

sanity, humanity and science

post-autistic economics review

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Forum on Economic Reform

In recent decades the alliance of neoclassical economics and neoliberalism has hijacked the term “economic reform”. By presenting political choices as market necessities, they have subverted public debate about what economic policy changes are possible and are or are not desirable. This venue promotes discussion of economic reform that is not limited to the one ideological point of view.

The Malaria Gap

Pia Malaney, Andrew Spielman, and Jeffrey Sachs

(Harvard University, Harvard School of Public Health, Columbia University, USA)

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Introduction: Malaria And The World Twice Given

Would an Africa free of malaria still be just as poor? If the continent were rich, would its malaria still be endemic? The scientist-philosopher Ernst Mach once remarked that “the world is given only once” in an effort to discourage undue effort spent on such counterfactuals. In the case of malaria, however, the planet can be divided into those regions that are malarious and those that are not, and from the point of view of both public health and economic development, these regions often resemble separate worlds.

The frequently cited case of sickle cell anemia is but the most dramatic example of the extent to which malaria changes the lives of those it afflicts: how better to evince the power of the parasite than with a potentially lethal modification of the genetic code as a desperate Darwinian defense against the even more deadly ravages of malaria? Accordingly, it may be expected that a force strong enough to rewrite our DNA will rewrite many of the lives and economies that it touches. It is no exaggeration to say that where malaria is present, it can be expected to affect diverse features of human existence including mobility, investment choices, and even fertility decisions.

We are not powerless to face this force of nature; from simple mosquito coils to investment in the development of a vaccine, there are numerous measures that may reduce or eliminate the threat posed by malaria. The economic dimension enters the picture precisely because these measures are not all equally effective, and none is without cost. It is in evaluating the appropriate level of resources that should be devoted toward anti-malaria interventions that the economist must ask “What would the sphere of economic behavior look like in the absence of malaria?” Answering this question provides the first step towards a comprehensive cost-benefit analysis.

Because the effects of malaria can pervade the fabric of human endeavor, however, it is not surprising that the current state of economic analysis has yet to provide a definitive accounting. To begin with, the state of the art for costing a disease like malaria has not progressed to the point where a dominant paradigm can be said to exist. Rather, there are competing schools of thought, each of which directly addresses some piece of the puzzle while leaving other aspects of the problem to alternative methodologies.

Recent attempts to assess the economic burden of malaria by means of cross-country regression analysis have found the disease to be a significant factor in long-term economic growth and

development.^{1,2} The nature of the macroeconomic approach, however, is such that it functions independently of chains of causation and so cannot shed much light on the underlying mechanisms through which these costs are incurred. As a first approximation, one might anticipate that the cost of malaria at a national level would be an aggregation of the burden borne at the household level. Microeconomic analyses that seek to estimate the burden of malaria on households generally conclude that the effect of this disease is, in fact, quite large and particularly burdensome for the “poorest of the poor.” The costs of prevention, treatment, and the loss of productivity as a result of malaria-related morbidity and mortality can represent a significant portion of the annual income of poor agricultural households. When aggregated to provide estimates of the burden of disease at a national level, however, the results are considerably smaller than those of cross-country estimates. Potentially large economic costs, therefore, appear to escape microeconomic analyses, implying that there are negative externalities that render the overall burden of malaria greater than its direct impact on individuals and on households.³

The extent of the economic burden imposed by malaria as well as the mechanisms through which these costs are imposed are relevant to health policy. The main reason for allocating resources towards malaria prevention and treatment is undoubtedly the significant cost that it represents in human terms. In trading off between equally deserving demands on health budgets, and more broadly, development budgets, however, an understanding of the extent of the economic impact of an investment in anti-malaria interventions becomes important. If intense malaria results in a considerable negative impact on economic growth, any reduction in this burden can ultimately promote a cycle of health and wealth that may improve standards of living. The very difference between the estimates of the economic burden deriving from microeconomic studies and from macroeconomic crosscountry regressions provides insight into the mechanisms through which malaria inhibits development. To the extent that malaria-related costs are external to the household unit, private expenditures allocated towards its reduction will be insufficient, and public support for anti-malaria interventions will be all the more critical.

The difference between the macroeconomic, or “topdown” approach and the microeconomic, or “bottom-up” approach for assessing the economic burden of malaria serves as the focus for the following analysis. Toward this end, we shall identify factors that may explain the apparent “malaria gap” that separates these estimates.

Economic Methodologies For Evaluating The Burden Of Malaria

Understanding the conditions that permit long-term economic growth is a central focus of economic research. There have been a number of attempts to explain the nearly hundred-fold difference in per capita incomes between the richest and the poorest countries. The many explanations for the difference that economists have explored include such factors as demographic structures, cultural practices, education, openness to trade, and legal and economic institutions.⁴⁻⁷ Although economists favor diverse explanations, more recent explanations have included an increased focus on the role of health, and in particular of malaria. Indeed, poverty and malaria appear to go hand in hand, the world over. The per capita gross domestic product (GDP) (adjusted for differences in purchasing power) in highly malarious countries is on average one-fifth that of non-endemic countries.² In fact, recent macroeconomic studies have found that

the growth rate of per capita GDP in malarious countries is 0.25–1.3% points lower per year than that of non-malarious countries, even after controlling for the impact of such factors as savings rates, economic and political institutions, and education levels of the population. Over a period of 25 years this can amount to almost half of the per capita GDP of poor countries.

Although macroeconomic studies suggest that malaria greatly inhibits economic growth, they cannot specify the mechanisms through which this happens. Their microeconomic counterparts attempt to provide national estimates by assessing the cost of malaria accrued by individual households and aggregating these estimates across households. This more conventional approach to assessing the burden of disease has been applied in numerous studies worldwide. An early 20th century calculation of the cost of malaria in the United States estimated the overall burden at US \$100 million in 1917 dollars.⁸ Since then, many area-specific studies ranging from South and Southeast Asia to Latin America and Africa have attempted to assess the costs imposed by malaria both on households and populations. The conclusions differ considerably, in part due to variations in methodology, but also to diverse patterns of endemicity and differences associated with the particular species of parasite involved. Of the several kinds of malaria parasites that infect people, *Plasmodium falciparum* produces a disease that is far more severe than that of the others, and the resulting costs reflect these differences. Similarly, the nature of the costs associated with the disease also change based on levels of endemicity. In highly endemic regions, mortality occurs mainly among infants and young children, while survival incrementally conveys diseasemodifying immunity. In addition to the unacceptable suffering associated with high infant and child mortality rates, they potentially have long-term effects on demographic and economic outcomes. Direct productivity losses, however, are less severe in such an environment than where transmission is less stable, where herd immunity is less, and where malaria-associated disease burdens people of all ages.

The most frequent approach toward evaluating the economic burden of malaria has been the cost-of-illness (COI) method. Such analyses attempt to account for the direct as well as indirect costs associated with an illness. Direct costs are private as well as non-private medical care costs. Private costs include private expenditures on prevention, diagnosis, treatment, and on case management. These could be such expenses as those required for bed nets, doctor's fees, the cost of anti-malaria drugs, the cost of transportation to medical facilities, and necessary support for the patient. Costs borne by an accompanying adult may be included, and these would be calculated over the duration of that person's stay at the facility. Non-private medical care costs include public expenditures on prevention and on treatment of the resulting disease and would be comprised of governmental expenditures on such measures as vector control, health facilities, education, and research.

Indirect cost calculations include productivity losses associated with malaria-attributed illness. Such costs are measured by estimating any income that may be foregone due to illness or death. In the case of mortality, foregone income is estimated by calculating the capitalized value of future earnings over the anticipated life-span of those who died prematurely as a result of malaria, based on projected incomes for different age groups, basic longevity estimates, and agespecific mortality rates. The indirect cost of morbidity is the value of lost workdays for each person with malaria and malaria-related illness, and this is calculated using similar methods. The standard formula for the COI method of calculating the cost of a disease is $COI = \text{Private Medical Costs} + \text{Non- Private Medical Costs} + \text{Foregone Income} + \text{Pain and Suffering}$.

The outcomes of previous COI studies on malaria have varied, based not only on such factors as the endemicity of the infection in the study locale, which actually does affect the cost of the disease, but also the particulars of the way in which the methodology was applied. A comprehensive example of this is represented by a collection of case studies conducted within Africa, where the cost of malaria was estimated using the COI formula in Burkina Faso, Chad, the Republic of the Congo, and Rwanda. Each study used data available within the country, modifying the formula and components as necessary.⁹ These studies indicated that a case of malaria in Africa cost \$9.84 in 1987, of which \$1.83 was direct and \$8.01 was accrued indirectly as a result of foregone income associated with malaria morbidity and mortality. The total estimated cost of \$0.8 billion represented 0.6% of the GDP of sub-Saharan African economies. An increase in this burden to 1% of the GDP in 1995 was predicted.

Although COI analyses generally find that the economic burden of malaria is less than macroeconomic results would suggest, they do demonstrate that the costs of malaria fall particularly heavily on the poor because the direct and indirect costs of a single case often represents a significant portion of a person's income. A household survey conducted in Malawi focused on the costs of malaria for low-income households.¹⁰ In a sample of households with a mean annual household income of \$115, the costs of malaria prevention and treatment, added to the foregone income from adult morbidity and caretaking for children with the disease, represent about 20% of annual income.

Although the COI approach theoretically includes the cost of pain and suffering, it is generally excluded from calculations because it is difficult to assess. An approach that is better designed to access these and other less tangible costs is the willingness-to-pay (WTP) approach, in which analysts attempt, by means of household surveys, to determine the value that a household would place on avoiding the disease. If it were possible to elicit such a dollar value, treatment costs and lost productivity would presumably be captured, as well as the value of lost leisure time, the cost of the pain and suffering associated with malaria, and other intangible costs that might be difficult to estimate. The WTP approach, which was developed originally to assign values to such public goods as environmental quality, has come under much criticism in the context of "existence" values, which do not derive from private consumption of a good.^{11,12} Such values may be subject to personal interpretation and can be biased by respondents' desire to engage in strategic behavior. It is possible, however, to avoid some of these pitfalls through the use of a carefully constructed survey with closed-ended questions that place the issue in a market context. In one such study conducted in Tigray, Ethiopia, poor, agricultural households were found to be willing to pay about 16% of their annual income for a hypothetical malaria vaccine, or about two to three times as much as would be suggested by a COI calculation for the same sample.¹³

The COI approach also fails to account for lost productivity in the event that patients must return to work before they have fully recovered from a malaria episode and are therefore less effective. Indeed, in intensely endemic regions, many residents sustain chronic infection even though they appear to be non-symptomatic. It seems reasonable to expect that such a condition might actually reduce productive capacity. The production function approach attempts to take reduced productive capacity into account by assessing the change in output caused by a disease. The results of such studies vary considerably. One analysis in southern India estimated that households whose members suffered with malaria could clear only 40% as much cropland as

those households without malaria,¹⁴ suggesting a considerably greater burden than is indicated by COI analyses. A study conducted in Cameroon, however, which assessed the impact of parasitemia on rice production, found no significant effect.¹⁵

The Malaria Gap

Macroeconomic analyses indicate that malaria inhibits long-term growth and development to a degree that previously was unimagined. There are at least three potential explanations for the magnitude of this effect and for the discrepancy between these results and those of microeconomic studies. First, although our hypothesis states that malaria causes poverty, causation runs in the other direction as well. Many countries are too poor to afford the kinds of malaria interventions that enabled such wealthier countries as the United States and Italy to eliminate transmission of this infection from within their borders. The causal effect of malaria on poverty cannot readily be isolated from the effect of poverty on malaria. A second econometric problem lies in the effect of such confounding factors as climate that may drive both poverty and malaria. A third explanation for the gap lies with a failure of traditional microeconomic methods to incorporate broad costs of the disease.

The cost-of illness, WTP, and production-function methods for microeconomic analysis provide a broad range of estimates for the economic costs of malaria. Leaving aside fundamental data problems, each of these methods of analysis focus only on certain costs of the illness. The COI approach may miss costs that are not easily estimated numerically. The WTP approach incorporates household costs exclusively. The production-function approach makes no attempt to include direct costs of the disease. There are, moreover, other costs that malaria may impose that could represent a significant burden at a national level, which would not be captured by any conventional microeconomic analyses.

The COI methodology evolved in the developed world to evaluate the costs of a range of illnesses such as circulatory or respiratory diseases. These diseases tend to affect only a small segment of the population at any point in time. In much of sub-Saharan Africa, however, malaria represents not merely an illness, but a pandemic. The ubiquity of malaria in some regions leads not only to excessive costs for prevention and treatment and a loss of labor, but also to modifications of social and economic behavior that profoundly affect economic growth and development. Standard measures of direct and indirect costs generally used to classify the economic burden of disease are simply not designed to capture the full range of these impacts.

Some of the costs deriving from the ubiquitous nature of malaria are such that they are external to individual households. In such a situation, the very existence of malaria in a community imposes a cost on the entire community by modifying social and economic decisions taken in response to the perceived risk of infection. It has been widely observed in the descriptive literature that decision making in such diverse areas as crop choice, trade, investment, and fertility is affected by the risk of acquiring malaria, with a potentially sizeable negative effect on economic productivity and growth. Standard household-based studies naturally fail to capture these effects.

One example of such a cost is the effect that fear of malaria may have on discouraging foreign trade and investment. International corporations that seek to extract natural resources may be willing to invest in intensive anti-malaria measures to protect their workers from infection because the value of the natural resources that they extract would justify the cost. In Zambia, for example, such investments by mining corporations greatly increased in-migration of labor and the output from copper mines. Indeed, it has been suggested that "effective malaria control was a principle driving force behind Northern Rhodesian economic development."¹⁶ To encourage investment in the kinds of manufacturing industries that have formed the basis of growth in many newly industrializing countries, however, it is necessary to provide an environment that can compete with other such opportunities. Malaria-endemic sites are inimical to foreign experts and their families. In such a market, investors are less likely to invest in a region requiring costly health interventions when they can choose instead to invest in malaria-free zones. In a rapidly globalizing economy, malaria can prove excessively burdensome in the long run.

Malaria can also affect trade within an economy because visitors to endemic sites generally lack appropriate immunity, and this may inhibit local traders from travel within and between malarious regions. This would limit the development of markets that form the building blocks of economic growth. Tourism, which can constitute a highly profitable industry, would similarly be affected by the perception of malaria risk. One approach to understanding the magnitude of some of these factors is to examine the impact of malaria control strategies on small island economies. For example, the emerging oil economies of the West African islands of Sao Tome, Principe, and Bioko are planning widespread control programs to control intense endemic malaria that could provide an opportunity to examine such macroeconomic impacts.

The risk of acquiring malaria can also affect population mobility. Adult residents of highly endemic sites generally benefit from an acquired non-sterilizing immunity to the malaria parasite that protects them from the intense illness that otherwise would result from this infection. Migrants from non-malarious regions, on the other hand, are exquisitely vulnerable to infection. Acquired partial immunity, moreover, dissipates within a few years in the absence of reinfection, as for example during a period of schooling or a job assignment away from home. The considerable risk of illness or death upon return may depress the extent of short-term migration for schooling or temporary job opportunities in other locations. By limiting the movement of labor to regions where it is most productive, malaria can interfere with skill-matching and generally depress worker productivity.

More fundamentally, malaria profoundly affects the demographic structure of a society. Where this infection is endemic, its mortality burden generally falls most heavily on children less than five years of age. High rates of infant and child mortality slow the pace of a country's demographic transition, wherein fertility rates decrease in response to a decrease in mortality. A high fertility/high mortality environment can be especially detrimental to a nation's long-term economic growth. In such an environment, women devote a major part of their productive life to child-rearing activities. Not only does this exclude them from the workforce, it often discourages investment in human capital through education of women because such an investment is less likely to produce economic returns. Such a cost is particularly inefficient when relatively few of the children a family has invested in survive to adulthood.

Malaria can also slow the long-term economic growth process through its impact on the accumulation of human and physical capital. High rates of saving and investments in physical and human capital have formed the engine of growth in many of today's most advanced and rapidly developing economies. The drain that malaria imposes on family resources through its direct and indirect costs limits the ability of households to save and to invest in physical and financial capital. Moreover, malaria tends to reduce the funds that might be available for education limits the human capital represented by children.

Human capital accumulation is affected even more directly by malaria through its effects on school attendance and performance. High rates of school absenteeism as a result of this disease increase repetition and dropout rates. An increasing body of research also points toward ways in which malaria in childhood may permanently affect development and cognitive performance.¹⁷⁻²¹ Parasitemic children, for example, score lower on certain tests than do non-parasitemic children. The in utero experience of a fetus in a malaria-infected mother may also inhibit the long term cognitive performance of the resulting child

To the extent that malaria contributes to the burden on societies of other illnesses, the entire range of direct and indirect costs that result should be included in the economic calculation. Acute or chronic malaria infection may alter the immune response to certain other infections while also changing the response to vaccines. Malaria is causally associated with hyper-reactive splenomegaly, chronic renal damage, the nephrotic syndrome, and Burkitt's lymphoma. Malaria suppresses appetite and growth in children and infants.^{22,23} Acute malaria infection, furthermore, can have chronic health consequences; cerebral malaria appears to cause long-term neurologic damage in many of those who survive. Perhaps most tellingly, endemic malaria has produced such a heavy disease burden through the ages that it has led to a potentially deadly genetic modification causing sickle cell disease in approximately 130,000 African infants each year.

A particularly burdensome consequence of chronic malaria is the anemia that directly results from this infection, particularly in children.²⁴⁻²⁶ In adults, such anemia markedly reduces worker productivity.^{27,28} In children, malaria-related anemia may be severe and potentially fatal, frequently requiring blood transfusions. Transfusion screening systems remain rudimentary in many sub-Saharan African countries, resulting in the iatrogenic transmission of such blood-borne pathogens as hepatitis B virus, hepatitis C virus, cytomegalovirus, parvovirus, and others. An increasingly deadly consequence is the transmission of human immunodeficiency virus (HIV) through infected blood supplies. Ten to fifteen percent of overall HIV infections and as much as 25% of pediatric infections in sub-Saharan Africa result from blood transfusions, mainly for the treatment of severe malaria and sickle cell anemia.^{29,30} Recent studies have also shown that malaria infection in pregnant mothers carrying the HIV virus can increase the rate of transmission to the unborn child.³¹ The economic burden of HIV is extremely high, and the role that malaria plays in increasing risk of infection represents a particularly costly consequence in both human and economic terms.

Conclusion

Economic estimates of the burden imposed by malaria are essential for guiding the effective

allocation of resources within tightly constrained health or development budgets. Different methodologic approaches, however, have produced drastically different results, with consequent implications for resource allocation. If indeed macroeconomic estimates of the impact of malaria, which suggest that the disease could account for a reduction of almost half the annual per capita GDP of some countries, are correct, then by economic considerations this disease should receive a much larger share of available resources than is currently devoted toward this end. Microeconomic estimates, on the other hand, find that the cost is closer to one percent of per capita GDP, with very different implications for resource allocation.

An enormous gap separates the various available estimates of the costs exacted by malaria, with certain research methodologies producing far larger estimates than do others. A careful examination of each approach suggests that the malaria gap could, in fact, convey a critical piece of information. If the studies undertaken using the different approaches successfully answer the question that they set out to explore, then the difference between these estimates most likely reflects a difference in the kinds of costs that each research approach seeks to assess. At the broadest level, this gap suggests that malaria imposes important economic externalities, i.e., costs that are borne not by each individual household, but by the community as a whole. These would include such costs as diminished tourism or foreign direct investment. Another difference between the questions posed by these methodologies is the time horizon of the effects. Microeconomic studies focus on the short-term effect of malaria on households. The magnitude of the impact of malaria on economic growth found by macroeconomic regressions, in contrast, suggests that the accumulation of the effects of malaria on standards of living may be far more serious over the long term. If malaria affects peoples' decisions about schooling and their ability to learn or their decisions to save, this infection could potentially change long-term income streams in a far more remarkable fashion than is indicated by a case by case analysis of costs borne by households.

Although macroeconomic analyses of the cost of malaria cannot identify individual elements in the chain of causation, they do encompass all possible malaria-related causes of poverty, including any that microeconomic analyses might miss. The apparent magnitude of the gap that separates these estimates suggests that certain economic externalities may be vastly more important than are the direct effects of malaria on public health. Our present challenge requires that we verify the magnitude of the economic burden of malaria, understand the channels through which these costs are imposed, and devise anti-malaria interventions that will most effectively contribute to human betterment in malaria-endemic parts of the world.

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Authors' addresses: Pia Malaney Center for International Development, John F. Kennedy School of Government, Harvard University, 79 JFK Street, Cambridge, MA 02138, Fax: 617-496-8753, E-mail: Pia_Malaney@harvard.edu. Andrew Spielman, Department of Immunology and Infectious Diseases, Harvard School of Public Health, 665 Huntington Avenue, Boston, MA 02115, Fax: 617-432-1796, Jeffrey Sachs, Earth Institute, Columbia University, New York, NY 10027,.

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Forum on Economic Reform

Greed (Part I)

Julian Edney¹

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An essay concerning the origins, nature, extent and morality of this destructive force in free market economies. Definitions. Paradoxes and omissions in Adam Smith's original theory permit - encourage - greed without restraint so that in a very large society [USA] over two centuries it has become an undemocratic force creating precipitous inequalities; divisions in this society now approach a kind of wealth apartheid, and our values are quite unlike Smith's: this is an immensely wealthy society but it is not a humane society. Wealth and poverty are connected, in fact recent sociological theory shows our institutions routinely design inequality in, but this connection is largely avoided in texts and in the media, as is the notion that greed is a moral wrong. Problems created by greed cannot be solved by technology. We are also distracted by already-outdated environmental rhetoric, arguments that scarcities and human suffering follow from abuse of our ecology. Rather, these scarcities are the result of what people do to people. This focus opens practical solutions.

Sign the tab in certain Midtown eateries and your neighbors' eyes slide over. Is that a \$48,000 Michel Perchin pen? What's on your wrist – a \$300,000 Breguet watch?

In Palm Springs and Bel Air, \$100,000 twin-turbo Porsches and \$225,000 Ferraris buzz the warm streets. In New York at an exclusive Morell & Company auction last May, a single magnum of Dom Perignon champagne was sold for \$5,750. And there are the paintings of course - one evening at auction two Monets sold for \$43 million.² Hotel rooms, anyone, at \$10,000 a night? Estate agents in suburbs of Dallas and Palm Beach have advertised baronial homes for sale at over \$40 million.³

These are prices paid by the exceptionally wealthy, the folks who skim the pages of the Robb Report (average annual salary of subscribers: \$1.2 million) in whose glossy pages are reviewed the best of everything. In a recent issue a southern plantation is advertised, "everybody's dream," at \$8.5 million.

Robert Reich points out that the superrich live in a parallel universe to the rest of the country: much of the time we don't see them because they live in walled estates, travel in private limousines and use different airports from the rest of us.⁴ There's lots of them. There are now more than 200 billionaires. Some five percent of American households have assets over \$1 million. And we're back to levels of extravagant consumption not seen for 100 years.⁵

By historical accounts this is a nation of persistent and resilient people with an unshakable mission: the pursuit of happiness. This idea of happiness is largely connected with wealth (and this connection has long philosophic roots). It is a nation of ambitious people with notions of unfettered future growth, a nation that celebrates abundance. There seems to be no reason

anyone should be deprived of luxury, if he works hard. Indeed with this country's aggregate wealth, there should be no reason anyone should ever go hungry or suffer.

People are going hungry in America. A Los Angeles survey found more than a quarter of low income residents, many working, are not getting enough food to meet basic nutritional needs. And 10% are experiencing hunger.⁶

Estimates are that 3 out of 10 Americans will face poverty sometime in their lives.⁷

Misery is a word seldom applied to the contemporary scene. Like wretchedness it seems antique, an Old World term. But many Americans live in cold, dank slums; many do not earn enough for shelter, many sleep outside. In America's inner cities and at its lowest levels, under freeway bridges and in tubercular alleys, in stained and broken rooming houses and in torn-apart schools, misery exists and persists. All our largest cities contain neighborhoods where some people live day to day in apartments that could be mistaken for closets, some fearing to leave home on gang-terrorized streets, some sharing bus seats with people with drug-scarred arms. Every great metropolis has its skid row mired in fecal gutters, where whole blocks are awash in narcotics and violence, its inhabitants despised and flatly abandoned.

America is once again a nation of extremes.

Sealed Off

As this society grows, it becomes more unequal. As aggregate wealth goes up, equality goes down. Our population has soared 13.2% in the last decade alone to 281 million,⁸ and the wealth has been concentrating in fewer hands (it has since the 1770s⁹) and the difference between the richest and the poorest is now immense. While the wealthiest individuals count their assets in the tens of billions, the lowest classes are falling. Americans' earnings are more unequal today than they have been any time in the past 60 years.¹⁰ Some corporations' CEOs have been making over 400 times the hourly rate of their lowest worker¹¹ but this inequality is not just a feature of businesses, it spans a variety of professions, perhaps to include my favorite musicians and your favorite athletes. For example, shortstop Alex Rodriguez's \$252 million 10 year baseball contract pays him \$170,000 per game.¹² To a person receiving the average allocation of \$83 per month in food stamps, the inequality is astronomical, and the chances of closing it so small it doesn't feel like a real freedom.

If the best-off are sealing themselves off, the worst-off are also doubly fenced about, this time by the distrust and aversion of those above. Around 20% of American children are living in poverty. An estimated two million are homeless some time during the year,¹³ including whole families and people who have full- or part-time jobs.¹⁴

This is a flamboyantly optimistic and self-congratulatory society, and the puzzle is why it allows this suffering. The inequalities are stunning, but a frequent attitude is a shrug – so what?. These days it is hard to plumb a concern.

Frequently I survey acquaintances with this touchstone question, attributed to Rawls:¹⁵ Suppose there are people living on one side of a big city who throw weekly parties so lavish that afterwards they are throwing out meat, while on the other side of the same town are people so poor they cannot afford to buy meat at all. Is this a moral problem?

I get a spectrum of answers: "No problem" to "Yes, of course" and in between "Technological, but not ethical problem," and "Maybe, but (horrified look) what solution are you pushing?" – as well as some yawns, as if these questions were so old fashioned. I believe the variety of these responses eventually leads to the question of what kind of society we live in.

Winner Takes All

My first point is that these extremes of wealth are connected. While the rich are growing richer, the poor are growing poorer,¹⁶ and this is no coincidence. But we largely deny the connection. This is a society which, as the divide between the happy and the abject grows, tries, now by education, now by medication, now by paradox, now by distraction, to avoid the inhuman consequences of its collective actions, and in the end – because none of those strategies is effective – it is one that uses specific strategies for vacating reality.

Defenders, of course, argue that the rich getting richer benefits all, and that in an economy that is an unlimited, growing, open system, all can rise, that (once we get through temporary difficulties) we will find a full and abundant world.

In fact these are not so much arguments as swollen cliches.

There is indeed a problem, and it has a history. I will sift the philosophy of utilitarianism and Adam Smith's founding economics theory for origins. Smith's 1776 treatise, we recall, tied the growth of wealth to the work of common entrepreneurs. It refused the inherited inequalities of aristocracy and with the Enlightenment's notion of reason, a quality accessible to Everyman, it promptly democratized the economy. This philosophy was exported whole cloth to the new America, and it has since grown to dominate our economic policies, its influence is now worldwide. But despite its original claims, we will find it woven with mystical filaments and contradictions. I will show that as the theory is commonly related, it is hard to separate rationality from dogma.

Competition is a fundamental good in utilitarian economics. Competition is a process which results in inequalities – winners and losers. It cannot be, in a society of free competitive units, that competition among all is good for all. Modern analysts Cook and Frank show free market competition has become so stark that we are becoming a winner-takes-all society.¹⁷ In a giant economy, aggressive acquisition, greed, where so widespread and popular as to be celebrated, has resulted in colossal differences, so that, as much as we are accustomed to reproaching the Europeans for their inequalities, we are now caught in a lie. We have become more unequal. The United States is the wealthiest nation. But its 20.3 percent child poverty rate ranks worse than all European nations.¹⁸

Historians Will and Ariel Durant¹⁹ estimated in their survey that the gap between the wealthiest and the poorest in America has become greater than at any time since Imperial plutocratic Rome.

Paradoxes

Inequality is a non-issue to the defenders of Smithian economics. The pursuit of excellence makes it inevitable and, they argue, the pursuit of excellence benefits all. So we are hostage to a paradox. As powerfully as we struggle for wealth and happiness we fling ourselves on the axiom that we all are equal, leaving some damage to the national psyche.

The whispered truth is that this nation bent on the pursuit of happiness is not so happy. Suicide afflicts all classes, and suicide rates are now so high as to eclipse homicide rates with three suicides for every two murders. Surgeon General Satcher partially blamed the media.²⁰ Clinical depression is at its highest rate in decades.²¹ There are unprecedented rates of anxiety, companionship itself is receding, trust is fading.²² Tens of millions are using prescription mood elevators.

Scarcity oppresses. And the worst signs of unhappiness cluster in the lowest cuts: we have among the highest national rates of imprisonment, and the Administration concedes there are 5 million hard-core drug users in America²³ and millions of alcoholics, all disproportionately among the poor.

Resonating with the battle cry of the French Revolution, *Liberte, Egalite, Fraternite*, the American Constitution was written with promises of human liberty and equality. Freedom and equality qualify as the fundamental political virtues. They are the two legs upon which democracy walks.

The second of the promises is broken.

So we first have a philosophical problem: There are many reasons for inequality, but it is ensured in an unfettered materialistic society by a celebrated style of acquisition we call greed. Greed is not just the whimsical excess of the individual. Its most virulent forms are displayed by business groups and corporations – but aggregated, it is an antidemocratic force.

Greed demolishes equity. Simply, you cannot have both unrestrained greed and equality.

Apartheid Economy

The principle of freedom always comes first, argues the Smithian capitalist. But in America, freedom has become something else, a wild individualism²⁴ with a strange amnesia – a disconnect between parts of our culture. A kind of sociopathic haze is settling, helped by mood-altering drugs and television, and appearing in the fashionable cluelessness and chic ignorance – so ubiquitous they have aerated society to numbness. Another facet is the narcissism (to rival one of Dostoevsky's characters so narcissistic he cared more about an ounce of his own body fat than the lives of 100,000 of his own countrymen²⁵). What the free individual chooses to do is now paramount., and the poor understand that detachment is the pivot. Detachment allows the paradox that you can both compete with others but not be involved with what results. The concept of "the common good" has almost disappeared, and nobody is his brother's keeper.

Neither are these inequalities an unfortunate by-product of the healthy struggle. Competitive acquisition for the sake of exhibition is again in vogue – and it seems television repeatedly flaunts that on the way to wealth, there are no principles competitors won't compromise. Besides hunger and fear, lack of health care, decent education and housing shortages, which make living hard, the poor live with brash opulence in their faces. People in decaying buildings daily watch glittering television scenes of shining cars, ocean yachts, and overflowing parties of the rich and famous. Owned by these images, a poor person cannot but feel the differences, and year by year these images add a sedimented frustration, resentment, sense of failure and inferiority which they cannot avoid.

Poverty is also punitive. The poverty-struck family is not just paying the price of its own failure: it is also paying the price of others' success.

Still, many regard these problems as if they were no more than the economy's stubble, moles, and split ends.

Second, we have a practical problem. The Durants show a cycle repeating through history. Great social inequality creates an unstable equilibrium. The swelling numbers of the poor and resentful come to rival the power of the rich. As grievances and restlessness grow, government worsens, becoming tyrannical. Eventually a critical point arrives. Wealth will be redistributed, either by politics, or by revolution.

Denying the Shadow

Could it happen in America? To some analysts, it is already beginning. A survey released by the Milton S. Eisenhower Foundation attributes our enduring levels of violence to "vast and shameful inequality in income, wealth and opportunity among urban poor" who are often "trapped in places of terror"²⁶ - inequalities which are simply un-American, opines C. Murphy.²⁷ Troubling studies exist, but we surround this research with technicians questioning methodology and politicians arguing the study represents no reality. There is denial: "Forget the data," asserts one newspaper columnist on poverty issues, "...things have gotten better."²⁸

Finally, this issue is no longer the environmentalist's concern about scarcity of natural resources, nor the population expert's warnings about Earth's limits to growth. These scarcities are man made, the result of what people do to people. The fact is, far from being an abundant world, it is a world of scarcity because we calibrate it so. And yet the moral connection is absent.

Currently our aggregate wealth is like a high tide, covering many unpleasant things on the ocean floor. When there is full employment, we all seem happily raised. But a few years ago the Harvard Business Review carried an article daring to look down: Richard Freeman²⁹ warns that under the surface America is becoming dangerously segregated, forming an apartheid economy, and the lowest are not free to move up. Freeman adds a shadow. He sketches in a huge new group of Americans, the economically sinking workers who are trailing their counterparts in other advanced countries.

Sociologist Derber's point is that where people are homeless, starving, or jobless, civil society has failed.³⁰

But these demographics will not reverse, because we are a society busily denying its own shadow. In this essay I will pull back the curtain on the irrational in this driving, powerful economy. Instead of an overarching machinery running on smooth technical devices, we shall see a clutter of denial, rationalization, visionary statements and internal contradictions. And the quietness around this topic has another reason. Perhaps we had better be quiet. If we look up, we see Goliath.

Definitions

Greed vastly predates Smithian economics, of course. It is one of the Bible's Seven Deadly Sins. Contemporary dictionaries define it as intense acquisitiveness of (usually material) goods or wealth. To dilate: Greed is the acquisition of a desirable good by one person or a group beyond need, resulting in unequal distribution to the point others are deprived. Competitive greed is the same type of acquisition deliberately to create that inequality. Punitive greed is the same type of acquisition deliberately to leave the deprived suffering, powerless or disabled. Sometimes it takes fine grained analysis of circumstance and motive to distinguish these, but all the preceding involve overt behaviors, and the measure is the resulting inequities. Simple greed does not require intention, for instance while continuing to acquire in the face of others' deprivation a person denies greed explaining he is unaware of results; it is still greed, the measure being the resulting inequity. Next, passive hoarding which perpetuates extremes of inequity previously created is also greed. Next, greed is not always impulsive. It may be planned and calibrated; sustained effort and greed are not incompatible. Next, greed can be exhibited by person, group, corporation, even government. Common observation also shows personality differences. Not everybody exhibits the extremes of greed; but I believe all people act on the impulse at some time in their lives. Separately, greed can be purely mental, a longing, or craving, akin to obsession and addiction, not acted upon, but this is the province of the psychologist.

In practice, as James Childs points out, greedy individuals usually hoard both wealth and power.³¹

The origins of greed are not mysterious. Like the origins of the drive for power the seeds are everywhere, and if a little bit feels good, more must be better. Previous lack is not necessary to start greed any more than fire is started by lack of fire, but like fire greed expands where it can, it has no internal homeostatic mechanism and the bigger it gets, the faster it grows. Its spread is also quickened by social imitation, akin to panic spreading through a crowd.

Greed is not a rational force.

As a concept greed has largely lost its moral sting. Few contemporary dictionaries include that it is reprehensible. The modern fashion not to sound judgmental, situation ethics, and the habit of social scientists to use past deprivation, social pressure, low self esteem, background, entitlement and myriad extenuating circumstances to explain the behavior, make the moral question so complex, all has crumbled into uncertainty.

This essay resurrects the moral dimension. If the consequences of greed are harm and pain, it is immoral. If greed is flaunted, when the pain is known, it is also sociopathic. These situations are quite common. Anyone doubting the concept of punitive greed should recall that the ancient book by Sun Tzu *The Art of War* is required reading in top corporate circles.

Not all wealth is created by greed, and not all inequalities are caused by greed, but if you could start with a society of complete equals, unrestrained greed will be sufficient to quickly render that society unequal.

It is also the purpose of this paper to suggest repairs, for which we need to know how our present problems started. Our founding economic theory is tangled.

You had to be Bold

The ordinary test of a philosophy is whether it makes people better and happier, whether it results in prosperity, cooperation and peace. Utilitarianism seemed a swaggering success because it dismantled the smothering pessimism of the Middle Ages, when a social caste system shackled your life chances, church dogma shrouded attitude and thought. Hobbes's dictum at the time was that life for Everyman was solitary, nasty, poor, brutish and short. Our current economic theory is based on a radically different idea.

You had to be bold bringing out new ideas in the European 1700s but they were revolutionary times and philosophers risked their necks pushing some new arguments that people were created equal and each had the liberty to create his own destiny. The French Revolution opened with its violence for equality. In England these ideas took shape as utilitarianism, a put-together philosophy that is neither profound nor poetic, but which was brazenly inclusive, and it confronted a national system of unbearably elaborate dogma and ancient ritual. Jeremy Bentham, Henry Sidgwick, J.S. Mill and Adam Smith drew the footings.

Inverting the Problem

Rather than religious, utilitarianism uses secular, psychological motivators to explain human behavior, the emotions of pleasure (happiness) and pain. Pleasure is a good. Its ethics: units of pleasure and pain can be summed and compared, and we should choose the act that results in the greatest good for the greatest number, calculations that any person can do. Utilitarianism is practical, astonishingly democratic, and astonishingly rule-free. The utilitarians bluntly advised governments, let the people alone. Let them be human, doing what they do naturally.

So instead of having high priests and nobility dictating values, utilitarianism promotes the values of science, which are truth, practicality and factuality. Adam Smith's contribution was a step further, to give happiness a mercantile slant. In the new philosophy there is no conspicuous concern with sympathy, compassion, honesty, courage, grace, generosity, altruism, charity, beauty, purity, love, care nor honor. It accepts that humans are fundamentally selfish and egoistic and that they don't care about society-as-a-whole. So how does utilitarianism reconcile the

selfishness of individuals with the common good - a problem no other social philosophy had solved?

Adam Smith's breakthrough was inverting the problem. He simply declared that the selfishness of man and the good of society go together. The general welfare is best served by letting each person pursue his own interests. Each unit egoistically strives to better his own lot and maximize his own pleasures. In exerting himself so, he looks for efficiency, for better ways to make money. He'll invent a better way to cure hides or find a quicker delivery route, for entirely personal gain. But these are soundly rational moves from an economic point of view, and when everybody does this, it sums and spreads through the community, which is improved as if lifted by an invisible hand because no individual intended that end. And we note all of this is achieved without the value of justice, because justice, like the preceding list of noble values, is not a natural quality. It requires rules, and utilitarianism is fundamentally to be rule-free.

Its writers were bold. Utilitarianism pitched a very big tent. As far as theories go, it is fabulously inclusive, reaching down from intrahuman emotions all the way up to prescriptions for nations. For Smith, a country is its economics.

Exported raw to America, this principle spread like wildfire, melding with the American philosophy of Pragmatism. Old morality withered, except where it became an instrument of economic progress. Little of value existed outside of usefulness, and a means-to-ends consciousness became urgent. It also emerged in the national consciousness that this pursuit was unlimited – this was the spirit of freedom.

At the end of the 1800s, enormous business and enormous acquisition was understood as heroic. It still is. We still believe in the invisible hand, and that the outsize wealth of the topmost benefits all. These are the footings of our contemporary capitalistic society and our progress in national wealth has been the awe of other countries.

Lost in the Rout

The typical high school textbook teaches a skimmed version of Adam Smith's argument that as the rich get richer, it's good for everybody. Not until he gets to college does the student find complications in Smithian capitalism, such as the persistence of inequalities, and of poverty. If the student pursues the study of economics he will eventually read texts containing "Indifference Curves" which show the economy actually does better with social inequality.³² The original ideal of equality is tainted, the pursuit of happiness is full of conditions.

Utilitarianism runs into trouble with some simple counterexamples.

If we should judge an act by what brings the greatest good to the greatest number (the 'hedonic calculus') then, for instance, in setting up a factory to make cheap clothes, the pain caused to employees doing tedious work for low wages is offset by the greater benefit to the greater number of customers who benefit from cheap clothes, and the factory is a good idea.

This example shows how the hedonic calculus is a sum of pleasure units weighed against units of pain. It is a simple additive economics, held to be rational. But in each example, there is no provision for the minority caught offside. Why don't we have public executions? – the pain to the victim would be more than offset by the summed satisfactions of all the spectators. A second counterexample, in different circumstances: suppose, on a battlefield, a hand grenade is tossed in on five soldiers in a trench. If one of them throws himself on it, saving the lives of the others, the hedonic calculus makes this a good act. But utilitarian ethics is also satisfied if one of the soldiers is pushed or ordered onto the grenade because four lives are still saved at the cost of one. Other philosophical systems would consider that an entirely different act. The usual explanation for these counterexamples is that utilitarianism includes an understanding that we are all enlightened people with civilized motives. Selfish, yes; competitive, yes. But we would never take pleasure from the suffering of another human, and we are not cruel – we are simply not that kind of people.

We are a species of competitors, and each person is inclined to do what benefits him and utilitarianism does not recognize greed nor avarice as moral wrongs. It regards self promotion as rational. It does not list equality as a social virtue. The problem is, utilitarianism is a philosophy with no ideals to offend anybody – just what works.

In the 1800s, through its industrial stage, Smithian economics consumed whole cities, and in the rout, gentlemanly civilities were lost. Some people got prodigiously wealthy, others suffered. But Darwinism was also rising and the robber-baron acquired allies among the Darwinists who held that inequality is an unavoidable fact of nature, so in capitalism's results, no guilt. It held, there are only the strong and the weak. Historically, it took more than a century after Adam Smith for the western democracies to question child labor. Until that time, the invisible hand justified the misery of legions of ragged and barefoot children whose lives were ruined in dank mills and deep mines, whose profits made Britain and America so powerful.³³

Squeezes

In fact there are many ways to crack Adam Smith's theory and John Nash's³⁴ famous mathematical rebuttal is only one.

An elementary rule of logic is that when there is a contradiction anywhere within a theorem, the whole theorem is false.

The center of Adam Smith economics is a paradox. It says, what's good for the selfish individual is also the common good. Secondly, it says, when you and I are in competition, what's good for me is also good for you. Those two by fiat.

Next paradox: utilitarianism does have an indirect gesture at equality. The notion is that when many units compete under the same rules of market exchange, the ever-circulating of goods and money keeps the whole system fluid; units are free to enter and exit this system at will. There is only one system, the free market, so we are all in the same boat, so we all must be the same. In practice, of course, history shows us a boat or ship of state with sweating galley rowers down on benches in the bilge, and with people up on deck all dressed in colorful finery, their faces

upturned into the glorious sun. Yes, we are all in the same boat. And what is different is supposed to be the same.

The fourth self-contradiction is that free market capitalism is supposed to rectify past inequalities by allowing free competition, which is something that results in inequalities.

Further, Smith's system cannot be regulated at the extremes where self-interest becomes the greed of not-so-well intentioned entrepreneurs, profiteers in cartels, and of corners, squeezes, and monopoly makers. All of these also want wealth but they are for the common bad.

But here is the most obvious point. Try to fit greed into the hedonic calculus and watch the ethics. Greed is the outstanding moral wrong because it reverses the utilitarian ethic, with greatest happiness for the smallest number.

The most popular way to handle paradoxes are to ignore them, of course. They take thought, and I'll argue later this is discouraged by our culture of bombastically bright entertainment. Another way is to repair them with rationalizations. Historically, the contradiction between the Constitution's talk of happiness and justice, and what was visible to the naked eye, that most workers' lives were still nasty, brutish and short, was rationalized by saying actually pain and suffering are good because they goaded the poor into greater efforts, thus the economy is energized. And this rationalization thrives today.

Since the promise of upward mobility is axiomatic in Smithian economics, we should take a closer look. Present inequality is vast enough, the chances for the poor to work to close up the gap are long gone. Inequalities of this magnitude tend to become hereditary³⁵ and by and large, the descendants of the American poor will be poor. Upward mobility is a sacrosanct notion in Smithian economics, very widely held because the freedom to move up represents hope - in some people's minds, this freedom rebuts all criticism of the system. Let's measure this myth. While there is freedom to move up adjacent classes (a stock hand may rise to supermarket manager in a lifetime), the same freedom allows many people also to fall, which is called downward mobility, and which occurs in similar numbers. But the chances of a person born poor climbing all five classes into the top ("making it"), while occurring in a few widely publicized instances, are too small to constitute a real freedom. (Remembering that the top is an extremely thin, long tip to a pyramid,³⁶ one sociologist puts the upper class at roughly 3 percent of the population. About 7.7% of that has moved in from below - a minute, and historically persistent, figure.³⁷ The argument that everyone is free to rise to the top is dismantled in most introductory sociology textbooks - although a student must usually wait until college to read this. But the trick of flaunting possibility to mask actual probability is not a casual device.

These paradoxes are no less nonsensical because they are cross-stitched into the writings of professional economists. Economists have been building on Adam Smith's examples of pin factories and canal barges for more than two hundred years. Our libraries contain shelf upon creaking shelf of intellectual embroidery around these basics. But the end result is that today all we have is a long, groping slavery to principles which don't work; can't work; because some of Adam Smith's axioms don't even rise to the level of common sense.

Mystique

A historical detail: one of the popular distractions of Smith's era was spiritualism. The vernacular was everywhere. Rawls has unearthed a minor book in utilitarianism, F.Y. Edgeworth's *Mathematical Psychics*. In that era, leisure time for the upper classes was spent at seances. Sidgwick was president of a Society for Psychological Research and actually conducted experiments to evoke mysterious forces. Science was in its infancy. And Smith's "invisible hand" is not a scientific principle. It is a mystical concept.

Marx's principles were once the major rebuttal, but now that communism has largely collapsed (of the world's 260 countries only 5 now are communist) Adam Smith's doctrine appears to emerge again, as if the winner, a victorious truth. If size is success, the showcase example is today's megacorporation, the corporation "overweeningly powerful and accountable to no one",³⁸ almost magical, because the belief also lives that once a certain high level of anything is achieved, you are invulnerable and above the law. This is a place where heroes live – the Nietzschean mystique – where big things get done, where no one is slowed down by theoretical contradictions.

Money Happiness

Recently, psychologists have provided a decimating argument against Smithian theory. Ryan and Deci³⁹ have summarized a whole literature in psychology on the antecedents of human well-being. Psychologists have always wondered what makes people feel good, and for decades they have quizzed people on the intricacies of happiness. The general answer, all the more reliable because it is based on voluminous and cross cultural research, is that money is not a reliable route to happiness. Happiness is based on other, internal factors. The relation of wealth to well-being is tenuous; only below the poverty line does money bring well-being, above it, increases in personal wealth do not bring increased happiness. A corollary finding is that the more people focus on financial and materialistic goals, the lower their feeling of well-being. Finally, certain people tenaciously believe that money does bring happiness; they are the unhappy. Together, these findings largely dismantle Smithian theory of human motivation. For the present essay it also means that the motivation behind greed, pursuit of material wealth to extremes, cannot be for the happiness it brings. There is nothing heroic about greed. It is closer to obsession.

In fact, after the fall of communism, most of the original problems of industrial capitalism have reemerged too – in different guise. Instead of local factories and mills, we have transnational corporations, just as indifferently employing hordes of unprotected labor, including children, for egregiously low wages in foreign countries.

All notable developments for a philosophy that was invented against privilege and tyranny.

Making It

If we are to build up a system with paradoxes, we must promote contradiction as we go. This begins with the contradictory myths we are teaching our children.

We are currently teaching our young two incompatible morality tales.

Horatio Alger's children's books from the 1800s tell the story of a boy from ragged tenement origins who struggles from poverty up to riches in an urban odyssey of unflagging effort, single-minded ambition, determination, tenacity and hard work. The boy hero meets tyrannical employers, jealous competitors, wily criminals, prejudice and derision of the poor. He defeats mountainous odds to emerge finally on top, financially successful, pulling his own mother up out of poverty, and this all with his good character intact, in a world where the good guys always win.

The youngest minds get molded around the idea that this sort of ambition makes a person invincible. This myth instills a trust in long term, hard work .

Yet in the same semester our schoolchildren learn the opposite value: how to turn a quick profit using cunning and slick chatter. A contemporary of Alger's, Samuel Clemens (Mark Twain), wrote luminous country tales, regularly read to children. In one, Tom Sawyer, a juvenile in a mid-nineteenth century American small town, is ordered to complete a wearying chore one beautiful Saturday morning, to whitewash a long fence. But our Tom is a gifted talker, and he figures a way out of the task. As each of his friends comes walking by, Tom plays the work up to be a magically rare opportunity, and his friends, persuaded, compete for a chance to try it, actually paying Tom their toys to let them paint the fence. More friends come by and Tom gets rich from all their prize possessions while getting them to do the work for him until the task is done. The story is imagetic and funny, but it values slyness over effort, and it makes a clear point of getting ahead by exploiting one's friends. Despite the phosphorescent prose, this tale is about skimming and suckers in a world where the good guys do not win. In it, winners are people who subtly know how to manipulate the wants of others.⁴⁰

It would be nice if children generalized from Alger and colored themselves all industrious, righteous, honest, rational and forward thinking. But growing up, some of us have absorbed the point that hard work is for dupes, and that out of the sleeve of ambition comes the hand of greed.

Distraction

The topic of greed battles with a powerful distracter.

Poverty, I have argued, is partly a product of unfettered greed.

But since the 1970s we have been captured in the orbit of a certain kind of argument, that we have poverty and scarcity because our planet Earth has limits and we are running out of food and raw materials.

Actually there is a new consciousness on this point. Analysts Mark Sagoff⁴¹ and Bjorn Lomborg⁴² head this argument. Since the 1970s environmentalists have been predicting energy will be dangerously short because we consume too much. These predictions are framed in phrases of standard economic theory, in material terms, with mathematical projections of dire depletion and collapse of the ecosystem if we continue at present rates. They state we will imminently see starvation among industries for materials, accompanied by starvation among people.

But these predictions simply haven't turned out. Both analysts document that since the 1970s the world's most basic resources have actually become more abundant and cheaper. There are ultimate planetary limits, of course, but we are nowhere near. Malthusian arguments that starvation exists because there are 'too many people' don't compute. In far too many places where the absolute level of food supply is adequate, there is famine. The world now produces enough food for everyone to have an adequate protein-rich vegetarian diet if the food was equally distributed.

But, says Sagoff, neither technology nor economics can address the major causes of starvation which are corruption, mismanagement, ethnic antagonism, war, trade barriers, and social conflict. Absolute levels of raw resources are not getting worse; what is getting worse is the difference in income between the wealthy and the poor. Technological methods will not bring solutions. Not until we try a solution that turns on the moral will we begin to see improvement.

Scarcity is man made. The whole debate needs a new pivot.

There is a lot of misery worldwide, and the argument that there is abundance for all who would only try is false. We need a new paradigm to explain life-threatening scarcity in the face of plenty.

Part II of "Greed" will appear in the next issue.

Notes

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julianedney@aol.com

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Teaching Heterodox Microeconomics

Frederic S. Lee (University of Missouri-Kansas City, USA)

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Microeconomics is an important, though not a very popular, field of research in heterodox economics. This is due, in part, to the underlaboring role of micro-entities, such as the business enterprises, costs, pricing, profit mark ups, wage rates, markets, and investment, in most of the research conducted by heterodox economists in macroeconomic theory, monetary theory, and economic policy. Given its theoretical importance, it is surprising that the number monographs devoted largely to delineating a heterodox microeconomic theory are so few.¹ One reason for this is that some heterodox economists believe that it is necessary for all economic students to learn neoclassical microeconomic theory; and the learning of heterodox microeconomics is of second-order importance. The unintended consequence of this attitude is that there is little interest among heterodox economists to delineate a comprehensive microeconomic theory. A second reason has to do with the role of microeconomic theory in heterodox economics. In particular, microeconomic theory is correctly viewed by most heterodox economists as providing a non-reductionist foundation to macroeconomic and monetary theory. And it is these theoretic areas that contribute most to macroeconomic policy issues in which they are interested. Given this macro-policy concern, there is little interest among heterodox economists to engage in the near thankless and largely obscure task of foundation building.

But there is more than just macroeconomic policy issues that heterodox economists should be engaged with. Antitrust, public utility regulations, workers rights, environment regulation, discrimination, environmental issues, and economic penetration of the social-political spheres are all “micro” issues and deserve as much if not more attention than macro policy issues because they actually affect the lives of individuals in an intimate way that the latter does not. However, many heterodox economists have typically considered these policy areas as of second-order importance. Consequently, this division of labor has resulted in an undeveloped microeconomic theory.

To redress this state of affairs is the intent of this article. It will be done by first arguing that heterodox economists must promote the teaching of microeconomic theory and followed by delineating the framework for the teaching of it. The third section of the paper will outline the subject matter of heterodox microeconomic theory. Then there will be the conclusion.

To Teach or not to Teach Heterodox Microeconomic Theory, That is the Question

The immediate response by most economists, including heterodox economists, to the suggestion that heterodox microeconomics should be taught to all students is that the advocate is against the teaching of neoclassical microeconomic theory altogether. This knee-jerk response is designed to silence the advocate by implying that his/her real aim is to impose a single micro theory on students. The appropriate response to this is that it depends on the students being taught. With regard to undergraduate teaching, the heterodox professor should take the position that all social knowledge is contestable and that this view must be conveyed to students. Hence, all undergraduate economic students should be introduced to a variety of different microeconomic

theories: neoclassical vs. heterodox in various forms. Teaching different microeconomic theories to undergraduates provides them (in principle) with the capability of understanding the different theories as well as with the capability of evaluating them and choosing the one they think is the best for understanding and explaining the capitalist economy in which they live.²

The teaching of graduate students is different since it is presumed that the applicants to a graduate program are adults capable of making an informed choice of the kind of microeconomic theory which they would want to study.³ Hence the core theory courses of graduate programs can be restricted to a specific theoretical approach, be it neoclassical or heterodox. The programs may still provide their graduate students through elective or optional courses alternatives to the core microeconomic theory of the program. However, a heterodox graduate program should ensure that its students are familiar with neoclassical theory.⁴ What does this imply about the teaching of microeconomic theory in a heterodox graduate program? First, neoclassical microeconomic theory should be taught, but in a fashion that is designed to give graduate students a solid foundation, while at the same time providing them with a critical understanding of its shortcomings. The theory should also be taught in a way as to provide students with a critical awareness of how heterodox microeconomic theory is organized, structured, and different. So the teaching of neoclassical microeconomic theory is a way of preparing students for studying heterodox microeconomic theory.⁵ Secondly, since the core microeconomic theory taught in the graduate program is heterodox, it must predominate overall in the teaching of microeconomic theory; thus, graduate students are expected to know it thoroughly.

The second response to the advocate for the teaching heterodox microeconomic theory is 'Why'? Clearly, neoclassical economists believe that neoclassical microeconomic theory is theoretically coherent and provides the best explanation of economic activity; therefore there is no good reason to not teach it, if not exclusively. Many heterodox economists also broadly agree with this position, although not with all the particulars.⁶ However, sufficient evidence exists showing that as a whole neoclassical microeconomic theory is theoretically incoherent and without empirical support (see Lee and Keen, 2004; and Keen, 2001). Moreover, the methodological underpinning of neoclassical microeconomics is open to criticisms. The methodological approach of neoclassical economics is based on a pre-vision of supply and demand and/or a Walrasian general equilibrium all combined with scarcity and constrained maximization. Accepting this vision as a matter of faith, neoclassical economists construct axiomatic-based arguments via a deductivist methodology (with or without the use of mathematics) to articulate this pre-vision.⁷ There is no attempt to establish that the pre-vision has any connection to or is grounded in the actual capitalist economy it purports to explain. Hence the method of constructing theory is not tied to or informed by the real world, which means that the axioms qua assumptions used are not chosen because of their realism or some other way grounded in reality but solely because they contribute to articulating the pre-vision. Therefore with a methodology unconcerned with the real world, the theories derived there from are theoretically vacuous and hence not really explanations. They are in fact non-knowledge. Consequently the methodology of neoclassical economics is not just wrong, it is also misleading in that it cannot inherently provide any understanding of how the real works or even predict outcomes in the real world.⁸

Given the above theoretical and methodology criticisms of neoclassical theory, it is not unreasonable to advocate the teaching of heterodox microeconomics. But even if the criticisms

were less severe than they are, it is still possible to advocate the teaching of heterodox microeconomics. In the domain of contestable social knowledge, it is in principle possible to articulate an alternative account of how capitalism works that does not utilize any components of neoclassical theory.⁹ The alternative account, heterodox microeconomic theory, is in fact superior to neoclassical microeconomics in terms of coherence, explanation, empirical groundness, and predicting future events even though it is incomplete.

Introduction to Heterodox Microeconomic Theory

At the undergraduate level, most students enter their introductory microeconomic (or macroeconomic) course with little or no knowledge of economics, economic theory, or awareness that there are different ways of doing economic theory. This problem is common to the teaching of neoclassical and heterodox microeconomics. It is a problem that cannot be solved here, but rather avoided by assuming that students have had an introductory, intermediate, and (perhaps) a graduate course in neoclassical microeconomics (and also the same courses in macroeconomics). Given this background, what other courses should a student take before enrolling in a graduate course in heterodox microeconomic theory?

The Prerequisites

The student should have one course in the history of economic thought and another course in the theoretical and social history of a specific heterodox approach, such as radical, Marxian, Institutional, or social economics. The rationale is that heterodox microeconomics is part of a historical discourse that starts with classical political economy and includes Marxism, the historical school, Veblen and Institutionalism, and Keynes. Familiarity with the older arguments and arguments from the different heterodox approaches will help the student to understand the structure and organization of heterodox microeconomic theory as well as the theoretical, empirical, and policy issues that it addresses. In addition, the student should have three courses in 19th and 20th century economic and social history of the United States, of the United Kingdom and the rest of Europe, and of the history of business enterprises. The rationale for these courses is that they provide the student to some degree with empirical qua historical knowledge of the social provisioning process in capitalist economies. A third set of three courses a student should have covers philosophy and methodology. In particular, a student should have two courses on 18th and 19th century philosophy, on pragmatism, on modernism and post-modernism, on philosophy of science, on social philosophy and theory; and a course on qualitative and historical methodology. The rationale for the 'philosophical' courses is that they introduce the student to ways of thinking that have an impact on how heterodox theory is articulated but which are not discussed in detail in the theory itself. The latter course on methodology, which is a complement to the undergraduate econometric course taken by the student, shows that there are ways other than econometrics to undertake economic research and that empirical evidence consists of something more than numbers and statistics. Finally, a student should have at the minimum two courses in calculus and more importantly a course in linear algebra, but an additional course in linear algebra or numerical analysis would also be highly desirable. The reason for taking the latter two mathematics courses is that they deal with the mathematics and models that underpins the input-output production and price models that constitute the framework of heterodox economics.¹⁰

The Introduction

The course starts with a four-part introduction to heterodox microeconomic theory that consists of history of heterodox economics, the scope and methodology of heterodox microeconomics, and the structural organization of economic activity. This block of material is designed to introduce the student to the foundational material upon which the microeconomic theory is established.¹¹ It also has the purpose of making it very clear to the student the extent to which heterodox microeconomics is different from neoclassical microeconomics. Not only does heterodox microeconomic theory have a different history, scope, definition, aim, and methodology, it explicitly repudiates fundamental aspects of neoclassical economics, such as the concepts of equilibrium, relative scarcity, neoclassical rationality, optimization and with it maximizing and minimizing, and methodological individualism. In short, heterodox microeconomic theory rejects the basis of neoclassical microeconomic theory and sets out to provide a complete alternative.

1. History of Heterodox Economics

Since the student has taken prerequisite courses in the intellectual history of heterodox economics, the history of heterodox economics in this section deals with the social, organizational, and political history of heterodox economics in the 20th century. One reason for including this particular material is to make the student aware that what currently constitutes heterodox economics and heterodox economic theory has a history that was formed in the heated crucible of contestability. For the American student, the material covered in this synoptic history can have the following topics:

1. The Contested Landscape of American Economics, 1900 – 1970s;
2. Radical Economics in Post-War America Emergence of the Union for Radical Political Economics, 1945 – 1970;
3. Institutionalism and the Emergence of the Association for Evolutionary Economics, 1945 – 1970; and
4. Heterodox Economics in the United States, 1970 – present.¹²

And indicative readings associated with the topics include:

1. Rutherford, M. 2000. "Institutionalism Between the Wars." *Journal of Economics Issues* 34.2 (June): 291 – 303.
2. O'Boyle, E. J. 1994. "*Homo Socio-Economicus*: Foundational to Social Economics and the Social Economy." *Review of Social Economy* 52.3 (Fall): 286 – 313.
3. Lee, F. S. 2000. "The Organizational History of Post Keynesian Economics in America, 1971 – 1995." *Journal of Post Keynesian Economics* 23.1 (Fall): 141 – 162.
4. Lee, F. S. 2004. "History and Identity: The Case of Radical Economics and Radical Economists, 1945-70." *Review of Radical Political Economics* 36.2 (Spring): 177 – 195.
5. Lee, F. S. 2004. "To Be a Heterodox Economist: The Contested Landscape of American Economics, 1960s and 1970s." *Journal of Economic Issues* 38.3 (September): 747 – 763.

A second reason for the history is to make the student aware of the different approaches to heterodox economics and therefore the need to keep an open and inquisitive mind as they learn about them in the context of heterodox microeconomic theory. This can be reinforced by providing the student with a list of heterodox economic web sites (see below for an indicative list) and a list of heterodox economic journals, such as found in Lee, Cohn, Schneider, and Quick (2005).

Association for Evolutionary Economics	http://www.orgs.bucknell.edu/afee
Association for Heterodox Economics	http://www.hetecon.com
Association for Institutional Thought	http://www.afit.cba.nau.edu/
Association for Social Economics	http://www.socialeconomics.org
Cambridge Social Ontology Group	http://www.csog.group.cam.ac.uk/index.htm
Conference of Socialist Economists	http://www.cse.web.org.uk/
European Association for Evolutionary Political Economy	http://ww.eaepe.org
Heterodox Economics Web	http://www.orgs.bucknell.edu/afee/hetecon.htm
International Association for Feminist Economics	http://www.facstaff.bucknell.edu/jshackel/iaffe
International Confederation of Associations for Pluralism in Economics	http://ww.econ.tcu.edu/econ/icare/main.html
International Society for Ecological Economic	http://ww.ecologicaleconomics.org/
Post-Autistic Economics Network	http://ww.paecon.net/
Society for the Advancement of Socio- Economics	http://www.sase.org/homepage.html
Union for Radical Political Economics	http://www.urpe.org

2. Scope of Heterodox Microeconomics

Given the general historical background, the next step is to introduce the student to heterodox economic theory itself, then delineate the nature and scope of heterodox microeconomic theory, and conclude with a brief historical sketch of its antecedents. The discipline of economics as *concerned with explaining and proposing and advocating changes to the process that provides the flow of goods and services required by society to meet the needs of those who participate in its activities, that is, economics is the science of social provisioning*. Thus, economics has two interdependent parts: theory and policy.¹³ Heterodox economic theory is a *theoretical explanation* of the historical process of social provisioning within the context of a capitalist economy. Therefore it is concerned with explaining those factors that are part of the process of social provisioning, including the structure and use of resources, the structure and change of social wants, structure of production and the reproduction of the business enterprise and other relevant institutions, and distribution. Because the social provisioning process involves issues of ethical values and social philosophy and the historical aspects of human existence, heterodox economists feel that it is also their duty to make *economic policy* recommendations to improve human dignity, that is, recommending ameliorative and/or radical, social, and economic policies to improve the social provisioning for all members of society and especially the disadvantage members. Moreover, they adopt the view that policy recommendations must be based on an accurate historical and theoretical picture of how the economy actually works—a picture that includes class and hierarchical domination, inequalities, and social-economic discontent.

The scope and objective of heterodox microeconomic theory is to identify, describe, and develop a narrative--that is a theoretical explanation--utilizing structures and causal mechanisms of the "micro-events" that contribute to the overall social provisioning process in a capitalist economy. Because of the significance of the price mechanism to neoclassical economics, one theoretical concern of heterodox microeconomic theory is the business enterprise, markets, demand, and pricing. Also, since heterodox economists see investment as the principle director and driver of economic activity, a second theoretical concern is investment decisions, the financing of investment, and the profit mark up. Finally, the third theoretical concern of heterodox microeconomic theory is the delineation of a non-equilibrium disaggregated price-output model of a monetary economy. The integration of the theories of the business enterprise, markets, demand, investment, and finance with a theoretical model of the economy forms a nexus of theory that can be identified as heterodox microeconomics.¹⁴

To ensure that the student does not, like most neoclassical students, take the theory at face value and without a past, a brief historical overview of the various heterodox microeconomic approaches that contributed to the intellectual and theoretical background of heterodox microeconomic theory should be offered. Consequently, the student is introduced, for example, to the administered prices doctrine, normal cost doctrine, and the mark up price doctrine, to the marginalist and administered prices controversy, and to Institutionalist, feminists, and social economics contributions. Indicative readings associated with the topics covered in this section include:

1. Bortis, H. 1997. *Institutions, Behaviour and Economic Theory: A Contribution to Classical-Keynesian Political Economy*. Cambridge: Cambridge University Press.
2. Dugger, W. M. 1996. "Redefining Economics: From Market Allocation to Social Provisioning." In *Political Economy for the 21st Century*, pp. 31 – 43. Edited by C. Whalen. Armonk: M. E. Sharpe, Inc.
3. Lee, F. S. 1998. *Post Keynesian Price Theory*. Cambridge: Cambridge University Press.
4. Fullbrook, E. (ed.) 2003. *The Crisis in Economics: The Post-Autistic Economics Movement: The First 600 Days*. London: Routledge.
5. Ferber, M. A. and Nelson, J. A. (eds.) 2003. *Feminist Economics Today: Beyond Economic Man*. Chicago: The Chicago University Press.

3. Methodology of Heterodox Microeconomics

Heterodox microeconomic theory is not an already made doctrine to be applied to an invariant economic reality. Rather it is still in the process of being created and developed because for some micro phenomena there are no existing heterodox theoretical explanations, because some existing heterodox theoretical arguments are insufficient and hence have to be redone, and because some aspects of economic reality have changed hence requiring the creation of a new heterodox theory. Therefore this section sets out for the student how heterodox economists understand the economic reality to be examined, the method of creating theory to explain that reality, and an overview and evaluation of the various qualitative and quantitative methods used to create theory. Thus the student is first introduced to the philosophical foundation of social theorizing and then to critical realism and the role of open systems theorizing (which embraces non-equilibrium and rejects optimalization), causal mechanisms, and structures in the context of

what constitutes a theory of economic activity.¹⁵ Following this, the student is introduced to the method of grounded theory as the way of creating and developing theory. This method of theory creation rejects the neoclassical approach of deductivism; on the other hand, it argues that theory must be constructed from empirical evidence. And the heterodox theories (which are non-equilibrium theories) that emerge from this method are historically grounded and historical analytical explanations of economic reality. Finally, there is a discussion about evaluating empirically grounded theories that revolves around explanation, new data, and scholarly community engagement in the evaluation process. The issue of prediction as the sole method of evaluating a theory is rejected.

In addition to being introduced to the method that heterodox economists use to construct theory, the student is also introduced to a number of methodological issues, such as the role of assumptions and logical coherence in theory creation, the importance of both qualitative data and quantitative data, the use of multiple research strategies--surveys, interviews/oral statements, ethnographic studies, participant-observation, questionnaires, fieldwork, and statistical/quantitative work, the importance of case studies, the use of mathematics and economic models, and the possible usefulness of econometrics. Thus, the student emerges with the view that quantitative-econometrics approaches are only one of many ways to construct and evaluating heterodox economic theories. In fact, the student is confronted with the argument that causal mechanisms and the role of agency can only really be captured by qualitative data gathered by "qualitative" research methods.¹⁶ Indicative readings for methodology include the following:

1. Downward, P. (ed.) 2003. *Applied Economics and the Critical Realist Critique*. London: Routledge.
2. Finch, J. H. 2002. "The Role of Grounded Theory in Developing Economic Theory." *Journal of Economic Methodology* 9.2: 213 – 234.
3. Locke, K. 2001. *Grounded Theory in Management Research*. London: SAGE Publications.
4. Lawson, T. 1997. *Economics & Reality*. London: Routledge.
5. Denzin, N. K. and Lincoln, Y. S. (eds.) 1998. *Strategies of Qualitative Inquiry*. Thousand Oaks: SAGE Publications.

4. Structural Organization of Economic Activity

The aim of the final section of the Introduction is to present to the student a theoretical picture of a capitalist economy that will serve as the foundation for developing an empirically grounded microeconomic theory of the social provisioning process as well as an empirically grounded model of the economy. This involves delineating the core structures of a capitalist economy relevant to the social provisioning process and locating within them the organizations, institutions, and agency that direct, engage in, or facilitate the economic events that result in social provisioning. And the economic events of specific interest are those that affect the production, pricing, demand, and distribution of goods and services. The structures help shape and govern economic events while the organizations and social institutions (that are located in the structures) house the causal mechanisms in which agency is embedded. What these structures are will in part determine the kind of heterodox microeconomic theory that is developed. The core structures include the input-output schema of circular production (which is incompatible with the neoclassical concept of relative scarcity), income flows relative to goods and services for social

provisioning, and the flow of funds that ensure that monetary production and monetary social provisioning are taking place; the core organizations, social institutions, and core agencies relevant to the social provisioning process and embedded in the structures include the business enterprise, market organizations such as cartels, family, government, and the social individual that makes decisions and choices in a non-neoclassical optimizing manner. Indicative readings for the section include:

1. Okubo, S. O., Lawson, A. M., and Planting, M. A. 2000. "Annual Input-Output Accounts of the U.S. Economy, 1996." *Survey of Current Business* 80.1 (January): 37 – 86.
2. Bortis, H. 2003. "Keynes and the Classics: Notes on the Monetary Theory of Production." In *Modern Theories of Money*, 411 – 474. Edited by L.-P. Rochon and S. Rossi. Cheltenham: Edward Elgar.
3. Davis, J. B. 2003. *The Theory of the Individual in Economics: Identity and Value*. London: Routledge.
4. Potts, J. 2000. *The New Evolutionary Microeconomics: Complexity, Competence and Adaptive Behaviour*. Cheltenham: Edward Elgar.
5. Fullbrook, E. (ed.) 2002. *Intersubjectivity in Economics: Agents and Structures*. London: Routledge.

5. Mathematics and Modeling: A Digression

The representing of the structures, organizations, institutions, and agencies to create an integrative picture of the foundations of heterodox microeconomic theory can be assisted by mathematics and economic models. Their uses are, however, restricted since the tenets of realism, critical realism, and the method of grounded theory prescribe that the type of mathematics used and economic models constructed are derived from (as opposed to being imposed upon via analogy or metaphor) the empirically grounded theories being developed. Consequently, the economic model reflects the narrative of the theory from which it is derived. To translate a grounded theory into an economic model, its structures and causal mechanisms (which embody accurate measurements and observations) have to be converted, as far as possible, into mathematical language where each mathematical entity and concept is in principle unambiguously empirically grounded, meaning in part they also have to be measurable and observable. As a result, the mathematical form of the model is determined and constrained by the empirically grounded structures and causal mechanisms, and hence is isomorphic with the theory and its empirical data. This relationship between mathematics and empirically grounded theory is similar to the late 19th century view in which mathematical rigor was established by basing the mathematics on physical reasoning resulting in physical models. However, the difference here is that rigor results when the mathematical model is based on social reasoning represented by empirically grounded theory. In this manner, mathematical model-based analysis remains subjugated to the study of economic activity. Thus, while mathematics helps illuminate aspects of the grounded theory and making clear what might be obscure, it does not add anything new to the theory, that is, it does not by itself produce new scientific knowledge.

As suggested above, the structure of the economy is pictured in terms of an input-output matrix; hence the mathematics of input-output models is what students studying heterodox microeconomic theory need to know. The "mathematical-methodological" reason for working with input-output models is that they are inherently measurable; that is, input-output models and the

mathematics of the models are empirically grounded. A secondary benefit of input-output models is that they permit the exploration of various theoretical themes in classical political economy, Marxism, and the capital controversies as they relate to heterodox microeconomics. Useful introductions to input-output models and their mathematics are L. L. Pasinetti's, *Lectures on the Theory of Production* (1977) and H. Kurz and N. Salvadori's, *Theory of Production* (1995).

Heterodox Microeconomic Theory: The Core Content

Because of the grounded theory approach to theory creation, the core of heterodox microeconomics consists of a series of substantive theories that are empirically grounded and are part of an overall formal microeconomic theory. However, since the empirical groundness of the substantive theories is uneven and far from complete, development of the overall theory is still incomplete. The requirement that all theories must be empirically grounded means that, in a discipline which traditionally does not empirically ground theories, this process is quite slow. The core can be divided into four components: three substantive areas--the business enterprise, the market and the business enterprise, and market governance; and a formal area which deals with the three substantive areas together. More specifically, the three substantive areas concentrate on delineating 'micro' structures and causal mechanisms and developing substantive theories of the business enterprise, of market demand, and of market governance. With the structures, causal mechanisms, and substantive theories in place, the final step is to develop a holistic heterodox microeconomic theory and with it the microfoundations of heterodox macroeconomics. Thus, in the formal area a disaggregated price-output model of a monetary economy will be developed and then utilized to delineate the impact of the micro—that is prices, profit mark ups, finance, and investment--on the overall level of economic activity.

The Business Enterprise

The business enterprise is conceived as a non-static, historically changing going concern, that is, as an entity that has an indefinite life span and which undertakes production, employment, pricing and investment activities in this context. Thus the enterprise is more than simply a collection of productive resources, that is, physical resources (such as plant, equipment, stocks of various material inputs and outputs and ownership of 'land') and human resources, that is, workers and management. It is also an organization that is structured and contains causal mechanisms that direct its activities. It is within these structures and causal mechanisms (which change over time) that these resources are utilized in various activities in a changing economic environment. The business enterprise comprises of three structures: legal and organizational structure, decision-making structure, and production and cost structure. The causal mechanisms, on the other hand, concern pricing, prices, investment, wages, employment, and production and reflect the motivation of the management of the enterprise involved in making the decisions. From the structures and causal mechanism a series of empirically grounded theories on pricing and prices, on investment, and on wages, employment, and production are delineated; and these theories integrated together constitute the theory of the business enterprise.¹⁷ Indicative readings for the section include:

1. Earl, P. E. 2002. *Information, Opportunism and Economic Coordination*. Cheltenham: Edward Elgar.
2. Lee, F. S. 1998. *Post Keynesian Price Theory*. Cambridge: Cambridge

- University press.
3. Downward, P. 1999. *Pricing Theory in Post Keynesian Economics: A Realist Approach*, Cheltenham: Edward Elgar.
 4. Bewley, T. F. 1999. *Why Wages Don't Fall During a Recession*. Cambridge: Harvard University Press.
 5. Champlin, D. P. and Knoedler, J. T. (eds.) 2004. *The Institutionalist Tradition in Labor Economics*. Armonk: M. E. Sharpe, Inc.

The Market and the Business Enterprise

The business enterprise decisions concerning production and investment determine its demand for industrial goods while those same decisions and the decisions about pricing are based on views about the demand for the goods produced by the enterprise. A central feature to these double-edge decisions is the structure of market demand; and central to market demand is concept of market.¹⁸ These two issues are addressed in this section as a prerequisite to dealing with competition and the theory of market governance in the following section. The concept of market is an empirically grounded in terms of standard industrial classification and followed by its delineation as a social structure that has a legal component, a set of institutional practices and rules of exchange, and involves issues of market control. Turning to the structure of market demand, the analysis focuses on the demand-for-goods decisions by households, enterprises, and non-market organizations, especially with regard to price.¹⁹ Finally, the structure of market demand and the market price is related to the enterprise as a going concern represented in terms of the Marxian schema M-C-M'. It is argued that, since price and sales are unconnected, a decline in the enterprise's price reduces its propensity to be a going concern by affecting M' relative to M. Indicative readings for this section include:

1. Nightingale, J. 1978. "On the Definition of 'Industry' and 'Market'," *Journal of Industrial Economics* 27 (September): 31 - 40.
2. Granovetter, M. 1985. "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology* 91 (November): 481 - 510.
3. Fligstein, N. 2001. *The Architecture of Markets: An Economic Sociology of Twenty-First-Century Capitalist Societies*. Princeton: Princeton University Press.
4. Lavoie, M. 1994. "A Post Keynesian Approach to Consumer Choice." *Journal of Post Keynesian Economics* 16 (Summer): 539 - 562.
5. Robinson, R. 1961. "The Economics of Disequilibrium Price." *Quarterly Journal of Economics* 75 (May): 199 – 233.

Market Governance

All enterprises have some market power, that is, the ability to inflict unacceptable consequences upon competitors. This is manifested in terms of setting and changing prices, thereby affecting the cash flows (that is M') of competitors, especially in markets where market price and sales are unconnected. Thus, any propensity towards price wars and other factors (such as business cycles or secular changes in demand) generating fluctuating prices among competitors inhibits the enterprise as a going concern. This section develops a theory of market governance to explain why and how business enterprises utilize social, economic, and political processes to co-

operatively establish institutions and organizations that regulate horizontal market transactions among themselves. The particular forms of market governance embodied in the theory include social networks, bilateral agreements, trade associations, cartels, price leadership, and government regulation. Indicative readings for this section include:

1. Richardson, G. B. 1965. "The Theory of Restrictive Trade Practices," *Oxford Economic Papers* 17 (November): 432 - 449.
2. Campbell, J., Hollingsworth, J., and Lindberg, L. (eds.) 1991. *Governance of the American Economy*. Cambridge: Cambridge University Press.
3. Fligstein, N. 1990. *The Transformation of Corporate Control*. Cambridge: Harvard University Press.
4. Colombo, M. G. (ed.) 1998. *The Changing Boundaries of the Firm: Explaining Evolving Inter-Firm Relations*. London: Routledge.
5. Mizuchi, M. S. and Schwartz, M. (eds.) 1992. *Intercorporate Relations: The Structural Analysis of Business*. Cambridge: Cambridge University Press.

Microfoundations of Heterodox Macroeconomics

With the structures, causal mechanisms, and substantive theories in place, the final step is to develop a holistic heterodox microeconomic theory and with it the microfoundations of heterodox macroeconomics. Thus, a disaggregated price-output model of a monetary economy is developed based on the foregoing theories of the business enterprise and market governance and the arguments of about the structure of market demand and the non-relationship between market price and sales. It is then utilized to delineate the impact of the micro—that is prices, profit mark ups, finance, and investment—on the overall level of economic activity. In particular, the disaggregated price model resembles a Sraffian price model based on normal output or capacity utilization; while the disaggregated quantity model is derived from a Leontief quantity model. The connection between the two via the profit mark-up qua prices and enterprise investment decisions and government expenditures or effective demand is examined, especially with regard to issues of prices and the going concern and co-ordination of economic activity, aggregate economic activity, and disaggregated effective demand. Finally, the impact of micro pricing, investment, production and employment decisions on distribution and social welfare under capitalisms is examined. Indicative readings for this section include:

1. Lee, F. S. 1998. *Post Keynesian Price Theory*. Cambridge: Cambridge University Press.
2. Milberg, W. (eds.) 1992. *The Megacorp and Macrodynamics: Essays in Memory of Alfred Eichner*. Armonk: M. E. Sharpe, Inc.
3. Eichner, A. S. 1987. *The Macrodynamics of Advanced Market Economies*. Armonk: M. E. Sharpe, Inc.
4. Lutz, M. A. 1999. *Economics for the Common Good: Two Centuries of Social Economic Thought in the Humanistic Tradition*. London: Routledge.
5. O'Boyle, E. J. 1996. *Social Economics: Premises, Findings and Policies*. London: Routledge.

Conclusion

In contrast to the commonly held view, this article shows that there is a heterodox microeconomics that is teachable to students. Clearly it is not as well developed as mainstream microeconomics, but then in the 1880s or even in the 1920s neoclassical microeconomic theory was not well developed and yet it was taught. Teaching an incomplete theory is not a problem if the professor believes that the central components of what is being taught are empirically and theoretically sound and help provide a better understanding of the phenomena under examination. The early neoclassical economists held this position and then spent two, three, five and more generations developing and extending their theory. What is presented above as heterodox microeconomics and its theoretical core is, like neoclassical microeconomics in the 1880s, quite incomplete—but it is not non-existent! Further developments are needed and in fact demanded; and it is not improbable that over the next couple of generations of heterodox economists it could be greatly transformed. All that is needed is for heterodox economics to overcome one major obstacle: the propensity of most heterodox economists to dismiss and ignore heterodox microeconomics and to direct their graduate students to pursue research agendas that do not engage with heterodox microeconomic theory. But whether this is possible is an open question!

Notes

1. Some of the monographs delineating to some degree heterodox microeconomics theory include Eichner (1987), Kregel (1975), Robinson and Eatwell (1973), Lavoie (1992), Wolff and Resnick (1987), and Earl (1995).
2. The contrast with neoclassical professors is striking. For much on the 20th century only neoclassical microeconomic theory has been taught to undergraduates. The exclusion of alternative microeconomic theories was deliberate and through. Illustrative of the exclusive teaching of neoclassical microeconomic theory to students is found in the United Kingdom where in 2003-04 some 45% of undergraduates in economics get no introduction to heterodox microeconomic theories with another 27% have a minimal to approaching zero introduction. Thus 72% of all undergraduates in economics are really not introduced to alternative approaches in microeconomic theory. [Lee, 2004]
3. In reality most applicants to graduate programs have not been introduced to heterodox theoretical approaches and hence are not really capable of making informed choices. This issue cannot be resolved in this paper.
4. As a result graduate students from such a program will have a sufficient command of neoclassical microeconomic theory to teach it at the undergraduate level and even at the M.A. and Ph.D. level at many universities. In fact, their knowledge of neoclassical theory is better than students coming out of strictly neoclassical programs, although their technical skills may not be at the same level. In short, they are competent to teach neoclassical microeconomics, but their real expertise and hence capabilities for doctoral teaching are in heterodox microeconomic theory.
5. For a more detail discussion of the teaching of neoclassical microeconomic theory for heterodox graduate students, see Lee (2005).
6. In addition, it is argued by many heterodox and neoclassical economists that heterodox microeconomic theory either does not exist or it is in such a confused, incoherent, contradictory state that it is not possible to teach it. Since this article is based on the premise that a coherent, teachable heterodox microeconomic theory exists, the argument will be ignored.
7. For a critique of deductivist methodology and its use in neoclassical economics, see Lawson (1997 and 2003). Moreover, there are arguments to be made that neoclassical economists misuse mathematics in their efforts to explain the real world.
8. It should be noted that the role of Friedman's methodology position that prediction is the goal of economic theory was really a clever way of rejecting the emerging 'realist' criticism of marginalism in the 1940s and 1950s. It made it easier for neoclassical economists to develop a methodology that was anti-empirical in terms of developing theory.
9. Neoclassical economists are in general not open to considering alternatives to their microeconomic theory. They accept their theory as an uncontestable truth. This position turns neoclassical economic theory into a matter of religious faith. Consequently microeconomic theory as taught by neoclassical economists should be located in departments that teach about faith-based documents that are outside the area of the social sciences and academic economic departments.
10. A course in mathematical economics is not recommended because the mathematics generally taught and the textbooks used are directed towards neoclassical microeconomic theory and hence are irrelevant for a heterodox microeconomic course. For example Wade Hands' *Introductory Mathematical Economics*, Edward Dowling's *Introduction to Mathematical Economics*, Akira Takayama's *Analytical Methods in Economics*, Michael Klein's

Mathematical Methods for Economics, Peter Hess's *Using Mathematics in Economic Analysis*, and Alpha Chiang's *Fundamental Methods of Mathematical Economics* devote less than 15% of their content to linear and matrix algebra and to Leontief-Sraffian input-output models.

11. This block of material is similar to the block of material covered in the preliminary chapters in introductory and intermediate neoclassical microeconomic texts. These chapters define economics and specify the contribution of microeconomic theory to understanding the allocation of scarce resources among alternative uses to human wants; provide a brief whiggish view of the historical emergence of modern microeconomics; introduce fundamental concepts such as wants, relative scarcity, production possibility frontier, opportunity costs, supply and demand, methodological individualism, and circular flow of economic activity; structural determinants of prices and quantities; briefly delineate the positivist methodology and the equilibrium qua marginalist method used by neoclassical economists; and quickly covers the mathematics utilized in presenting the theory in the rest of the book.
12. If a heterodox microeconomic theory was taught in the United Kingdom a similar history would cover the following topics:
 - (1) The Contested Landscape of British Economics, 1900 – 1970;
 - (2) Heterodox Economics in Britain: Conference of Socialist Economists, 1970 – 1995;
 - (3) Heterodox Economics in Britain: Non-Marxist-Post Keynesian Developments, 1970 – 1995; and
 - (4) Research Assessment Exercise and the Attack on Heterodox Economics in the United Kingdom, 1992 – 2000.Other countries will have their own heterodox histories.
13. Neoclassical economics is also concerned with explaining the social provisioning process, although it does not say it in this way. Their theoretical explanation centers on the phrase “the allocation of scarce resources among competing ends;” and their policy prescriptions follow from the theory. Thus the fundamental difference between heterodox and neoclassical economics is in their theoretical explanation of the social provisioning process and secondarily in what they advocate for economic policy.
14. Others heterodox economists would probably argue that I have drawn the core boundaries too tightly; and they may be correct. Further argument, discussion, and different heterodox views need to be brought to bear on what are the major theoretical concerns of heterodox microeconomics. This article is an invitation for such a debate.
15. Social theory and the philosophy of the social sciences should be part of the intellectual make-up of all economists and certainly of heterodox economists. However, the principle problem with this is that graduate programs in economics generally do not make room for such courses and undergraduate economic majors are not encouraged to take such courses. However, because of the interdisciplinary nature of the Ph.D. program at the University of Missouri-Kansas City, many of our economic students take a minor in social theory.
16. Graduate students at the University of Missouri-Kansas City do take graduate courses in econometrics; but because of the interdisciplinary nature of the doctoral program they are also encouraged to take method courses in sociology (such as ‘qualitative methodology’) and historiography and method.
17. Since the theory is historically grounded and a historical analytical explanation of the activities of the business enterprise, it could be claimed that it is a evolutionary theory of the business enterprise. However, ‘historical’ does not have the same meaning as ‘evolutionary’, thus the reluctance to use the concept.
18. Heterodox economists do not consider the demand for labor power the same as the demand for goods; and do not accept the concept of labor market while accepting the concept of goods market. Hence neither of these issues are discussed in this section.
19. This issue is from a mainstream perspective about whether market demand curves exist and have a negative slope.

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leefs@umkc.edu

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Symposium on Reorienting Economics (Part IV)

Reorienting Economics Through Triangulation of Methods

Paul Downward and Andrew Mearman

(Loughborough University and University of the West of England, UK)

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Introduction

Tony Lawson's widely acclaimed book *Economics and Reality* (1997) provided a systematic ontological critique of mainstream economic analysis. The critique focussed upon the inappropriateness of the 'deductivist method' of neoclassical economics, which implicitly assumes a closed-system ontology, and the open-system nature of reality. Deductivism is an approach that invokes covering laws of explanation, whether or not these are derived from formally deductive or inductive premises. This method in turn assumes a *closed-system ontology*, in which strict regularities of the type 'if event X, then event Y' will occur. For Lawson, the emphasis on mathematical modelling and econometric testing are evidence of this closed-system approach. Further, the use of econometric testing, so defined, is an example of *empirical realism* – reflecting a belief in a flat ontology comprising only observations of events.

While essentially a critique, *Economics and Reality* also advocated *retroduction* – the movement in thought from a phenomenon of interest to the mechanism(s) which (at least in part) caused it – as the appropriate logic of inference for an open system. The reasons are broadly two fold. First, cause cannot be associated with the constant conjunction of events in a non-experimental open-system, but rather the emergence of events out of causal mechanisms which draw upon human agency and structures. Using this method to gain an understanding of events, the researcher then needs to establish the mechanisms that gave rise to them. Second, our empirical observation of actual events and the mechanisms that produce them will be related *transfactually*, i.e., the causal mechanisms exist and may operate irrespective of the observed events. Consequently our understanding of them will be fallible, a fact that follows not only from the complex codetermination of events, but also because of the hermeneutic issues associated with interpreting and communicating our understanding of causes.

For Lawson, retroduction is likely to be achieved most successfully through *contrast explanation*, a method based on the premise that research should be directed towards explaining 'surprising' breakdowns in patterns of events, because here changes in causal mechanisms may be more apparent. Contrast explanation thus shares the same structure as experimental reasoning but, of course, reflects an open-system context in which causal mechanisms are not isolated and stable.

One criticism of *Economics and Reality* is that its practical guidance to economists remains limited, beyond informing them what they ought *not* do. *Reorienting Economics* (2003) also emphasises the ontological critique of mainstream method, although in cautious terms. However, there is an expanded account of 'contrast explanation' and a discussion of the merits of borrowing biological metaphors in producing social explanation. Lawson demonstrates that heterodoxy's appeal to evolutionary biological metaphors as opposed to mathematical systems has promise,

but should be tempered by concern with the ontological relevance of mathematics to social systems. Lawson then focuses upon a discussion of the broad, often implicit, ontological similarities between heterodox approaches to economics and critical realism. As such they offer possibilities for redefining economics in a much more pluralistic way.

We believe that there is a need for practical guidance in conducting research projects informed by critical realism, and in this paper we argue, drawing upon ongoing work, for the adoption of *triangulation* as a principle of research design. Triangulation is commitment in research design to investigation and inference via multiple methods which are not placed in any *a priori* hierarchy. We argue that triangulation allows retrodution to be made operational, facilitates pluralism – rather than rejecting outright entire methods – and allows economics to be reorientated towards other social sciences, as Lawson recommends (Downward and Mearman (2004a, 2004b, forthcoming). Thus, triangulation can be an important step towards fulfilling Lawson's project.

Triangulation

In social research in its broadest sense, and moving away from the spatial origins of the metaphor, triangulation implies combining together more than one set of insights in an investigation. Denzin (1970) offers a taxonomy of triangulation: 1) data triangulation – the combination of different data types; 2) investigator triangulation – the combination of insights from different investigators; 3) theoretical triangulation – the combination of different theoretical perspectives; and 4) methodological triangulation – the combination of different methods. Denzin further distinguishes between *within-method* triangulation, i.e., combining different cases of the same method; and *between-method* triangulation, i.e. combining studies of different methodologies. Clearly, between-method triangulation is more radical, because it could involve, for example, an econometric methodology in combination with an ethnographic method. We have argued elsewhere that Critical Realism can create a philosophical basis for triangulation.

Triangulation is common in other applied social sciences (see below) but not in economics. There is some use of triangulation by professional (including government) economists, such as those at the Bank of England, but its use by academic economists is rarer; and when used it tends to be for pragmatic reasons. A common reason for combination of data types is that the main source of data is incomplete. For example, the Bank of England uses survey and anecdotal evidence from its Agents as the most up to date picture of economic conditions. This compensates for the inevitable lag in official quantitative data. Economists cite epistemological reasons for triangulation, such as the fallibility of knowledge, relatively rarely.

In the literature of social science research methods there is discussion of the basis for triangulation. It is common to *reject* triangulation for ontological reasons. *Positivist* social scientists (or those influenced by positivism) tend to hold that methods should only be used which conform to positivist principles, such as objectivity, observability, and precision. All of these principles are met by quantitative data. For *interpretivists*, the opposite position is taken. Interpretivism includes hermeneutic concerns that social phenomena are intrinsically meaningful; that meanings must be understood; and that the interpretation of an object or event is affected by its context. Moreover, for the above reasons, meanings cannot be measured, counted or understood. Unsurprisingly, interpretivist approaches tend to focus on the limitations of

quantitative analysis in the social arena. Silverman (1993) offers a typical example of the interpretivist approach. Silverman argues that quantitative methods retain a positivist perspective in which data collectors basically follow established protocols and data providers simply reveal aspects required of the protocol as 'objective' entities. In contrast, qualitative methods are 'interactionist' and reflect the interviewer creating the interview context and the interviewee engaging in a dialectic with the definition of the situation, so that the research reflects social relationships which are inherently subjective and not objective. On this basis Silverman rejects quantitative methods as inappropriate to social research.

It remains the case that the justification for triangulation in social science tends to emphasise pragmatism. This is clearly unsatisfactory for a Critical Realist, whose concern is for ontological consistency between method and material. This paper argues that such consistency can be established because triangulation is essential to retrodution. The argument proceeds by considering alternative research methods.

Triangulation Rather than Rejection of Methods

Lawson (1997) spends considerable time critically examining the use of econometrics in an open-system reality, in which event regularities are unlikely to occur. It is easy to form the impression from Lawson's work that econometrics is being rejected as inappropriate practice. Lawson (1999) clarifies this position, arguing that econometrics is perfectly permissible providing that it is used in closed systems; however, given that these are held to be unlikely to occur, econometrics is likely to have extremely limited use. Downward and Mearman (2002) examine such Critical-Realist objections and find them unsustainable. If methods are to be rejected because they impose some degree of closure on an open reality, then in fact, all methods so far proposed must also be rejected. Any method which supposes that an entity remains fixed for long enough for it to be identified as an object of study imposes closure on an open reality. Thus quantitative analysis involves closure, because the act of quantification involves the assumption of qualitative invariance across subjects. Likewise, *if* qualitative investigation is concerned with collating insights and offering stylised interpretations and narratives, this assumes qualitative invariance – or, in Critical-Realist terminology, *intrinsic closure*. Contrast explanation is thus challenged because, first, it tends to involve quantitative contrasts; second, because it makes assumptions about what are surprising, abnormal or significant instances, which in turn presupposes a notion of a normal deviation from a trend or fixed pattern, and finally because qualitative endeavours to explain the contrasts are not fundamentally distinct in terms of maintaining a degree of closure. However, this is not necessarily problematic *per se*. As Mearman (forthcoming) notes, a Critical-Realist *abstraction* necessarily involves a focus on what is real and essential to the temporary exclusion of other factors, regarded as transient or insignificant. Moreover, by abstracting from other factors, one assumes that those factors are behaving in particular, consistent ways.

Therefore, we argue that for practising economists, Lawson's arguments are potentially too destructive, leaving no techniques available for concrete analysis. In contrast, as reality comprises parts which have different degrees of openness, these should be explored by methods which also exhibit different degrees of openness: for example, statistical inference requires more closure than statistical estimation.

The above discussion can be viewed as reflecting (an aspect of) the fallibilism of all knowledge claims. More generally, fallibilism of theory tends to have two geneeses: ontological and epistemological. Epistemologically, humans have limited computational capacity to deal with the world, even one of a simple structure, particularly when faced with multiple meanings and incommensurability. Thus, no one theory is likely to be able to capture adequately these aspects. Furthermore, if the object of enquiry (and by extension, the world) is highly complex, it is extremely difficult for any theory to capture its aspects adequately. This concern applies when the social world is held to comprise open systems, in which, for example, the future is open, because current agency affects future structures in unpredictable ways. Even for a super computer, society is complex and unpredictable. In this light, no one model should be relied upon to give an accurate picture of the object of enquiry.¹ Rather, methodological triangulation requires that in any act of inference to causal claims about an object of enquiry, two (or more) methods with different degrees of openness, are combined.. Simultaneously, triangulation provides the researcher with a means of inference which addresses the concern over open systems and avoids the rejection of methods. Thus, triangulation offers a way out of the practical impasse found in *Reorienting Economics* and in *Economics and Reality*..

Triangulation and Retroduction

As we have argued elsewhere, a Critical-Realist position can provide an ontological justification for triangulation; and triangulation is a necessary element of the logic of retroduction and hence is crucial for operationalising Critical Realism (Downward and Mearman, 2002, forthcoming).

A central element of the Critical-Realist programme is that every paradigm (and its associated methods and theories), has an underlying ontology. Thus, the link between a method or theory and its ontology cannot be avoided (Danermark, et al (2002: 152-3). How far do other philosophical positions meet this criterion? Above it was argued that both positivist and interpretivist approaches make a strong pre-commitment to a particular ontology that explicitly rules out the need for (methodological) triangulation. Specifically, positivism and interpretivism both reject methods which do not meet their ontologies. Consequently, one might imagine that both meet the Critical-Realist criterion. Nevertheless, Critical Realists criticise both perspectives because each has empirical realist foundations: the empirical is the basis for, and in fact constitutes, reality. For example, positivism embraces an inductive view of explanation to which value-free or observation of objective reality is crucial. Furthermore, either informally or formally, through statements of initial conditions and assumptions, deduced consequences or predictions are assessed empirically. Additionally, as noted earlier, for Critical Realists, there is a factor common to deduction *and* induction and which characterises their essential logic: explanations are presented in the form of 'covering laws' which commits an *epistemic fallacy*, i.e., to conflate what is experienced with what exists. The conception or knowledge of phenomena manifest in the theorist's ideas and arguments is treated as logically equivalent to the phenomena under review. In this sense, knowledge is presented as being effectively complete. This is either in a literal or positivist sense in which theories directly represent an external world, or in the 'idealist' or interactionist sense that the world is merely the proposed collection of ideas, whether these are deductive constructs or subjectively specific concepts.

Thus, from the Critical-Realist perspective, both quantitative and qualitative analysis (either based on phenomenology or on hermeneutics) commit an epistemic fallacy; that is, they conflate the subject and object of analysis through the invocation of covering laws. Therefore, the traditional quantitative/qualitative choice can be viewed as unnecessary and, moreover, reflects fallacious thinking from a critical realist perspective. This argument opens up the possibility of triangulation.

Critical Realists also espouse an ontology of depth realism, which has two prongs: realism and depth. Realism holds that the nature of the object drives the process of research. Depth implies that specific types of methods are necessary for (social) scientific investigation. Critical Realism implies that, because the objects of social science are inherently complex and have many important aspects which belong in various categories, it is not possible to capture some of the broader aspects of the objects with narrow methods (for instance counting the frequency of the entity). Furthermore, because, according to Critical Realists, agency is absolutely crucial, so people's motives cannot be ignored; and because reasons are causes, it is essential to explore these different concepts in analysis. Moreover, because reasons are causes, Critical Realists reject the traditional equation of, on the one hand, qualitative equals exploratory or descriptive; and on the other, quantitative equals explanatory methods (Danermark, et al, 2002: 163). Indeed, Critical Realists share with pragmatists the view that to associate qualitative methods with hermeneutics (or whoever) and quantitative analysis with positivism (or whoever) is limiting – instead they are looking to transcend the dichotomy. Also, research is governed by the need to get to the bottom of a question – i.e., to uncover generative mechanisms – and whichever are the best methods to use should be used (Danermark, et al: 162-4). However, unlike pragmatism, realism has an ontological grounding to that position.

The connection between the ontology and the method – added to the belief that reality is stratified – can be argued to lead some Critical Realists to abandon the strict dual of quantitative/qualitative in favour of one in terms of intensive versus extensive research design (Sayer, 1992: ch.9; Danermark, et al: 2002, ch. 6). The former design is what is typically thought of as a characteristic of social science. Research explores the contextual relations surrounding a particular unit of analysis (i.e., qualitative research). This is as opposed to the latter research design which emphasises the formal relations of similarity between units of analysis, that is, it produces taxonomic descriptions of variables (i.e., quantitative research).

However, this seems to reinstate the old dual despite the two types of method being treated as complementary empirical procedures with complimentary strengths and weaknesses. Thus it is typically argued that the causal insights from extensive research will be less. Moreover, one is reminded that the validity of the (qualitative) analysis of cases does not rely upon broad quantitative evidence. In this sense the traditional view put forward for triangulation as validating qualitative insights is not necessarily applicable.

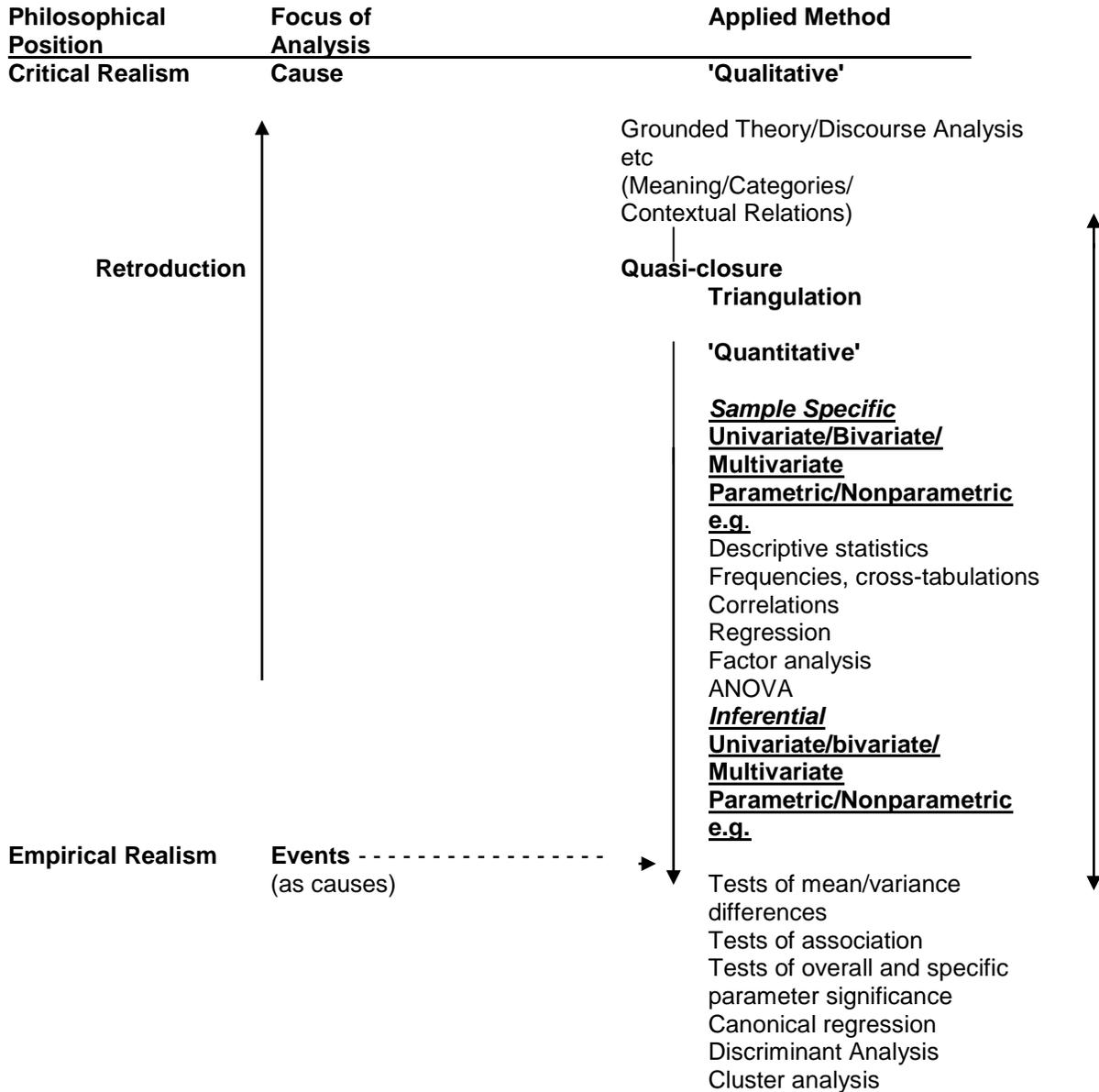
The focus on intensive/extensive research designs in combination seems necessary because of the nature of reality. A number of authors (for example, Olsen, 2003) have talked in terms of a *zoom-lens* approach, in which the investigator necessarily zooms in to focus on critical detail of a case (intensive research) but, for various reasons (including the often necessary relations between an object and other objects), the investigator must then zoom out, to get a wider sense of the object's context. Yet, the ontological basis for making such claims seems unclear.

In a number of papers we address these issues and argue that combining methods is *central* to retroductive activity. The following discussion briefly restates these arguments.

One of the consequences of the above discussion is that 'quantitative' and 'qualitative' approaches are not a dual: they overlap to a degree in underlying logic and can also refer to the same objects of analysis. They can share, or be conditioned upon, the same ontological perspective and are not of necessity wedded to particular, and different, ontological presumptions. Rather, the choice of method is not paradigmatic or one of ontology, because that ontology is shared by the methods, but simply reflects the specifics of the question being asked. If the questions probe different features of a phenomenon then different methods might be needed. It remains that they focus on the *same* phenomenon.

Two conclusions follow from this discussion. The first is that different research methods can be logically employed in a triangulating strategy to reveal different features of the *same* reality without the presumption of being exhaustive. The second is that the Critical-Realist perspective renders a need for the triangulation to have an explicitly ontological dimension to capture related but different layers of this reality. Figure 1, adapted from Downward (2003: 298) illustrates potential options.

Figure 1 Applied Critical Realism



In the first column are the two opposing positions identified in the Critical-Realist literature; Critical Realism and empirical realism. The latter is, of course, the empirical counterpart to deduction, induction and the hypothetico-deductivist model of explanation. The next column describes the focus of analysis framed within these alternative philosophical positions, which are, respectively, real causes and empirical events. In the case of empirical realism, relationships between events are purported to reveal causes in the covering law sense as indicated by the horizontal broken line linked to, say, typical statistical testing methods.

In contrast, Critical Realism maintains that investigating causes involves moving below the level of events through retroduction. The third column thus reveals that corresponding to what is typically identified as 'qualitative' research methods, the context-laden meaning of concepts,

categories and relationships can be established and causal narratives constructed. However, this process of defining shared meanings and categories in essence breaks down the qualitative orientation of the research and, of necessity, begins to invoke aspects of closure in seeking a degree of generality and purporting to refer to the same object of analysis. Hence the direction of 'quasi closure' indicated in the column. Thus, categorising phenomena implies assuming invariant (or a degree of invariance in) qualities. In essence, defining a variable requires at least intrinsic closure.

Increasing the degree to which closure is invoked thus begins to 'legitimise' various statistical procedures. These can refer to one, two or many variables but be either sample specific or inferential in orientation, which means that a probability distribution is referred to in a parametric or non-parametric manner to make claims about the generality of the purported relationships between variables. It is, of course, clear that the degree of closure assumed increases as one moves *down* the column. For example referring to sample specific descriptive methods of analysis such as averages, correlations or regression implies that values of variables have consistent meanings and that these variables can be combined in a relatively constant or enduring manner as indications of, say, outcomes of causal links.

Probabilistic inference assumes, much more strongly, that the results carry over, in a measurable sense, to contexts beyond the sample. In this sense one is increasingly invoking the *extrinsic condition of closure*, and one can clearly see the strength of the assumptions underpinning the methods which appear in this part of the column. What the diagram does reveal, in entirety however, is that in general movements towards statistical methods naturally shifts attention towards 'events' as opposed to 'causes' which are in essence qualitative. On this basis one can argue that rather than revealing covering laws, in contrast statistical methods can reveal phenomena from which causal research can begin and combinations of which contribute to our understanding of the phenomena under investigation (Downward & Mearman, 2004c). Thus the final column reveals that triangulation between the methods - that is linking the insights gained from these different research methods captures the retroductive logic of critical realism. Importantly, any quantitative analysis becomes merely a scenario whose legitimacy will rest upon the robustness of the qualitative invariance invoked in causal mechanisms and, of course, the lack of influence of countervailing causes. The discovery and robustness of such causal claims, along with their implications, will of necessity always be open to revision. In this respect, probabilistic inferences are also conditional upon and should be assessed in connection with analysis of the nature of the object under investigation.

Conclusions

This paper has argued that Lawson's *Reorienting Economics* still leaves significant lacunae in its implications for what economists, if they take Lawson seriously, are to do in their concrete research. Moreover, we interpret Lawson's new contribution as reinforcing his previous ones on the proper role of econometrics and other 'traditional' methods in economics: that such methods should not be used unless in highly specific narrow circumstances. It has been argued that a commitment in one's research design to methodological triangulation, i.e. inference via the combination of methods (informed by different and perhaps competing philosophies), can contribute several significant benefits: 1) the rejection of methods apparently implied by Lawson

is avoided; 2) the self-defeating implication of (1), viz., that all empirical analysis is invalid in open systems, is also avoided; 3) triangulation is consistent with depth realism; and 4) triangulation is essential to the operationalisation of the Critical-Realist logic of retrodution.

Moreover, triangulation allows economics to be reoriented toward the social sciences, as Lawson recommends in *Reorienting Economics*. In other social sciences, and implied by Denzin's taxonomy, triangulation is much more widespread. For example, Danermark et al (2002: 152) claim that within the sociological community the view is widely supported that there is no universal method and that there is a need for multimethodological approaches. Thus, in the applied social sciences, triangulation is common in nursing, health and education, and tourism (see, for example, Downward and Mearman, forthcoming). Yet in economics, 'scientific status' is sought, where scientific status is thought to mean systematic explanation, shaped by empirical evidence, and arrived at via a narrow set of methods. Hence, economics is typically perceived to be closer to the 'hard' sciences than other social sciences because of the axiomatisation of the discipline (Hausman, 1998). Economics stands alone from other branches of social enquiry and, indeed, disciplines.

Thus, triangulation raises interesting questions concerning the nature of social science. If one mixes methods of research and, in so doing, attempts to bring specific disciplinary tools to the analysis then such a 'multi-disciplinary' approach will entail the ontological clashes discussed earlier because, by construction the different disciplines embrace different methods and, as a result, different ontologies as expressed by traditional philosophy of science. In contrast, to 'unite' social science, what is required is an attempt to transcend the separate disciplines to produce an 'inter-disciplinary approach'. Social science, so defined, *naturally* involves triangulation, because the methods *qua* disciplinary boundaries are removed. It is argued in this paper that Critical Realism provides the methodological apparatus within which such a view of social science can be constructed. Aspects of the subject matter of the disciplines, if not the currently expressed nature of the disciplines, thus become branches or fields of the same domain of investigation brought together by triangulation.

Note

1. Bhaskar (1978: 43) supports fallibilism as concomitant with realism. However, Bhaskar (1978: 197-9) rejects fallibilism as an overarching concept, because it can be confused with judgemental relativism, i.e. the notion that all beliefs or theories have equal merit. Bhaskar prefers his concept of epistemic relativism, which allows for theories to be incorrect, but more correct than other theories. However, Sayer (2000: 20) notes that in open systems, there is always the possibility of "misattributions of causality"; i.e., fallibilism. Danermark et al (2002: 152-3)'s caution that investigators must be very careful when making inferences. They also refuse to rule out *a priori* any type of methods; however, this might reflect more strongly their position that any methods must be informed by the nature of the object under study. Furthermore, though, Critical Realists argue that agents' responses are corrigible, which means that replies to questionnaires, etc. cannot be taken completely at face value. Thus, the investigator's evaluation of a subject's responses is an important element in research; and given the corrigibility of responses, other data types or methods should be utilised. More generally, data might also be fallible, perhaps because it is incomplete or its collection was difficult.

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Comment on McCartney

Peter Dorman (Evergreen College, USA)

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I agree with the general argument presented in McCartney (2005) regarding game theory and multiple equilibria. Neoclassical economics has, in its discomfort with this consequence of strategic interaction, attempted to suppress it through implausibly strong assumptions that began with Nash and continue to the present. Removing this straightjacket is a crucial first step toward recovering the intellectually liberating potential of game theory.

I would like to make three further points, which I offer as “friendly amendments” to McCartney.

1. It is important to identify and analyze the assumptions that suppress multiplicity of equilibria. A wonderful example can be found in Hargreaves Heap and Varoufakis (1995). The central assumption in traditional neoclassical theory is the (quasi-)convexity of preference and feasible production sets, as I argued in Dorman (1997).

2. McCartney emphasizes the policy aspects of equilibrium selection. Once it is recognized how common (and multiple) such multiple equilibria are in complex economies, however, it is clear that even the most conscientious policy makers would be unable to exercise selection across all of them. In our own largely decentralized economies, the main role is played by history: equilibria are “selected” by virtue of their being in the neighborhood of past equilibria. This path dependence is ubiquitous and constitutes a major reason for the centrality of history in the study of economics.

3. The motivation of neoclassical theorists in suppressing multiplicity of equilibria raises important questions of scientific method. According to the dominant point of view, a theory must produce a unique prediction (identify a unique equilibrium) in order to generate and motivate hypotheses for empirical testing. It is clear that the unfettered game theory McCartney and I advocate does not do this. Is that a problem? It depends on the role that theory is called upon to play in relation to empirical work.

The product of the neoclassical approach to theory-building is a set of categorical hypotheses. The components of such a theory, including the assumptions employed to impose unique solutions in games and other models, can be entirely arbitrary so long as logical consistency (especially with the postulate of rational choice) and empirical confirmation of the ensuing hypotheses are upheld. There are two main criticisms that can be made of this conception of “economic science”:

a. In reality, hypotheses are rarely subjected to critical empirical tests. Rather, econometric work typically relies on a large number of supportive assumptions that can be adjusted as needed to permit a result “consistent with” the theoretical framework. This was the situation I encountered in my own work on the theory of compensating wage differentials, for example. No economist had sat down and asked, what assumptions and implications of this theory can be put to the test, and what sorts of tests would strip away as many confounding factors as possible? (Dorman, 1996 and Dorman and Hagstrom, 1998) The more general point is this: if a theory is to be

assessed entirely on the basis of its consistency with empirical evidence, then an extra burden falls on empiricists to be as aggressive as possible in the construction of critical tests. Of course, it may be the case that no economic theory could survive under such an assault, which would mean that reliance on empirical testing to justify arbitrary theoretical assumptions (such as those that sustain unique equilibria) is not a defensible strategy.

b. Even should a body of theory survive the most critical testing, however, its explanatory potential is minimal if, in fact, it does not explain. To explain means to provide a mechanism that accounts for the relationship between causal and consequential states. We need such mechanisms not only to satisfy our intellectual curiosity, but also to know when and how to deploy a theory. No mechanisms, save perhaps for a few in the most fundamental physical processes, are universal. To apply a theory normally means to identify situations in which the mechanisms it posits can be expected to operate. Neoclassical economics claims to have little interest in mechanisms, least of all in the most basic process in its chosen field of study, market equilibration. (Hence its black box character, particularly in the form of *tâtonnement*.)

The alternative view of scientific work embraces the central role of mechanisms. This is how geology, biology, chemistry and virtually every other science (with the possible exception of physics) functions. In economics it means that theory would consist of an assortment of well-described social processes pertaining to the economy. Such processes might or might not have determinate outcomes, but the mechanisms they embody would provide a basis for context-specific empirical and policy analysis. This is not the place to make the case for such an approach, but it is appropriate to mention that game theory, in its open-ended, multiple-equilibrium conception—unencumbered by assumptions whose main purpose to impose a “solution”—is an ideal tool for elaborating mechanisms in complex social situations.

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