Modern Economics and its Critics, 1

by

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Prologue

Most economists I know have little time for the philosophy of economics as an intellectual discipline. They have even less patience with economic methodology. They prefer instead to *do* economics. If they are involved in serious methodological discussion at all, it is during the process of conducting economics research or preparing their findings for publication. They do so in the latter stage, for example, and they do so often unashamedly, when commenting on the weaknesses of previous work before saying why they feel their own work is superior.

There is much to be said for this habit. Far and away the most effective criticisms of current-practice economics that I have read have come from those who themselves have been engaged in research in economics, rather than in its philosophy or, more narrowly, in its methodology. Indeed, I know of no contemporary practising economist whose investigations have been aided by the writings of professional methodologists.

Why has this been so? One reason may be that people who do economics usually know more about the strengths and weaknesses of current-practice economics than those who have neither acquired nor sifted data, nor experimented with alternative theoretical constructions so as to judge which construction is likely to improve upon that which has been explored and which is unlikely to do so. It would have been of no moment, for example, to tell those econometricians in the 1950s who developed the linear-expenditure system for studying consumer behaviour in the United Kingdom that it is a restrictive system: they already knew it, *but* nevertheless had good reasons for adopting it.

This said, I think there is a wider reason, having probably to do with the fact that economic philosophers and methodologists find it difficult to keep abreast of the professional literature in economics. For example, it is a commonplace criticism of modern economics voiced by those who are uncomfortable with it that the subject is becoming increasingly mathematical, indeed, that the gap between economic models and "reality" is ever-increasing. My own experience has been quite otherwise. When I was a graduate student in the mid-1960s, economics appeared far more compartmentalised into the "theory" and "applied" categories than it is today. The cutting edge of theory then consisted of problems of a seemingly esoteric and transparently mathematical kind.[1] In saying this I don't imply criticism. Those investigations yielded technical tools. Training in the use of such tools enabled young economists to work on problems of the "applied-theoretic" kind the analysis of which dominate leading economics journals today.

If my reading of the shift in economics research over the past quarter-century or so is even

[1] For example, even among economic theorists who were not mathematicians, there was much interest in the existence of optimum programmes in infinite-horizon economic models, and in the kind of fixed-point argument that would be required for establishing that a particular economic system possesses a general equilibrium.

approximately correct, it should be a puzzle that modern economics has recently come under attack - often virulent attack - from both without and within the profession for its lack of contact with "reality".[2] External attack on current-practice economics is not new; it goes back at least to the first half of the nineteenth century, when romantics bemoaned the "dismal" science. So far as I know, though, it is internal attack that is new. Moreover, the internal attacks I allude to aren't of a sort reflected in such professional disputes as, for example, the one that dominated macroeconomics during the 1980s over the worth of real business-cycle theories, or the famous nineteenth-century controversy between David Ricardo and Thomas Malthus on the Corn Laws. In a professional dispute protagonists speak a common language and share something like an understanding of what constitutes evidence and an argument. Differences frequently occur among experts because the evidence is often at best translucent: several interpretations are simultaneously possible. Such disputes are the stuff of any productive research community and economics is no exception. If the disputes are on occasion shrill, it is because they involve policy prescriptions and personal egos. However, I know of no evidence which suggests that disputes among modern economists are more pronounced than they are among experts in such other overarching disciplines as biology, history, and physics.[3]

The internal attacks I will be concerned with in this essay are something else. They appear to be part of a lineage that earlier consisted of commentaries and presidential addresses by elderly economists disaffected with the direction in which economics research had been moving since the end of the Second World War.[4] The lineage's current manifestation, however, often operates at an Olympian height of generality, it usually works round what modern economists *say* in their "literary" moments, rather than what they actually *do* in their technical work, it frequently advocates the need for a "paradigm shift", and it is almost always so scholarly as to lack focus. To an unreconstructed practising economist like myself, reading such attacks proves to be puzzling and frustrating; indeed, on occasion it feels rather like grasping at air.

My fellow economists choose simply to ignore these writings. Understandably, they think they have better things to do. Some have told me I waste my time worrying about such attacks. But worry I do, at least in part because of a possibility that some of the critiques may indeed prove helpful in our

[2] See, for example, John Cassidy, "The Decline of Economics", *New Yorker*, December 2, 1996, 50-64, and Robert Heilbroner and William Milberg, *The Crisis of Vision in Modern Economic Thought* (Cambridge University Press, 1995). Some of the remarks that follow in this prologue have been prompted also by the second and third of Professor Stephen Toulmin's 1998 Tanner Lectures at Cambridge, entitled "Economics: From Theodicy to Chaos" and "Situated Understanding", respectively.

[3] The often acrimonious debate that took place only recently among leading physicists in the United States on the worth of the superconducting super-collider provides a good example.

[4] For a critical review of one such commentary, see Frank Hahn, "The Winter of Our Discontent", *Economica*, 1973, Vol. 40.

work. So it has seemed to me that the critiques ought to be met, by someone who is engaged in research in modern economics and so could be expected to know something of it.

But there is a wider, social reason for my worrying about the critics. Criticism accumulates if it is not answered, or if it is generally not understood that it has been answered. Cumulative criticism can erode the confidence the lay public should have that such a large enterprise as modern, and largely academic, economics does have in place internal checks and balances, incentives for constructive work, and the many other instruments and devices that make for a progressive republic of social science. We economists not only conduct research, we also teach the subject and produce the next generation of economists and a fraction of policy-makers and shapers of opinion of the future. A good deal of the teaching and research that is undertaken in economics, at least in Europe and in the poor countries of the world, is supported by the taxed public. If, as I believe is the case, economics (especially microeconomics) has for quite some while been enjoying a supremely productive phase, during which any number of social phenomena that earlier made no obvious economic sense have come within its orbit, the public should know about it. The matter is made urgent by the fact that critics of modern economics enjoy a far wider readership than does the modern economist. They appear regularly in literary magazines and are, superficially at least, an easy read. Moreover, their writings are polemical and offer the occasion for controversy. It is also not uncommon for them to assume the role of a maverick, battling against a reactionary establishment. All this makes them particularly attractive to the literary editor.

Some time ago I was asked by a literary magazine to review a pair of books by Professor Robert Heilbroner, a distinguished historian of economic ideas and a critic of the character of modern economics.[5] Given Heilbroner's formidable scholastic reputation, I tried hard to understand his approach to economics research. It transpired that I tried so hard that I was slower to read the two books that had been sent to me than he was at writing two further books that were subsequently sent to me.[6] Fortunately, there is unity in Professor Heilbroner's intellectual explorations. So his four books offered me an opportunity to understand one major strand in the current criticism of modern economics. As I understand it now, this strand deplores the abandonment by modern economists of what is in effect an amalgam of the intellectual agenda of classical political economists and that of John Maynard Keynes.

I felt I wanted to write not so much a review as a methodological essay, one that would weave together in a narrative form not only why "political economy" in the late eighteenth- to mid nineteenth-century sense holds no attractions for the modern economist, but would also give the reader an idea of

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[5] Robert Heilbroner, *21st Century Capitalism* (New York: W.W. Norton, 1993); and Robert Heilbroner, *Visions of the Future: The Distant Past, Yesterday, Today, Tomorrow* (New York: Oxford University Press, 1995).

[6] Robert Heilbroner and William Milberg, *The Crisis of Vision in Modern Economic Thought* (New York: Cambridge University Press, 1995), and Robert Heilbroner, *Teachings from the Worldly Philosophy* (New York: W.W. Norton, 1996).

how very much farther economics has progressed in recent years than its critics realize. The Heilbroner books offer an excellent opportunity to do so because at least two of the books I will be discusing here are not critiques at all; they involve quite different intellectual explorations.

But of course, I wanted also to respond to the specific criticisms Heilbroner makes of modern economics. The way I have done so as regards the latter is to use examples Heilbroner relies upon to give expression to his frustration as a springboard for my own illustrations. Needless to say, many of the examples I have chosen for this purpose are from those fields of study with which I am most familiar. For both these reasons there is a selection bias. As this was unavoidable, I offer no apology for it.

The essay I consequently wrote was too long to be a review. But shortening it significantly would have compromised the intellectual unity in Heilbroner's critique. So I have no plans for submitting it for publication. Instead, I am circulating it as the first of a possible two-part response to critics of modern economics. This essay addresses a few of the works of a leading critic within the profession. In the sequel I hope to respond to critics without. Some of the latter whom I have already read take quite a different stand from the one adopted by Professor Heilbroner. A few deplore the mathematical treatment of human concerns, while others relish the prospect of a "paradigm shift" without worrying if it would involve more, or less, mathematical material. I am discovering that critics of modern economics come with differing agenda. They don't share a common dislike for modern economics; rather, what they share in common is dislike for it.

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Economics and its History

Not so long ago, economics was taught in tandem with the history of economic ideas. So far as I am able to judge, even creative economists were versed in the canon. For example, at the University of Dhaka in the late 1930s, my father, Amiya Dasgupta, lectured on both advanced economic theory and the history of economic thought. In later life he often told me he wouldn't have known how to proceed on one front without keeping a look-out on the other. In this he had been influenced by his teacher, Lionel Robbins, whose legendary undergraduate lectures and Faculty seminar at the London School of Economics displayed a similar mix. Robbins in turn had been a student of Edwin Cannan, whose teaching had the same flavour; or so I am told. Nicholas Kaldor's lectures at Cambridge on value, distribution, and growth, which I attended as a student in the mid-1960s, made more than a passing reference to the great nineteenth-century economist, David Ricardo. Although people more knowledgeable than I maintain that Kaldor's Ricardo was more Kaldor than Ricardo, the point remains that Kaldor at least *tried* to link his thoughts to those of a past Master.

Things are different today. You can emerge from your graduate studies in economics without having read any of the classics, or indeed, without having anything other than a vague notion of what the great thinkers of the past had written. The modern economist doesn't even try to legitimize his inquiry by linking it to questions addressed in the canon; he typically begins his article by referring to something in the literature a few months old. He reads Ricardo no more than the contemporary physicist reads James Clerk Maxwell. What today's economics student gets of the classics are those bits that have survived the textbook treatment, dressed in modern garb. The history of economic ideas hasn't died; it has simply metamorphosed into a specialized field. It is taught, but it is not compulsory for students, at least not in the major economics departments. And just as most working economists today know little of the ideas that have shaped their subject, your average historian of economic thought understands little of what is currently going on in economics and why. The separation is as complete as can be.

It may seem obvious that this is an altogether bad state of affairs; and yet, on reflection, it isn't clear that it is so. To be sure, the practising economist has lost something valuable by the separation of economic analysis from its history, but the loss, it seems to me, is one of culture, not fecundity. Maybe the research economist would have greater self-knowledge if she were versed in the history of her own discipline. But she would also likely be more self-conscious, and this could prove inhibiting. Moreover, as time is scarce, it is even possible that today's economics student would be better equipped to study live problems if he were to read a good graduate text on, say, ecology than *Das Kapital*. In order to do creative work, there is a further advantage in not being knowledgeable about the intellectual concerns and struggles of bygone eras: there would be a lower risk that the past was setting the present's research agenda.

Forty-five years ago, in a charming book, *The Worldly Philosophers* (Penguin Books, Harmondsworth, 1953), Robert Heilbroner offered an account of economics to both students and the lay public by inviting them to view the development of the subject in terms of the lives, times, and ideas of great economic thinkers. Heilbroner's classic reads as the work of a scholarly patrician, a rare quality in so technocratic a group as modern economists. The book also displays the author's love for the subject's past Masters and his admiration for what it is capable of achieving when practised at its loftiest scales. Now he has produced *Teachings from the Worldly Philosophy*, which contains passages from the writings of the Masters (the line stretches from the Bible and Aristotle to Keynes and Joseph Schumpeter) on specific themes. These are accompanied by Heilbroner's commentaries, designed to help the reader to understand the motivations of the Masters and to get him to view the links that form a connection between intellectual struggles across time.

As one would expect from *The Worldly Philosophers*, this is a work of erudition. Admittedly, it is frustrating to be given only tiny fragments of the writings of authors who often wrote and wrote and wrote, but it will prove useful to students if read as a companion to the earlier book. It may even encourage them to read a few of the Masters in the original. I have never had the pleasure of meeting Professor Heilbroner, who is the Norman Thomas Professor of Economics, Emeritus, at the New School of Social Research in New York City, but having read him extensively in preparation for this article, I am convinced he communes daily with the authors of the canon. In fact, I would go further: I think he speaks to Adam Smith in the morning, Karl Marx at noon, John Maynard Keynes in the evening, and so on. The trouble is, he has little time left over to study modern economics. This poses a number of problems for each of his offerings under discussion here. In *Teachings from the Worldly Philosophy*, however, there is an immediate problem facing the reader: the scribe often leaves the Masters' musings hanging in the air, having offered no clue as to their current status.

Take, as an example, the long struggle (literally, across centuries, as Heilbroner tells it) economists faced in trying to determine the *exchange value* of a commodity, such as a table. Here is Marx's famous solution (quoted on p. 164): "Along with the useful qualities of the products themselves, we put out of sight both the useful character of the various kinds of labour embodied in them, and the concrete forms of that labour; there is nothing left but what is common to them all; all are reduced to one and the same sort of labour, human labour in the abstract."

The language is sufficiently opaque for it to have required several generations of scholars to decipher the construct which embodies this thought. Today we are able to offer a precise formulation of this part of Marx's schemata and, if required, also expose its empirical irrelevance; for modern economic analysis has shown that Marx's account isn't coherent in the world we know.[7] But reading Heilbroner, the unwary reader wouldn't know this. He would think either that the problem Marx wrestled with is alive and kicking (i.e. his claim is still in need of confirmation) or that Marx was right in being confident he had the correct answer to the question he had posed.[8] Admittedly, this is merely an omission on Heilbroner's part, and perhaps I shouldn't make a thing of it. Nevertheless, it is a symptom of the pitfalls facing someone who studies the history of economic thought in the manner in which Heilbroner writes it.

As it happens, they are likely to face further pitfalls. Part of my intention in this article is to explore them.

The Character of Modern Economics

Economics, as a distinct body of inquiry, emerged from moral philosophy, but it is quite a different species. If, to the moral philosopher, Aristotle is alive, it is because he asked questions that continue to be in need of response. Moreover, the tools at the disposal of the modern moral philosopher are not so different from those that Aristotle wielded. What he regarded as an argument is, often enough, not far removed from what the moral philosopher today regards as an argument. That is why the subject can be, and most often is, taught in the form of a running dialogue with past Masters.

Economics isn't like that. In a justly-famous discourse on economics, Robbins identified it as the science that studies human behaviour as a relationship between ends and scarce means which have alternative uses.[9] Now, even although this identifies the terrain of economics, it doesn't tell us where we should be within it or how we should study it. Robbins' definition gives us no more clue to what an economist should be investigating than a definition which says that physics is an inquiry into the laws that govern the physical world would help a physicist to identify what he should be investigating. Economics cannot be identified by the questions it entertains, because the questions themselves change with changing

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[7] By this I mean that the assumptions under which Marx's construct holds are violated in our world, and that this is a deep fact, not an incidental one. For Marx's claim to be true, we need to assume, among other things, that each and every commodity has a competitive market, that joint production of a certain kind (e.g. mutton and wool) is not possible, that there is a single non-produced good (labour), and that the economy is stationary (i.e. history has ended). In saying we "need to assume" these, I do not mean the assumptions are necessary, but that they are tight, in that, dropping any renders Marx's claim invalid. A simple proof, following the original proofs offered by Nicholas Georgescu-Roegen and Paul Samuelson, is provided in Tjalling Koopmans, "The Price System and the Allocation of Resources", in *Three Essays on the State of Economic Science* (New York: McGraw Hill, 1957). To the best of my knowledge, the most general statement is in James Mirrlees, "The Dynamic Non-Substitution Theorem", *Review of Economic Studies*, 1969, Vol. 36.

A common criticism I have heard Marxian scholars make is that the model economy studied in the articles referred to above does not capture what Marx had in mind. But I know of no attempt by them to provide a formal account of what Marx meant *and thereby* check if the account finds empirical support.

[8] Some ecologists in recent years have sought to establish an account of the value of commodities in terms of the energy that is embodied in their production. Any such account is incoherent in the world we know, and for the same reasons.

[9] Lionel Robbins, *An Essay on the Nature and Significance of Economic Science* (London: Allen and Unwin, 1932), p.15.

circumstances.[10] The institutions of our own era are substantially different from those prevailing at the time *The Wealth of Nations* was published. That people use the same term, *capitalism*, to refer to the economic systems in England of both 1776 and 1976 doesn't mean it is analytically illuminating to do so. The physicist, Steven Weinberg, once remarked that when you have "seen" one electron, you have seen them all. In contrast, the objects of study in economics are not immutable, in Weinberg's sense. When you have observed one transaction, you have not observed them all. More tellingly, when you have met one human being, you have by no means met them all.

It is a recognition of the commonality of the human experience, on the one hand, and the separateness of every human being and the particularity of the circumstances she faces, on the other, that gives economics its special flavour and is a reason why it is an awesomely difficult subject. Each generation of economists accomodates these opposing pulls, at least, to a certain extent, in the light of the questions to which it seeks answers. Even the way a question is framed often reveals the kind of accommodation being reached. This isn't relativism. In the absence of firm guidance from either psychology or sociology, the hapless economist is forced to regard the accommodation, initially, as a matter of choice, and to evaluate it repeatedly on the basis of empirical evidence on the implications of the theory. If modern economics possesses a distinctive *character*, it is that it treats human beings with respect (a matter to which I will return). This it does by trying to illuminate the various pathways through which millions of decisions made by individual human beings can give rise to emergent features of communities and societies. Since individual decisions are, in turn, influenced by these emergent features (e.g. rate of inflation, productivity gains, level of national income, prices, cultural values, and social norms), there is mutual feedback over time. If the period being studied is short, one can simplify by taking some of the emergent features (e.g. cultural values and norms) as given, and thereby, not subject them to analysis. But if the period is long, we are led to study dynamic processes with mutual feedback between millions of micro-decisions and the emergent (macro) features. This character of modern economics isn't, of course, new; but it has never been espoused with such abandon as it is today; and so, when the modern economist says he seeks a *microfoundation* for some observation or the other, it isn't an admission on his part, it is an assertion.

This motivation has meant that a good deal of economics is conducted on a piece-meal, small-scale basis. A typical article may seek to explain why there are exclusionary contracts between purchasers and incumbent firms in some industries and not in others, or it may ask if richer people spend a greater proportion of their income on environmental amenities; it may try to discover why there are strikes, or

[10] This reading of economics is demonstrated in Amiya Dasgupta's *Epochs of Economic Theory* (Oxford: Basil Blackwell, 1985), where the author views every "epoch" in terms of an interpretation of the problems that were perceived to be central in *that* epoch. Dasgupta's book also assesses the achievements and shortcomings of the answers that were given to these problems.

why workers are paid on a piece rate in some lines of work in some parts of the world and not in others, or why some industries are vertically integrated while others are not, or whether welfare payments in cash are a more effective form of transfer than those in kind; it may try to determine if personal saving and corporate investment are responsive to interest rates, or if a minimum wage legislation would reduce employment in a particular industry, or whether mother's education is a determinant of fertility in rural regions of poor countries and, if so, why; and so forth. These questions are hard enough, and so, most economists would shift uncomfortably in their chairs if asked to pronounce on the laws of motion of capitalism, or to speculate on the future of the multinational firm. It is not so much that grand themes have disappeared (this too is something I will come to later), it is that "small", sharp questions dominate economics journals today.

Why? One reason is that this enterprise has proved to be immensely more illuminating than the search for answers to what appear to be grand questions, but are in fact badly posed questions, or questions to which currently no useful answer can be given, or there is no way of judging if answers to them are true or false. Nevertheless, to someone steeped in the canon, such a research agenda could well appear small-time, possibly irrelevant, perhaps not worth bothering about. While something of this attitude pervades all of Professor Heilbroner's writings under review, it is displayed most vividly in two of them, *Visions of the Future: The Distant Past, Yesterday, Today, Tomorrow* and *21st Century Capitalism*.

The Nature of Economic Life: past and present

The books address giant themes, concerned as they are with the nature of economic life in the past and present, and its prospects for the future. In *Visions of the Future*, both the brevity and the canvas beggar the imagination: in precisely 124 pages, we are taken through 150,000 years of the human enterprise. Heilbroner's *Distant Past* is a stretch that began 150,000 years ago and ended at the beginning of the eighteenth century, during which, he says, nothing much happened: "... the tools and techniques of production remained the same from one generation to the next... economic life, insofar as it was distinguishable from social life in general, was a force for stasis, not for change" (p.8). In contrast, hope and progress were the features of *Yesterday*, a 250-year period that ended sometime in the second half of this century. It was a period when (p.11), "... the future ... enters the human consciousness as a great beckoning prospect... (it) denotes an era in which we look to the future with confidence, because men and women believe that forces will be working there for their betterment, both as individuals and as a collectivity." *Today*, in contrast, "... is marked by a new degree of pessimism," (p.15), where "science, economics, mass political movements ... appear as potentially or even actively malign, as well as benign; both as threatening and supportive ..." (p.13). In short (p. 69): "Resignation sums up the Distant Past's vision of the future; hopefulness was that of Yesterday; and apprehension is the dominant mood of

Today."

Well, I know very little about the *Distant Past* (although I am reliably informed that during that stretch of time, a period characterized by "stasis", animals got domesticated, agricultural societies emerged, cities were established, and Athens invented democracy), but the contrast Heilbroner draws between *Yesterday* and *Today*, even when confined to the Occident, does not ring true to me. In *The Rhetoric of Reaction* (Harvard University Press, 1991), Albert Hirschman showed that for each of the great social revolutions that have taken place in Western Europe during the past two centuries and more (that of civil liberties in the eighteenth century, political liberties in the nineteenth, and socio-economic liberties in the twentieth), there were doubters, who not only doubted, but wielded three separate counter-arguments, based on *perversity* ("your proposal, if implemented, will bring forth a response from society that yields the exact opposite of what you intend"), *futility* ("society will react to nullify the movement you are espousing, so why espouse it?") and *jeopardy* ("your proposal is good, but you must appreciate that implementing it would ruin that other social good you value highly"). Now these critics were not a random assortment of society’s malcontents; they included such thinkers as Edmund Burke, Alexis de Tocqueville, Thomas Carlyle, John Ruskin, and Vilfredo Pareto. And they were deeply worried about the changes taking place round them. Nor is the "anti-scientific" element a feature unique to Heilbroners’s *Today*. William Morris, like Carlyle and Ruskin, reacted against the industrial revolution and the age of mechanization, but added to it "... the Romantic prejudice that a mechanical civilization had been created by a mechanical science, and that science was attempting to substitute for art."[11]

I cannot imagine how anyone could see wisdom in trying to carve three epochs out of a 150,000-year stretch, the shortest of which, a mere forty-to-fifty year spell, being one to which they themselves belong. Moreover, Heilbroner offers no more than a few pages of assertions in support of his thesis. Thus, in providing evidence that apprehension is the dominant mood of *Today*, we are given not much more than a running sentence (pp. 69-70) on "... the totally unforeseen outburst of bloodthirsty violence in what used to be called Yugoslavia, ... the descent into desperation of Soviet society, following the dissolution of its empire; the maelstorm of Central Africa; the rise of skinheads in Germany and neo-fascist movement in Italy; and not least the breakdown of civil society at home, both within and, to a lesser extent, outside the boundaries of the inner city." After this, as evidence of *Today*’s loss of confidence in science, the reader would duly expect references to the Chernobyl disaster and the late Paul Feyerabend’s fatuous characterization of scientific activity, to wit, *anything goes*.[12] She will not be disappointed: they appear on pages 73 and 76, respectively.

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[11] Raymond Williams, *Culture and Society 1780-1950* (London: Penguin Books, 1971), p. 154. As Williams shows, Morris was not alone in harbouring such anxieties.

[12] Paul Feyerabend, *Against Method: Outline of an Anarchistic Theory of Knowledge* (London: Verso Edition, 1978).

Are We Especially Apprehensive Today?

Any stretch of time, and I mean *any* stretch of time, could be identified as a period when apprehension was the prevailing mood if you were to point your finger only at disasters and the hand-wringing of intellectuals. I know of no evidence that Heilbroner's anxiety is shared, for example, by the rising middle classes in Asia, or by the bulk of the voting public in Western Europe. To be sure, there are experts who argue that we *should* be apprehensive today; for example, about the adverse links between environmental stress and large-scale poverty in the South, and about the ecological damages that are associated with the unprecedented levels of consumption of material goods in the Occident and the East.[13] But they lament that their message on, say, global warming is *not* getting across, that people in democratic societies are *not* apprehensive enough to force their governments to tackle the problems in a coordinated manner; they have not concluded that the reason not much is being done is that we are paralysed through despondency about the possibilities of collective action. Recent work by economists, such as Scott Barrett, Michael Hoel, Karl-Göran Mäler, and Domenico Siniscalco, on the theory and practice of international negotiations on the global commons, appears to support the view that failure to achieve collective action has not been due to pessimism. Barrett, for example, notes that, while little has been achieved in the case of carbon emissions or biodiversity protection, international negotiations over the protection of the ozone layer have been remarkably successful (nearly all countries have cooperated in creating a regime in which the emission of chlorofluorocarbons will soon be reduced to nil). From this and other evidence he infers that the costs of reducing both carbon emissions and biodiversity destruction are, even today, *perceived* to be much greater than the benefits, especially when note is taken of the side-payments nations would have to make among one another and the changes in the institution of property rights that would be required if any such agreement were to be implemented.[14]

Then there is evidence of a different kind that *Today* isn't marked by especial despondency about the value of political action. A remarkable development over the past twenty-five years or so has been the rise of local non-government organizations (NGOs), especially in poor countries. A great many have on their agenda the poorest of the poor, especially the women, children, and the old among them. Worldwide, NGOs today number over 2,000. Moreover, their ability, reach, and importance are such that,

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[13] Here I am referring to such thinkers as Bert Bolin, Paul Ehrlich, Murray Gell-Mann, John Holdren, Henry Kendall, Harold Mooney, David Tilman, and Edward O. Wilson. See, for example, Bert Bolin, "Changing Climates", in Laurie Friday and Ronald Laskey (ed.), *The Fragile Environment* (Cambridge University Press, 1989); Edward O. Wilson, *The Diversity of Life* (New York: W.W. Norton, 1992); Murray Gell-Mann, *The Quark and the Jaguar* (New York: W.H. Freeman, 1994); and Paul R. Ehrlich and Anne H. Ehrlich, *Betrayal of Science and Reason: How Anti-Environmental Rhetoric Threatens Our Future* (Washington, D.C.: Island Press, 1996). For a collection of expert essays on the nature of ecosystem services, see Gretchen C. Daily (ed.), *Nature's Services: Societal Dependence on Natural Ecosystems* (Washington, D.C.: Island Press, 1997).

[14] Scott Barrett, "The Problem of Global Environmental Protection", *Oxford Review of Economic Policy*, 1990, Vol. 6; and "Comments on the 1995 Keynes Lecture", *Proceedings of the British Academy: 1995 Lectures and Memoirs* (London: British Academy, 1996).

in order to be effective, international organizations increasingly act through them, and national governments are wary of ignoring them.[15] The past quarter-century has also been the period when women, in the Occident at least, acted upon and achieved success in realizing a number of measures designed to improve their life-chances. These happenings do not add up to Professor Heilbroner's *Today*.

Visions of Tomorrow

What of *Tomorrow*? On this, *Visions of the Future* overlaps with *21st Century Capitalism*. In other respects, though, the two books are different, in that, the latter is a discourse on the character of economic institutions under capitalism. The evolution of capitalist order in the West has been the subject of a large number of studies over the years, and it would be astonishing if anything really new could be said on it. Heilbroner does not astonish, but his narrative reflects his expertise and is interesting.[16] Economics, as a distinct body of inquiry, arose at about the time the Industrial Revolution began; so, the history of economic thought is intertwined with an important segment of the history of capitalism. Heilbroner exploits this fact by turning to past Masters of economics. He does not offer much quantitative data in support of the picture he wants to portray of capitalism; he relies in the main on what past Masters said of the institution. So while it may seem that Heilbroner is taking a historical view of economic life, he isn't actually doing that: he is approaching economic history through the history of economic thought. This gives the reader a feel for how capitalism at a past date appeared to a Master writing at that date, but not much else. In other respects, though, the fare Heilbroner offers is standard: The central role of market signals (e.g. prices) in directing private production outlays and investment plans is noted; the (to me, questionable) notion of immanent change through the drive for capital, with the accompanying "... feeling of self-propulsion along a rising gradient that constitutes the core idea of progress" (p. 42), is stressed; the periodic tendencies under capitalism toward deficiencies in aggregate demand for goods and services are recounted; and it is followed by a discourse on the politics of capitalism, in particular, on the symbiotic relationship between Business and Government, reflected in the changing agenda of the private and public sectors of an economy.

Like those of the past Masters he surveys (pp. 121-9), Heilbroner's long-term prognosis on capitalism is gloomy. For he writes (p. 130), "... capitalism's uniqueness in history lies in its continuously self-generated change, but it is this very dynamism that is the system's chief enemy." He then adds to the past Masters' considerable list of problems inherent in a capitalist order the threat of ecological disaster; for he stresses that "... the threat ... is rooted in the inability of the market mechanism to resolve the global

[15] See, for example, Ismail Serageldin, *Development Partners: Aid and Cooperation in the 1990s* (Stockholm: Swedish International Development Authority, 1993) and Claudia Fumo, *The World Bank's Partnership with Nongovernmental Organizations* (Washington, DC: World Bank, 1996).

[16] *21st Century Capitalism* was selected by Fortune Book Club and was included in the *New York Times*' list of one of the notable books of the year.

problem of pollution." At this point *21st Century Capitalism* merges with *Visions of the Future*. Heilbroner claims (p. 140) that the problems of capitalism lie with the workings of the private sector, not of the public; and concludes that the prospects of 21st century capitalist societies will depend on the success with which they can marshall and apply the forces of government to deal with such problems.

Societal Ills and Market Failure: are they the same?

Coming as it does as the main conclusion of two books on the grandest of themes, this could appear bland to readers. But they should know it is also deeply misleading. It is one thing to say that an unaided market mechanism cannot be relied upon to ensure a sustainable pattern of use of, say, environmental services; it is another thing to say that the sole culprit behind a misuse of the environmental resource-base is the market mechanism. The first is a finding in modern economics;[17] but the second has been demonstrated, again by contemporary economists, to be false: different kinds of environmental degradation are traceable to different forms of institutional failure, they are not all due to market failure. For example, Hans Binswanger[18] has shown that, in Brazil, the exemption from taxation of virtually all agricultural income (allied to the fact that logging is regarded as proof of land occupancy) provided strong incentives to the rich to acquire forest lands and to then deforest them. This isn't market failure, it is government failure. Binswanger has also argued that the subsidy the government has implicitly paid to the private sector has been so large, that a reduction in deforestation is in *Brazil's* interests, not merely in the interest of the rest of the world. This has implications for international negotiations. The current consensus appears to be that, as a country, Brazil has much to lose from reducing the rate of deforestation she has been engaged in. If this were true, there would be a case for the rest of the world to subsidize her, as compensation for losses she would sustain if she were to restrain herself. But, as Binswanger's account suggests, it isn't at all clear that the consensus is correct.

Then there are environmental problems whose cause can be traced to the fact that such micro-institutions as the household can be dysfunctional. In rural communities of poor countries, for example, men typically have the bulk of the political voice. We should then expect public investment in, say, environmental regeneration to be guided by male preferences, not female needs. On matters of afforestation in the drylands, for instance, we should expect women to favour planting for fuelwood and men for fruit trees, because it is the women and children who collect fuelwood, while men control cash income (and fruit can be sold in the market). This explains why, even as the sources of fuelwood continue

[17] See, for example, James Meade, *The Theory of Externalities* (Geneva: Institute Universitaire de Hautes Etudes Internationales, 1973); Karl-Göran Mäler, *Environmental Economics: A Theoretical Enquiry* (Baltimore: Johns Hopkins University Press, 1974); William Baumol and Wallace Oates, *The Theory of Environmental Policy* (Englewood Cliffs, NJ: Prentice-Hall, 1975); and Partha Dasgupta and Geoffrey Heal, *Economic Theory and Exhaustible Resources* (Cambridge University Press, 1979).

[18] "Brazilian Policies that Encourage Deforestation in the Amazon", *World Development*, 1991, Vol. 19.

to recede, fruit trees are often planted. This too isn't a case of market failure.[19]

That political instability (at the extreme, civil war) is a visible cause of environmental degradation is obvious. What may not be so obvious is that it is a hidden cause as well. As political instability creates uncertainty in property rights, people are reluctant to make the investments that are necessary for the protection and improvement of the environmental resource-base: the expected returns are low. In a study comprising 120 countries, Robert Deacon has offered statistical evidence of a positive link between political instability and forest depletion.[20] This isn't evidence of market failure either.

Beyond the Market-Government Dichotomy

The narrow, market-government dichotomy of society has little to commend it, but orthodox discussions of economic life cling to it. Someone wedded to the dichotomy would, understandably, want to jump into the arms of the state whenever market failure were observed, and Professor Heilbroner isn't alone here. But people all over the world have explored a wide variety of resource allocation mechanisms: society is usually cleverer than scholars of society. When they have needed to, and have been able to, people have developed what are often criss-crossing institutions, such as extended-family and kinship networks; civic, commercial, and religious associations; charities; production units; and various layers of what is known as government. Each serves functions the others are not so good at serving. They differ not only in terms of the emotional bonds that connect members, but also in regard to the information channels that serve them, the kinds of agreements that bind them, and the investment outlays and severence costs that help sustain them. Their elucidation, in particular our increased understanding of their strengths and weaknesses, has been the most compelling achievement of economics over the past twenty-five years or so.[21]

Related to the orthodox, market-government dichotomy is a rhetoric I have found curious. While discussing the symbiotic relationship between the private and public sectors under capitalism, Professor Heilbroner writes in *Visions of the Future* (p.78), that "... business rushes to the support of government more from patriotism and possibly also profit, than in defense of political principles. Perhaps one can sum it up by saying that business stands behind government in emergencies and government stands behind business between emergencies." Similarly, in his discussion of future scenarios in *21st Century*

[19] These issues are discussed more fully in my *An Inquiry into Well-Being and Destitution* (Oxford: Clarendon Press, 1993) and in my 1995 Keynes Lecture to the British Academy, "The Economics of the Environment", *Proceedings of the British Academy: 1995 Lectures and Memoirs* (London: British Academy, 1996), an expanded version of which was published under the same title in *Environment and Development Economics*, 1996, Vol. 1.

[20] "Deforestation and the Rule of Law in a Cross Section of Countries", *Land Economics*, 1994, Vol. 70.

[21] This has not come about in one swoop, but like most advances, by accretion. The literature is gigantic. It is also often technical, because many of the issues *are* technical. American colleagues, fast as they are with new labels, refer to it, alternatively, as "the new institutional economics", "the economics of information", "transaction-costs economics", and "the new political economy". When they christen aspects of it merely as "agency theory" and "the theory of contracts", one feels let down.

Capitalism, he refers (p. 135) to, "the possibility that capitalism may attempt to assure its required expansion by using public investment to provide whatever transformational impetus is lacking in the private sector."

What is curious is the dehumanized viewpoint reflected here. Business, capitalism, and government are stripped of the people who comprise them. Reading passages such as these, one would not know that firms are owned and controlled by people; nor that, in representative democracies, all arms of government are manned by people who serve as agents of citizens; nor that someone can simultaneously be a citizen, a worker, and a shareholder, with potentially conflicting interests and motivations. To be sure, the control shareholders and citizens are able to exercise is often vastly limited. Not only do managements possess and acquire relevant information shareholders do not and cannot (resource allocation failures owing to this are sometimes, somewhat inaccurately, called "adverse selection" among potential managements), they are also capable of doing things shareholders cannot observe (this is sometimes, again a little inaccurately, called "moral hazard" facing shareholders). Moreover, shareholders typically hold different beliefs; so their motivations differ. Even their assessment of the relative desirability of alternative investment policies would be expected to differ. But they can buy and sell, and this gives each shareholder some leeway. In a not-dissimilar manner citizens, in a "principal-agent" relationship with politicians and civil servants, also face an agency problem. The character of liberal democracies is shaped by it. In the typical scenario, political competition among contending parties and performance-related compensation schemes for civil servants ease the agency problem facing citizens, but even this isn't an easy matter to prove.[22]

I said earlier that modern economics treats people with respect;[23] it does not regard them as mere dupes and foils of Business and Government. It sees people as having aspirations and goals that are, in part, influenced by the prevailing culture, a matter to which I will return below. But it is *particularly* concerned with the constraints people face in their ability both to be and to do, and it unravels the various pathways by which such constraints are shaped. Typically, they are shaped by the access people have to resources (material goods, skills, *and* information), but, and this is the point, the access itself is affected by the choices made. A major achievement of modern economics has been the elucidation of the many routes by which reasoned (and honourable) choices on the part of each person in society, be it a *capitalist society or otherwise*, can result in failure to achieve an efficient, a just, or even a decent outcome. The

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[22] For book-length accounts of such agency problems, see Kenneth Arrow, *The Limits of Organization* (New York: W.W. Norton, 1974); Partha Dasgupta, *An Inquiry into Well-Being and Destitution* (Oxford: Clarendon Press, 1993); Joseph Stiglitz, *Whither Socialism?* (Cambridge, MA: MIT Press, 1994); Oliver Hart, *Firms, Contracts and Financial Structure* (Oxford: Clarendon Press, 1995); and Avinash Dixit, *The Making of Economic Policy: A Transaction-Cost Politics Perspective* (Cambridge, MA: MIT Press, 1996).

[23] Here I am using Professor Heilbroner's rhetorical device of anthropomorphizing an abstraction.

achievement is real because the pathways that have been identified are often subtle, difficult to detect, and hard to understand. Prior intuition is often of little help. That is why mathematical modeling has proved to be indispensible. The achievement is also deep, because it does not rely on postulating predatory governments, or thieving aristocracies, or grasping landlords. This is not to deny their existence, but you don't need an intellectual apparatus to conclude that a defenseless person will be robbed if there is an armed robber bent on robbing her.

Economics and the Ethical Life

It is a character of present-day sensibility pretty much throughout the world that we arrive at our economics from our politics, our politics from our political philosophy, and our political philosophy from our conception of the ethical, or indeed religious, life. An example of this directional mode is provided by John Rawls' great work, *A Theory of Justice* (Clarendon Press, Oxford, 1972), where the author says something about the kind of economic life that best sits within a just society (Ch. 5, Sec. 42) only *after* having arrived at the principles of justice. In a similar vein, there is a passage in *21st Century Capitalism* (pp. 131-4) where Professor Heilbroner inquires into the moral basis of capitalism. As always, he goes to past Masters for guidance and discovers that they have found little-to-no basis for it. But the passage contains no mention of a crucial matter, that of the kind of *incentives* people have to accumulate and create within various socio-economic environments. Heilbroner instead talks elsewhere of the unseemliness of impersonal market transactions and the corrupting influence of advertisement, which are common complaints of the aristocratic temperament.[24] But you can entertain personal aspirations and have needs without being greedy or self-centered. It is entirely possible for someone to be concerned with their own self, while at the same time to abide by norms of behaviour pertaining to production and exchange, even when the risks of being caught violating the norms are negligible; it is even possible for such a person to be charitable toward others. Being self-regarding in the private sphere isn't the same as being immoral, nor is it the same as being amoral. When someone is in search of the best buy in a market, it isn't necessarily their intention to chisel anyone. Nor is the notion of a fair price alien to the self-regarding household. Internalised social norms of behaviour work by making people feel good about abiding by them. But to ignore the existence of the self when discussing the moral basis of a social order and, thereby, to neglect matters of incentives, is to create social theories out of thin air. An ethical theory, or for that matter a moral theory, that isn't grounded on deep facts is unlikely to be illuminating. For this

[24] Possible parallels between our exposure to smiling faces extolling the pleasures of automobiles and shampoos and that of the subjection to political propaganda of citizens of the former Soviet Union about the glories of coal and tractor production have been drawn by the sociologist, Michael Schudson. Heilbroner finds the parallel compelling. He says (p. 111) their "... effect is much the same. As the public voice of the private sector, advertising is the propaganda of the market system, just as propaganda is the advertising of the centralized one." There is a difference though: citizens of the Soviet Union could not vote propagandists out of office in the way citizens of the United States can refuse to buy goods from advertisers. Heilbroner provides no evidence that this difference does not matter.

reason, the reverse mode of inquiry into the nature of ethical life - *from* economics, through politics, via political philosophy - is equally necessary.[25] Ultimately, we would want to iterate between the findings of the two routes to arrive at an understanding of the intersection of the possible and the desirable. Unhappily, we are as yet far from such an understanding.

Critiques of Modern Economics

None of this receives any notice in *The Crisis of Vision in Modern Economic Thought*, a book Heilbroner has co-authored with his colleague, William Milberg. As the title suggests, this is a different sort of work. It is an assault on what the authors have been able to take from modern economics. They express moral outrage at its failings, they charge practising economists of having disconnected themselves from reality, and they tell us what we must do if we are to improve our performance. Of course, they don't show us how to do it with a demonstration of their own: they preach, they don't practise.

By *vision*, the authors mean (p. 4) "... the political hopes and fears, social stereotypes, and value judgments - all unarticulated ... - that infuse all social thought, not through their illegal entry into an otherwise pristine realm, but as psychological, perhaps existential, necessities."

The tone is confrontational from the outset (p. 5): "Our ... purpose is ... polemical and political. It is to lay bare what we believe to be the disastrous consequences of the failure of the economics profession ... to bear in mind the inescapable presence of vision in defining the tasks that economic inquiry arrogates to itself."

Strong words, these. I will now provide an account of the Heilbroner-Milberg line of attack. I want then to explain why it is not at all fruitful.[26]

Heilbroner and Milberg have in their sight (Ch. 1) the whole of modern economics. But the bulk of the book (Chs. 3-6: pp. 25-96) is actually a case-study, in that it offers an account of the way *macroeconomics* has evolved since the publication, in 1936, of *The General Theory of Employment, Interest and Money* by John Maynard Keynes.

Macroeconomics is concerned with the study of economies described in aggregate terms. Typical variables whose inter-relationships are under investigation in macroeconomics are the level of employment, national output, the general price level, government deficit, the "money" supply, the rate

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[25] I have explored this route briefly in "Utilitarianism, Information and Rights", in Amartya Sen and Bernard Williams (eds.), *Utilitarianism and Beyond* (Cambridge University Press, 1982); and, more fully, in *An Inquiry into Well-Being and Destitution* (Oxford: Clarendon Press, 1993).

[26] Hardly a season passes when a book-length attack on modern economics isn't published. From this one can only conclude that such books sell. I know of no other discipline whose practitioners are castigated as frequently as those of modern economics. Most often, such books are written by people who are not known for any original contribution to the subject. I have no explanation for the phenomenon. Heilbroner and Milberg modestly list (p. 128) 9 other books over the past 9 years that have expressed "very deep dissatisfaction with the condition of contemporary theory". I can assure readers that they would discover many more if they were to look in libraries.

of inflation, government debt, the trade balance, and so forth. One reason macroeconomics looms large in public consciousness whenever economics is mentioned is that economic journalists love writing about it. Many of my non-economist friends think macroeconomics *is* economics, and are surprised when I tell them it is not so. Macroeconomics is among the most problematic of fields within economics, because it is very, very hard. Lord only knows why you should expect to be able to get things "right" if you have to describe an entire economy in terms of nine or ten variables.[27] But then, Lord only knows why you should expect to say very much of practical moment if you were to work with models comprising thousands of commodities and millions of households. So macroeconomic reasoning is essential. Moreover, many of the tools at the disposal of government (e.g. interest rates and public debt) are macroeconomic, in the sense that they have economy-wide repercussions, and there is a need to know the effect of changes in their magnitudes on such aggregate economic indicators as the level of employment, gross output, and so forth.

In the authors' opinion, macroeconomics went off the rails laid down by Keynes almost immediately after the publication of his book, but has been in an especially degenerated shape since the end of the Keynesian consensus, which prevailed over a period that began just after the War and ended sometime in the early 1970s, a period now known for a different, though I believe related, reason as the "golden age of capitalism". Hence their anger.[28]

It is often thought that Keynes invented public works. This isn't true. Scandinavian economists had already arrived at the idea that modern, capitalist economies could be lifted out of severe depressions by means of judicious government expenditure. German economists in the mid-1930s not only had the same thought; they even put the thought into considerable practice. The importance of Keynes' book lay elsewhere. In it he tried to provide the economic *theory* that would explain the need for active monetary policy and public expenditure as ways of maintaining full employment of labour in each period of time. As is now well known, he did this by focusing attention on the determinants of the overall demand for goods and services in modern market economies, a major innovation in economic analysis.

Keynes is widely admired for his clarity. In fact, his *General Theory* is obscure. But the obscurity is so well hidden by the charm and confidence of the prose, that readers are beguiled into thinking it is all very, very clear. That it isn't even very clear is reflected in the fact that more than sixty years after the

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[27] Modern macro models are more disaggregated, numerical models containing 20-30 commodities being quite routine these days.

[28] The period in question has been so christened because, during it rates of growth of productivity and gross national product in Western Europe and the United States attained figures well in excess of their historical trends.

Heilbroner and Milberg may not agree that the bulk of their book is a case-study. They sometimes write as though they think macroeconomics is the whole of economics (p. 9): "Our study focuses on the development of modern economic thought, using that phrase to refer to changes in economic theory since the decline of the Keynesian doctrine that exercised a seemingly uncontestable hegemony in the post-World War II era."

publication of his classic, his disciples are still in rage over what they regard as continued misinterpretations of Keynes by others. When I say "disciples", I mean *disciples*, for deification of Keynes began even before his book was published. It was initiated among a group at the University of Cambridge; it spread outward after the War, and it has continued in various universities throughout the world. Needless to say, this has not helped the development of macroeconomics.

I am sorry to have to report that Heilbroner and Milberg write like disciples. They say, for example, (pp. 44-5) that, "... by the early post-World War years ... Keynes' "general" theory had become accepted by economists ... although at the expense of a considerable weakening of its originality and power... the disruptive, uncertainty-centered model of the *General Theory* was converted into a pastiche of ideas, not so much blended as permitted to co-exist, with their mutual contradictions and inconsistencies allowed to go unresolved. The result was termed "bastard keynesianism"..." At no point do the authors entertain the possibility that the *General Theory*, great work that it is, was itself constructed out of a pastiche of ideas, based in part on *ad hoc* assumptions, and that subsequent work on Keynesian macroeconomics by many whom Heilbroner and Milberg criticise (e.g. the construction of the "neo-classical synthesis" by, among others, John Hicks, James Meade, Paul Samuelson and, later, Franco Modigliani and James Tobin) was an attempt to make sense of it.

Why Are Microfoundations Necessary?

No macroeconomist of any substance, *including* Keynes, has ever thought that you could construct a sensible macro model of an economy without building on behaviour at the micro level, that is, without basing the model on an account of behaviour at the level of the householder, voter, shareholder, manager, bureaucrat, and so forth. But because the aggregation that is required for arriving at macroeconomic variables from microbehaviour is gigantic, attempts at aggregation have often been avoided. It was, thus, not uncommon in the immediate post-War period for macroeconomic models to be based on behavioural rules characterising representative types of agents (e.g. households, firms, and government) that were not founded on such matters as the motivations of the various actors and the constraints under which they make choices. In short, early macro models were often without what by current standards would be deemed as an adequate microfoundation.

At a practical level, does it matter that a macro model lacks an adequate microfoundation? After all, if the model works well, why worry that it lacks foundation?

There are four reasons why one must worry. First, it is difficult to judge if a macro model works well (e.g. if it provides good forecasts). Even the many ingenious tests that have been devised by econometricians cannot clinch matters. Microfoundations provide a needed discipline in the design of macro models; they serve as an anchor. The second, related, reason is that there may be several macro models that interpret the macro facts, such as they are, equally well. Microfoundations could enable us to choose amongst them. The third reason is purely intellectual. Even if we have constructed a sound macro model by some holistic leap of the imagination, we would still want to know what accounts for its soundness. The fourth reason is prudence: since circumstances will undoubtedly change, a macro model which currently works well will almost certainly not continue to work well. In other words, macro relationships should be expected to undergo changes over time. Good microfoundations would enable us to know how to adapt the model to changing conditions.

The need for adequate microfoundations in macroeconomic models was increasingly felt and expressed in the late 1960s by a new generation of mathematically trained economists. For example, when I was a student, it was an open scandal that there was no convincing model of involuntary unemployment, the central matter of concern in Keynes' classic. This is not to say that we concluded involuntary unemployment cannot occur. Many of my generation were persuaded by Keynes' insights, but felt his was the beginning of a research programme, not its end. In the event, the problem area appeared to us to be too hard. As most of us had no insights to offer then, we worked on other problems.

Heilbroner and Milberg express outrage at the usurpation of macroeconomics during the decade of the 1970s by those who built economy-wide models on a microfoundation that excluded involuntary unemployment *by assumption* and avoided even mentioning the short-run, which is the span of concern in a good deal of government deliberation.[29] Many others were puzzled at the time, some even appalled, but moral outrage is no substitute for persuasive counter-arguments; and the fact is, there still was no convincing set of models that yielded persistent involuntary unemployment, not to mention the new phenomenon of "stagflation" (i.e. high unemployment combined with inflation), as a possible outcome. By the late 1970s, though, a new direction in macroeconomic research began to take shape in the form of small-scale, piece-meal inquiries into separate markets, such as those for labour, credit, savings, and skills. I believe it is precisely *because* the initiators of this line of work chose to be modest in their goal that they were successful in building not unconvincing models that yielded macroeconomic resource allocation failures, for example, involuntary unemployment, and the more difficult phenomenon of stagflation. The embarassment now isn't that we do not have good models of involuntary unemployment; rather, it is that we have too many contenders. So there is a long way to go.[30] Heilbroner and Milberg

[29] Inevitably, these economists were given a label in the United States. They are called "new-Classical" economists.

[30] For major syntheses of what, no doubt, my American colleagues are now calling "the new macroeconomics" (to supplant an earlier term, "New Keynesian economics"), see Edmond Malinvaud, *Mass Unemployment* (Oxford: Basil Blackwell, 1984) and *Diagnosing Unemployment* (Cambridge University Press, 1994); Assar Lindbeck and Dennis Snower, *The Insider-Outsider Theory of Employment and Unemployment* (Cambridge, MA: MIT Press, 1988); Richard Layard, Stephen Nickell and Richard Jackman, *Unemployment: Macroeconomic Performance and the Labour Market* (Oxford: Oxford University, 1991); Joseph Stiglitz, "Capital Markets and Economic Fluctuation in Capitalist Economies", *European Economic Review*, 1992 (Supplement); Edmund Phelps, *Structural Slumps* (Cambridge, MA: Harvard University Press, 1994); and Frank Hahn and Robert Solow, *A Critical Essay on Modern Macroeconomic Theory* (Cambridge, Massachusetts: MIT Press, 1995).

I have focused on the theoretical problems that were detected in macroeconomics by a generation of economists. For (pp. 88-91) are contemptuous of even these achievements and say the problem with them is that they do not capture Keynes' ideas, a remark that, again, reflects scholasticism, not much else.

This isn't the place to raise technical matters, but I cannot resist one. On page 90 they write:

".. perhaps the decisive identifying aspect of the school is its insistence that the proper scope of macroeconomic discussion is limited to the supply side... demand factors are considered of secondary importance. Such a view leads to a fundamental abandonment of Keynes's insight that a monetary economy, even with perfectly functioning markets, will be prone to unemployment due to insufficient effective demand.... Having attributed involuntary unemployment to coordination failures and market imperfections rather than the failure of aggregate demand, many New Keynesian economists are silent on questions of macropolicy."

This passage is wrong on several counts, an immediate one being that "coordination failure" can itself be the reason for a "failure of aggregate demand".[31] In any event, what was distinctive of new-Classical macroeconomics (see footnote 29) was not its desire for microfoundations, but the particular microfoundations that were chosen by its practitioners. The key to correcting their Panglossian view of the world is to model alternative microfoundations, and test the macro-models built on those foundations, seeking less conventional data (especially "natural experiments") on which to do the testing. This has been under way for some time now.[32]

Choice vs. Propensities

What Heilbroner and Milberg want is a return to the old ways of doing macroeconomics, which they see as relying on *propensities* as the basis of human behaviour. They think this was a virtue, not a tactical necessity. They want to see a shift in the character of economic analysis from the one I sketched of modern economics at the beginning of this article to one where "... considerations of norm-driven mass behaviour are placed at the center of a specifically capitalist order" (pp. 33-34). They also insist (p. 8) that, "... the recognition of the inextricably social roots of all behaviour leads to the view that macrofoundations must precede microbehaviour, not the other way around, as modern economic thought perceives the issue".

I should say at once that modern economists often enough incorporate social norms (i.e. rules of

a fuller account of the evolution of macroeconomics in the post-War period, see Paul Krugman, *Peddling Prosperity: Economic Sense and Nonsense in the Age of Diminished Expectations* (New York: W.W. Norton, 1994). Krugman did not stress the points I have made here, because his motivation was different: he wanted to explore the various pathways by which findings in academic research are transmitted, often in a distorted form, to interested parties. His is an account of the intellectual shortcomings of those who act as "middlemen" in the process of transmission, from research papers to policy decisions.

[31] On other counts see, for example, Joseph Stiglitz, "Capital Markets and Economic Fluctuation in Capitalist Economies", *European Economic Review*, 1992 (Supplement), and Frank Hahn and Robert Solow, *A Critical Essay on Modern Macroeconomic Theory* (Cambridge, Massachusetts: MIT Press, 1995).

[32] See the references in the footnote 30, and the references contained in them.

behaviour that are subscribed to by all) as raw data for arriving at an account of human behaviour. For example, in the most famous article ever written on descriptive economic growth, the author postulated that aggregate savings are a constant proportion of national income, but provided no explanation for it.[33] But this was a tactical move on the author's part, not a matter of principle: the author had other things in mind in that article than savings behaviour. The difference between research *tactic* and *principle* is all-important here. One problem with regarding social norms invariably as raw data is that it does not allow us to ask what purposes norms serve, nor how they are enforced; nor does it allow us to inquire why norms change when they do change. Moreover, in the absence of microfoundations, one can easily have debased arguments over whether a certain pattern of behaviour is a norm at all. Similarly, it is an easy enough matter to model herd behaviour among consumers and in stock markets by *postulating* herd behaviour (e.g. that people like, or feel safe, imitating one another). But this will not tell us why there is herd behaviour in some activities, under certain circumstances, and not in others. That is why the modern economist isn't satisfied until there is something like a microfoundation for social norms and herd behaviour.[34]

On a closely related matter, echoing the narrative in *21st Century Capitalism*, Heilbroner and Milberg identify economics with the study of *modern* econom*ies*. They say (p. 5, italics in the original), "... what prevents economics from claiming for itself a genuinely universal character is that the vision by which we "see" and "understand" capitalism is not, and cannot be the vision by which we would see and understand tribal, imperial, feudal, or communitarian societies, *if we were ourselves members of those societies*."

It is not easy to know what to make of this. To me it reads like a modern version of the colonial conceit that Orientals are inscrutable. Nor is it dissimilar to the conceit's seemingly progressive manifestation of recent years, that people in the East display a different (but equally valid, of course!) form of "rationality" than those in the West.

One may ask if there is any evidence of such fundamental differences. Indeed, one may ask in which ways the Oriental, or for that matter the African, is so inscrutable. Pioneering empirical work by Peter Bauer and Theodore Schultz established many years ago that traders and farmers in Africa and Asia respond to changes in prices and technological opportunities in much the same way as their counterparts

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[33] Robert Solow, "A Contribution to the Theory of Economic Growth", *Quarterly Journal of Economics*, 1956, Vol. 70.

[34] Interesting recent work on herd behaviour include Abhijit Banerjee, "A Simple Model of Herd Behaviour", *Quarterly Journal of Economics*, 1992, Vol. 107; Sushil Birchandani, David Hirshleifer, and Ivo Welch, "A Theory of Fads, Fashion, Custom, and Cultural Change as Informational Cascades", *Journal of Political Economy*, 1992, Vol. 100; and Douglas Bernheim, "A Theory of Conformity", *Journal of Political Economy*, 1994, Vol. 102.

do in the Occident.[35] You do not have to live in a capitalist society to want to improve your own lot and that of your nearest and dearest. Nor is it a response specially tailored for people in capitalist societies to mourn the loss of one's children. Nor, indeed, is there any evidence that the peasant farmer in traditional societies isn't averse to the risk of being obliterated through bad harvest; nor that households there do not wish to smooth their consumption over the annual cycle. Even the Law of Excluded Middle appears to be easily understood by the Oriental; and I know no African who doesn't appeal to it when counting change. As Jack Goody has shown recently, one can go further. Our societies are obviously not all the same, but as they were "fired in the same crucible", their differences must be seen as diverging from a common base. He shows, moreover, that these differences are rarely if ever of the deep-seated kind that would prevent "modernisation", or even its onset.[36]

In an early passage in *21st Century Capitalism*, Heilbroner quotes from the anthropologist Elizabeth Marshall Thomas' account of the way a kill is shared among the !Kung people of the Kalahari desert. It is observed that, while the hunter keeps the largest portion, the remainder of the kill is allocated in a precise manner among the group. Moreover, there is no fuss made over the allocation - no quarrels, no resentment: the allocation is supported by *tradition*. Heilbroner seems to think this community isn't within the purview of economics, in the sense that one does not need economic analysis to understand the way the Bush people operate. He says (p. 24), "Once we know about their culture, their politics, and their technology, nothing remains to be explained with regard to their "economy"."

But it isn't an unreasonable demand to wish to *understand* the Bush people's culture and politics, not simply know them. Thus, to the modern economist the allocation rule described by Thomas would, in broad terms, appear to be an obvious one to follow if people want to pool risks, so as to reduce individual risks, in a world where meat does not keep and incentives are required in order to motivate individual members to *make* a kill. I have not read Thomas' account, so I don't know if she asked what would have happened if Gai, the hunter, had refused to share the kill in the manner specified by tradition. Heilbroner doesn't tell us, but it is an important matter. It could be, for example, that the hunter would be shunned, or be awarded a very small portion on the occasion of the next kill, or whatever. Recent developments in the theory of games have taught us that, among people engaged in repeated interchanges, rules of punishment for deviant behaviour, when judiciously chosen, enable norms of behaviour to be *self-enforcing*; that is, if everyone else were to follow the norm, it would be in each person's interest to follow the norm. When such punishment schemes are put in place (and they have to be so designed that they are

[35] Peter Bauer, *West African Trade* (Cambridge University Press, 1954) and Theodore W. Schultz, *Transforming Traditional Agriculture* (New Haven, Connecticut: Yale University Press, 1964).

[36] Jack Goody, *The East in the West* (Cambridge University Press, 1996). Goody is concerned only with Eurasian societies. But I have reasons to believe he would not stop with them.

credible), no external agency is required for sustaining cooperation among members of a group.[37]

This sort of argument has been put to use in a variety of contexts. Avner Greif, for example, has shown how the Maghribi traders during the eleventh century in Fustat and across the Mediterranean acted as a collective to impose sanctions on agents who violated their commercial codes.[38] It has also been put to successful use in explaining the way local common property resources, such as river water, grazing lands, swidden fallows and local forests, have been collectively managed in rural societies in contemporary poor countries. Empirical studies have confirmed that resource users in many instances cooperate, on occasion through not undemocratic means, so as to ensure that the resource base is not eroded. Attempts have also been made by social scientists to explain observed asymmetries in the distribution of benefits and burdens of cooperation in terms of underlying differences in the circumstances of the various parties. For example, in her study of collectively-managed irrigation systems in Nepal, Elinor Ostrom has explained observed differences in benefits and burdens among users (e.g. who gets how much water from the canal system and who is responsible for which maintenance task) in terms of such facts as that some farmers are headenders, while others are tailenders. In an earlier work, Ostrom also tried to explain why cooperation failed to get off ground where it did not get established.[39]

There are a number of curious implications of modern game theory that too have been useful in interpreting evidence. In a summary of her research findings on local irrigation in Nepal, Ostrom notes that systems that had been improved by the construction of permanent headworks were in worse repair,

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[37] See Drew Fudenberg and Eric Maskin, "The Folk Theorem in Repeated Games with Discounting and Incomplete Information", *Econometrica*, 1986, Vol. 54. To be sure, we also internalize social norms, such as that of paying our dues, keeping agreements, returning a favour; and higher-order norms, as for example frowning on people who break social norms, and so forth. By internalizing such norms as keeping agreements, a person makes the springs of his actions contain the norm. The person therefore feels shame or guilt in violating a norm, and this prevents him from doing so, or, at the very least, it puts a break on his violating it unless other considerations are found by him to be overriding. In short, his upbringing ensures that he has a disposition to obey the norm. When he does violate it, neither guilt nor shame is typically absent, but the act will have been rationalized by him. A general disposition to abide by agreements, to be truthful, to trust one another, and to act with justice is an essential lubricant of societies. Communities where the disposition is pervasive save enormously on transaction costs. There lies its instrumental value. In the world as we know it, such a disposition is present in varying degrees. When we refrain from breaking the law, it isn't always because of a fear of being caught. On the other hand, if relative to the gravity of the misdemeanour the private benefit from malfeasance were high, some transgressions could be expected to take place. Punishment assumes its role as a deterrence because of the latter fact.

[38] "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition", *American Economic Review*, 1993, Vol. 83. See also Avner Greif, Paul Milgrom and Barry Weingast, "Co-ordination, Commitment, and Enforcement: The Case of the Merchant Guild", *Journal of Political Economy*, 1994, Vol. 102, where the authors offer an account of the rise of merchant guilds in late medieval Europe. These guilds afforded protection to members against unjustified seizure of their property by city-states. Guilds decided if and when a trade embargo was warranted against the city.

A somewhat reverse set of actions occurred as well in medieval Europe, where transgressions by a party were sometimes met by the rest of society imposing sanctions on the entire kinship of the party, or on the guild to which the transgressor belonged. The norm provided collectives with a natural incentive to monitor their own members' behaviour.

[39] Elinor Ostrom, "Incentives, Rules of the Game, and Development", *Proceedings of the Annual World Bank Conference on Development Economics, 1995* (Supplement to the *World Bank Economic Review* and the *World Bank Research Observer*), 1996; and *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press, 1990)

delivered substantially less water to the tail-end than to the head-end of the systems, and had lower agricultural productivity than the temporary, stone-trees-and-mud headworks that had been constructed and managed by the farmers themselves.[40]

Ostrom has an explanation for this. She suggests that, unless it is accompanied by counter-measures, the construction of permanent headworks alters the relative bargaining positions of the head- and tail-enders, resulting in so reduced a flow of benefits to the latter group that they have little incentive to help repair and maintain the headworks, something the head-enders on their own cannot do. Head-enders gain from the permanent structures, but the tail-enders lose disproportionately. She also notes that traditional farm-managed systems sustained greater equality in the allocation of water than modern systems managed by such external agencies as the government and foreign donors.[41]

Theory and Empirics in Modern Economics

It is the fate of some disciplines to begin as a fit subject for educated gentlemen to advert upon, and to become technical, to the displeasure of educated gentlemen. At the root of it all, I believe what really galls Heilbroner and Milberg are the increased technical requirements demanded by contemporary economists before they are persuaded by an argument. But the authors don’t want to say it in so many words. So they say instead (p.3): "The thrust of our criticism (of modern economics) ... becomes explicit in the first of the attributes that we have ascribed to economics up to the post-Keynesian period - namely, its continuously visible concern with the connection between theory and "reality". By way of contrast, the mark of modern-day economics is its extraordinary indifference to this problem."

In this article I have offered evidence that this claim is quite incorrect. But in order to conduct a statistical test of the claim, I consulted five years (1991-95) of the *American Economic Review*, the flagship journal of the American Economic Association. This journal reflects establishment economics in a manner no other journal does today. I classified articles into three categories: (1) pure theory, (2) applied theory (by which I mean a piece of theoretical analysis that tries to explain some observed fact, or which analyses the implications of particular types of policies), and (3) experimental and/or empirical economics. Here is what I discovered: Of the 281 articles published in the journal during 1991-95 (in order to save time, I excluded "short articles and notes"), 25 were in category (1), 100 in (2), and 156 in (3). In other words, more than 90 percent of the articles were about the "real world", in the Heilbroner-

[40] Elinor Ostrom, "Incentives, Rules of the Game, and Development", *op. cit*.

[41] For other, fine uses of the theory of games to explain the many ways in which the local commons have been managed in traditional societies, see Jean-Marie Baland and Jean-Philippe Platteau, *Halting Degradation of Natural Resources: Is There a Role for Rural Communities?* (Oxford: Clarendon Press, 1996) and Paul Seabright, "Is Cooperation Habit-Forming?", in Partha Dasgupta and Karl-Göran Mäler, eds., *The Environment and Emerging Development Issues* (Oxford: Clarendon Press, 1997).

Milberg sense of the word.[42] To be sure, there are journals that specialise in the purest of pure theory; but then there are journals which publish only empirical articles. I don't know what one is to infer from this.

Of course this isn't to say that the allocation of research effort in economics is "optimal" (whatever that might mean); and *of course* much that is routinely published is of little-to-no worth (I have published more than my fair share myself). Given that research is risky business, a good part of this is inevitable. But there is another part, which has to do with the fact that many of us not infrequently address problems that are internally generated by the prevailing literature and which serve to answer puzzles and curiosities, but not much else. This adds to the path dependence of the process of economic inquiry. Needless to say, there can also be self-indulgence in the choice of research problems, where the published material displays no more than the product of a finger exercise on what many others would find a boring question. But I don't know why one should think that this kind of slack is unique to economics, nor how it could be removed without stifling creativity. More to the point, there is no evidence that the prevalence of *mathematics* in contemporary economics plays a role in such slack as that which exists. One has only to look at, say, pre-Second World War editions of the then most prominent economics journal in the English-speaking world, *The Economic Journal*, to confirm this. Nor do I know how one can influence other people's research interests other than by producing fertile research of one's own. In the late 1970s, I used to complain regularly about the lack of interest my professional colleagues showed toward the links I felt must surely exist between rural poverty in poor countries and the use of the local environmental resource-base. I even wrote a book on the subject so as to create interest among development and environmental economists.[43] I failed then, presumably because I was unable to demonstrate to others that it was an intellectually productive field. In the event, research in that field did not become active until nearly a decade later.

Quantification and the Social Sciences

It is simply no good moaning unless you can offer something that can be used as a springboard for others.[44] Despite what Heilbroner and Milberg think of the profession, there is much constructive criticism that economists make of one another's works: indeed, every creative piece of work is an implicit

[42] I should add that I was most generous to Heilbroner and Milberg in my choice of criterion for inclusion in (1). For example, in my list, (1) includes two Nobel Lectures, both on foundational work: one was the basis of much of "the new institutional economics", the other was the forerunner of "the economics of information".

[43] *The Control of Resources* (Cambridge, MA: Harvard University Press, 1982).

[44] Here is an example of the sort of sentiment Heilbroner and Milberg think could influence economics research (p.122): "As with earlier classical situations, today's vision must incorporate the socioeconomic essence of the historical setting in its choice of the fundamental agents who will set into motion the economic drama itself." No doubt, but try doing something with this instruction.

criticism of the existing literature. That a problem area is *important* has never been a clinching argument for rushing to work on it. Wisely, I think, contemporary economists study an important problem only when they think there is a chance that it will yield fruit. If I were to give an example of this from a field of research with which I am very familiar, it would be the study of those economic processes that lead to inequality and to poverty traps. Surprising though it may seem, even a decade ago there was little of any theoretical depth in the economics literature on inequality in contemporary societies. This was not because economists did not regard this to be an important problem area (ways of measuring inequality and poverty had been under scrutiny by economists during the previous fifteen years or so[45]), but because there were no promising analytical leads on the matter. Today we not only understand why certain classes of people can be caught in poverty traps even when an economy experiences a general rise in prosperity (i.e. why the fruits of economic growth do not necessarily trickle down to the poorest in society), we also understand why and how extreme patterns of inequality in the distribution of assets can act as a drag on aggregate economic performance. Our theories and empirical findings show that even though the pathways by which these phenomena can occur are different across countries and across "stages" of economic development, they share a number of common analytical features.[46]

What was only very recently the purest of academic research, expressed in technical language, has now seeped through sufficiently to make it appear almost as a commonplace observation. Today international agencies write about it as if it should be "conventional wisdom".[47] However, such rapid acceptance of contemporary research findings has its own dangers. The qualifications that are inevitably underlined in academic discoveries tend to get blurred by the time they reach and excite policy makers. I cite this example also to show that the incentives are in place for economists to chase promising avenues of research. As is well known, God created graduate students so as to keep tenured Faculty honest and

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[45] See S.-C. Kolm, "The Optimal Production of Social Justice", in J. Margolis and H. Guitton eds., *Public Economics* (London: MacMillan, 1969); A.B. Atkinson, "On the Measurement of Inequality", *Journal of Economic Theory*, 1970, Vol. 2; and Amartya Sen, *On Economic Inequality* (Oxford: Oxford University Press, 1973).

[46] See, for example, Partha Dasgupta and Debraj Ray, "Inequality as a Determinant of Malnutrition and Unemployment, 1: Theory", *Economic Journal*, 1986, Vol. 96, and "Inequality as a Determinant of Malnutrition and Unemployment, 2: Policy", *Economic Journal*, 1987, Vol. 97; Avishay Braverman and Joseph Stiglitz, "Credit Rationing, Tenancy, Productivity, and the Dynamics of Inequality," in Pranab Bardhan (ed.), *The Economic Theory of Agrarian Institutions* (Oxford: Oxford University Press, 1989); Roland Benabou, "Human Capital, Inequality and Growth: a local perspective," *European Economic Review*, 1994, Vol. 38; Steven Durlauf, "Spillovers, Stratification and Inequality," *European Economic Review*, 1994, Vol. 38; Torsten Persson and Guido Tabellini, "Is Inequality Harmful for Growth?", *American Economic Review*, 1994, Vol. 84; and Partha Dasgupta, "The Population Problem: Theory and Evidence", *Journal of Economic Literature*, 1995, Vol. 33, and "Nutritional Status, the Capacity for Work and Poverty Traps", *Journal of Econometrics*, 1977, Vol. 77. For cross-country evidence that is suggestive of the existence of certain types of positive links between an absence of extreme income inequality and economic growth, see K. Deininger and Lynn Squire, "Economic Growth and Income Inequality: Reexamining the Links", *Finance and Development*, 1997, Vol. 34.

[47] See, for example, United Nations Development Programme (UNDP), *Human Development Report* (New York: Oxford University Press, 1996).

hardworking. If you have a promising idea, you can be almost sure that some economist, somewhere, will run with it; and if you make a mistake, you can be absolutely sure that some economist, somewhere, will pounce on it.

Economics is a quantitative subject. When the Chancellor of the Exchequer asks his expert advisers to tell him of the fiscal advantages and disadvantages of an increase in the tax on petrol, he does not want a philosophical discourse, nor a lecture on what Marx would have thought about the matter. He wants to know how much revenue he would be able to raise, what effects its imposition would have on other sectors of the economy, what it would mean to the lives of different categories of people and, if the Minister of Environment is within ear-shot, he will also ask if it would reduce carbon emissions. So mathematical modeling is essential and is here to stay. But mathematical modeling of volition is, inevitably, a repugnant exercise, because it seems to demean the human experience. Certainly, when I lecture to first-year undergraduates on the theory of consumer choice, I feel the economist's "consumer" isn't the sort of person I would invite home to dinner. But in order to make progress, we have to simplify in suitable ways. In many applications, individual choice, as modelled by the economist, is a grotesque caricature of ourselves. Those who find mathematical modeling unsatisfactory think they would avoid making such compromises if they were to go the literary route. So they take refuge in such aphorisms as that "it is better to be vaguely right than precisely wrong".[48] What this misses, however, is that you won't even know if you are vaguely right if you operate within a framework in which you cannot be precisely wrong; there is no way to controvert a vague statement.

If a discipline tries to do everything, it will succeed in doing nothing well. If it tries to be all things to all people, it will be of little use to anyone. If it is to illuminate, it must have boundaries. To be sure, innovative work sometimes involves extensions of the boundaries, when the discipline's techniques illuminate problems in another discipline. But such explorations are like reconnaissance exercises: you try to see what lies beyond, but just for size; if it looks as though the probe will work, you try some more. Modern economists have demonstrated the power of their discipline by crossing into law, political science, anthropology, demography, ecosystem ecology, and behavioural ecology, often on the basis of a narrow viewpoint of human motivation. What I have tried to explain in this article is that it is possible to look *outward* from the narrow viewpoint to catch a glimpse of the larger enterprise called living. The techniques of economics (yes, mathematical techniques) have been borrowed by people in a number of other fields.[49] People who sneer at what they see as the narrowness of modern economics often also

[48] The aphorism appears in Gerald Shove, "The Place of Marshall's *Principles* in the Development of Economic Theory", *Economic Journal*, 1942, Vol. 52, and is attributed to one Wildon Carr.

[49] For example, they are now routine in behavioural ecology. See J.R. Krebs and N.B. Davies (ed.), *Behavioural Ecology: An Evolutionary Approach* (Oxford: Basil Blackwell, Third Ed., 1991), and J.R. Krebs and N.B. Davies, *An Introduction to Behavioural Ecology* (Oxford: Basil Blackwell, Third Ed., 1993).

complain of its imperialistic tendencies; but you cannot have it both ways.

Economics doesn’t encompass the whole of the social and moral sciences. So it is a dangerous mistake to expect from it everything one desires to learn of the social world. But if you want to reach a measure of understanding of the limits to what people can realistically achieve in their search for a social order that makes life more than just liveable, then you simply can’t afford to ignore economics’ modern version.