being focused on the needs of ordinary people.

Needless to say, doctors of medicine (and their close allies, doctors of chiropractic) are indispensable within the ranks of health care professionals. But there are several other preventive and healing practices that are gaining recognition for their contributions to human well-being. Among them are acupuncture, dietetics, herbalism, massage, and physical therapy. Since these practices generally employ neither patented medicines nor expensive equipment, their services are available at fractions of the costs of standard medical care.

There are many ways, of course, in which these three basic principles could be put into practical effect. Whether individually or in combination, however, each principle encourages health care keyed to genuine needs rather than corporate profit. With health care of this character more readily available, loss of income would no longer impose the severe threat it now does of failing health.

### **P10 Recapitulation and conclusion**

This study has argued that economic growth is the primary force propelling society toward its downfall by ecological destruction, and that survival depends on growth being radically curtailed. Prolonged curtailment of economic growth, however, is tantamount to recession. And recession is a painful process for society to endure. There is no doubt that many people will encounter severe hardship as society begins to move toward the restoration of environmental health.

It so happens that the world economy currently is in the grips of a bruising recession, albeit for reasons having nothing to do with environmental recovery. This happenstance suggested the thought experiment underway in this postscript. Supposing (counterfactually) that the current recession in fact had occurred as part of a process of

environmental restoration, we set about specifying certain economic changes that might make further progress along that path more tolerable. As a first step, specifying these changes required identifying the major causes of the current economic collapse.

Primary among these causes was the fact that the U.S. housing market, like most other sectors of the economy, had evolved into a system functioning primarily to generate profit for managers and investors. Driven by desire for increased profits, banks began issuing mortgages to people who could not afford them, and then packaged these loans as collateral for credit extended by higher-level lending institutions that enabled the banks to issue additional subprime mortgages. These latter institutions leveraged their investments by further loans from yet higher-level lenders, again in a manner providing increased profits for stock holders and managers. Given extensive leveraging on these upper levels, the entire system collapsed with the downturn of the housing market. The result was a massive credit freeze in the financial world generally, brought on by key players trying to squeeze out more profit than the system would yield without collapse.

One lesson to be drawn from the current recession is that the profit motive (a.k.a. greed) is a two-edged sword. In Chapter 13, desire for wealth was identified as the driving force behind economic growth. Pursued to an extreme, however, desire for wealth has plunged the world economy into deep depression. The profit motive thus turns out to have undercut itself. Greed in small doses traditionally kept the economy growing, but in excess has pushed it in the opposite direction.

For reasons reviewed at the beginning of this postscript, economic growth is closely linked to ecological destruction. Despite the hardships it brings in human terms, curtailment of growth bodes well for the environment. To the extent that such hardships

could be ameliorated, the reversal of growth now underway might turn out to be a good thing.

The next step in our thought experiment was to isolate major hardships resulting from the current recession and then to identify economic changes by which these hardships could be minimized. In the context of the thought experiment, these are changes that would make further progress toward environmental recovery less burdensome. In the context of the recession actually underway, they are measures that might be taken to help society deal with recession in an environmentally helpful way. In order to serve both purposes, these changes must reduce human suffering from economic causes without involving resumption of economic growth.

Forms of human suffering receiving particular emphasis were hunger, loss of housing, and inadequate health care. Recession has exacerbated these hardships because food, shelter, and health care are treated as commodities in our current economic system, with the consequence that people without income cannot afford them. The changes suggested would enable people to acquire these basic necessities in return for work, rather than having to buy them on the open market. The hardships in question are symptomatic of an economy geared to profit; and corrective measures might be found in an alternative economy geared to genuine human need.

Setting the thought experiment aside, what these considerations show us is that there are two radically different directions we might take in trying to escape from the current recession. One is to prop up the greed-based market economy that has just collapsed under its own weight. Rejuvenating the old economy will renew opportunities for key players to pursue personal wealth, at the expense of poor people deprived of basic

necessities. Since this alternative involves a resumption of economic growth, however, it would move us further along the path to ecological destruction.

The other alternative is to take advantage of the current recession as a first step in the direction of environmental sustainability. Toward that end, we would institute measures making it more difficult for a privileged few to amass excessive personal wealth with resulting deprivation for other people. By reverse token, we would make it easier for most people to meet their basic needs without augmenting profits taken by the privileged few. No less importantly, we would encourage our economists and business leaders to devise an economic order not dependent on growth for its continual well-being. Given what we have learned in the present study, this would be an economic order conducive to environmental health.

The issue of how we emerge from the current recession is momentous. If the recession ends with a return to the pattern of continuing growth that many mainstream economists hope for, our environmental crisis will continue to worsen. But if we treat the recession as an incentive to find a way of doing business that respects the needs of ordinary people, the biosphere will benefit along with humanity at large.

#### Notes

1. A hedge fund is an investment vehicle that specializes in risking large amounts of borrowed money in hopes of gaining enormous profits. Because most of their transactions are private, hedge funds are largely unregulated. This enables them to employ techniques, like “selling short” and aggressive leveraging, that would attract scrutiny if used by regulated companies. As of March 2007, 2 trillion (2,000 billion)

dollars were invested in hedge funds worldwide (<http://www.hedge-fund-news.blogspot.com/2007/03/global-hedge-funds-now-over-2-trillion.html>; accessed March 2009).

2. See <http://www.relistr.com/real-estate/fannie-mae-freddie-mac-subprime-spree-may-add-to-bailout.html> (accessed March 2009).

3. By way of illustration, a given firm's decision to buy a given package of derivatives typically will be made by an investment manager who does not own the assets used to make the purchase. Such managers usually earn large salaries, which are augmented by annual bonuses keyed percentage-wise to the funds they manage. Thus motivated, a manager will be prone to purchase mortgage-packages (CDOs) with an eye toward short-term profitability rather than degree of risk. What happens in the long term is the concern of the party who owns the assets. Even if short-term gain (with resulting bonus) is not forthcoming, the manager still receives a healthy paycheck.

4. Figures in this and the next paragraph are from *Newsweek*, Dec. 29, 2008 – Jan. 5, 2009.

5. *New York Times*, October 14, 2008.

6. An Associated Press release of Dec. 23, 2008, stated that JPMorgan Chase and Bank of New York Mellon, which received \$25 and \$3 billion government bailout funds, respectively, were among 21 large banks that refused to disclose how their bailout money was actually being spent.

7. Basic needs unproblematically include food, shelter, and other provisions necessary for bare survival. By extension, accoutrements necessary to meet such needs, such as tools, weapons, and conveyances, also count as genuine human needs. More debatable

are various wants that must be satisfied for someone to flourish in a given society, like comfortable quarters, healthy food, and some level of education, along with other provisions required for a satisfying lifestyle. Clear examples of “mere wants” (not genuine needs), on the other hand, are desires that could go unsatisfied without marked decrease in quality of life, such as tastes for exotic foods, designer clothing, and an unlimited variety of different automobile styles. Our interest is in an economic set-up that would serve genuine human needs but would not cater to desires of the latter sort.

8. So called “subsistence economies,” which do not encourage accumulation of wealth, reportedly still exist in some Melanesian societies

(<http://economicexpert.com/a/subsistence:economy.htm>; accessed March 2009).

9. The mortgage system dates back to 12th century England, and had been established in the U.S. by the early 1900s. After the Great Depression, the Roosevelt administration created the Federal Housing Administration in 1934 to invigorate the market for single-family dwellings. The mortgage industry took on its multi-tiered structure with the creation of the Federal National Mortgage Association (“Fannie Mae”) in 1938.

10. This often could be accomplished in two or three days. Whereas cooperative barn raising was practiced among secular communities as well during the 19th century, the practice is continued only among Amish (and certain Mennonite) communities today. A more broadly based communal group that currently constructs housing with unpaid labor is Habitat for Humanity, which has constructed nearly 200,000 houses worldwide. See [http://www.habitat.org/celebrate\\_build/press/200k\\_house\\_announcement.aspx](http://www.habitat.org/celebrate_build/press/200k_house_announcement.aspx) (accessed March 2009).

11. The essential thing about these societies is that they are owned by their members. As

of March 2009, UK building societies included 2.9 million borrowing members and had over 395 billion pounds of combined assets

(<http://www.bsa.org.uk/docs/publications/associate.pdf>; accessed March 2009). The U.S. counterpart is the savings and loan association, a thrift institution under the management (at least originally) of its depositors and borrowers.

([http://www.absoluteastronomy.com/topics/Savings\\_and\\_loan\\_association](http://www.absoluteastronomy.com/topics/Savings_and_loan_association); accessed March 2009).

12. These groups are co-ops in that participating stores are locally owned and the owners are shareholders in the company, through which they obtain most of their merchandise.

There are some 5,600 True Value (<http://www.simplyhired.com/job-id/7qigwf4hhr/senior-programmer-jobs/>; accessed March 2009) and

4,600 Ace Hardware ([www.insiderpages.com/store\\_finder/find/ace\\_hardware](http://www.insiderpages.com/store_finder/find/ace_hardware); accessed March 2009) stores worldwide.

13. See <http://nal.usda.gov/afsic/pubs/csa/csadef.shtml> (accessed March 2009).

14. See [http://humanscience.wikia.com/wiki/Local\\_currency](http://humanscience.wikia.com/wiki/Local_currency) (accessed March 2009) and [http://eu.wikipedia.org/wiki/List\\_of\\_community\\_currencies\\_in\\_the\\_United\\_States](http://eu.wikipedia.org/wiki/List_of_community_currencies_in_the_United_States) (accessed March 2009).

15. See <http://www.ithacahours.com/> (accessed March 2009).

16. See [http://www.smallisbeautiful.org/publications/essay\\_stonington.html](http://www.smallisbeautiful.org/publications/essay_stonington.html) (accessed March 2009).

17. See <http://www.berkshares.org/whatareberkshares.htm> (accessed March 2009).

18. An early venture in local currency took place in Wörgl, Austria, during the 1930s. Labor certificates issued by the local government enabled the construction and

repair of numerous local roads, bridges, and factories. While the system was in operation (after less than two year it was suspended by the national government), the local currency circulated 13 times faster than the official shilling, local government revenue increased ten fold, and unemployment was eliminated. See

<http://encyclopedia.thefreedictionary.com/Local+currencies> (accessed March 2009).

19. Although many variables are involved, people knowledgeable in such matters have estimated that, with labor-intensive methods and good growing conditions, one-half acre would be enough to feed a single adult. See <http://www.jeffvailnet/2007/04/self-sufficient-gourmand-on-13-acre.html> (accessed March 2009).

This compares with 20 acres or so farmed with energy-intensive (factory farm) methods. (<http://answers.yahoo.com/question/index?qid=20060722182955AA8DTd8>; accessed March 2009).

20. See

[http://www.coxwashington.com/hp/content/reporters/stories/2008/03/23/CUBA\\_FARMS\\_23\\_cox.html](http://www.coxwashington.com/hp/content/reporters/stories/2008/03/23/CUBA_FARMS_23_cox.html) (accessed March 2009).

21. See, for instance, the 2008 EPA publication EPA542-R-08-002, “Green Remediation: Incorporating Sustainable Environmental Practices into Remediation of Contaminated Sites.”

22. See <http://en.wikipedia.org/wiki/Permaculture> (accessed March 2009).

23. Permaculture is not a specific production method as such, and there are few statistics comparing its performance with conventional agricultural techniques.

It rather is a combination of ecologically modeled food production systems and environmentally-friendly life-styles. Other information reported in this paragraph comes

from [http://www.mnforsustain.org/diver\\_steve\\_permaculture\\_faq\\_intro.html](http://www.mnforsustain.org/diver_steve_permaculture_faq_intro.html) (accessed March 2009), <http://www.phwlocalnew.com//rashon/rib/community/26066309.html> (accessed March 2009) and <http://www.permaculture.org.uk/mm.asp?mmfile=AboutPermaculture> (accessed March 2009).

24. Data in this paragraph come from <http://photius.com/rankings/healthranks.html> (accessed March 2009) and <http://www.wvahc.org/downloads/MMWchart.pdf> (accessed March 2009).

25. See <http://www.signonsandiego.com/news/health/20040822-9999-1n22health.html> (accessed March 2009).

26. Data in this paragraph are from <http://blogs.wsj.com/health/2008/04/04/on-top-of-tax-breaks-nonprofit-hospitals-reap-big-profits/?mod=WSJBlog> (accessed March 2009).

27. See <http://www.maineahc.org/articles/010710drugsPR.htm> (accessed March 2009).

28. Data for this and the following paragraph are from <http://www.actupny.org/reports/drugcosts.html> (accessed March 2009).

29. See <http://www.gmax.co.za/think/health/2004/040304-obesity.html> (accessed March 2009).

30. This would be a community-level action, in contrast with national “Twinkie taxes” mentioned in section 17.2.

