
An orientation for a green economics?

Tony Lawson

Faculty of Economics and Politics
Sidgwick Avenue
Cambridge, CB3 9DD, UK
E-mail: tony.lawson@econ.cam.ac.uk

Abstract: This paper argues that any successful project in economics will need to adopt a philosophical orientation that is rather different to that of the current mathematical mainstream. In particular, it argues that explicit, systematic and sustained ontological analysis is required. The possibilities and limits of ontology are elaborated. The paper also sets out the explicit ontological conception that the author finds to be the most sustainable. He sees signs that such an orientation is being adopted in green economics and is optimistic that this development will continue. This paper defends crucial ideas that underlie and explain green economics.

Keywords: ontology; green economics; mainstream economics; economic modelling; problems of modern economics.

Reference to this paper should be made as follows: Lawson, T. (2007) 'An orientation for a green economics?', *Int. J. Green Economics*, Vol. 1, Nos. 3/4, pp.250–267.

Biographical notes: Tony Lawson lectures in the Faculty of Economics at the University of Cambridge, UK. He is the organiser of the *Cambridge Realist Workshop* and the *Cambridge Social Ontology Group* and Executive Director of the *Cambridge Centre for Gender Studies*. He is the author of numerous papers and books including *Economics and Reality* (1997) and *Reorienting Economics* (2003), both published with Routledge.

1 Introduction

If a green economics, or indeed any alternative to the current mainstream approach of modern economics, is to fair significantly better than the mainstream project it is seeking to replace (or perhaps complement), it will likely require a very different philosophical orientation. Specifically it will require an attention to explicit, systematic and sustained ontological analysis, something that modern mainstream economics (along with most of modern social theorising) is notably lacking. This is my contention. By ontology, I mean study of the *nature* of phenomena of a domain of reality. Clearly the contention advanced rests on certain presuppositions. First and foremost, I hold that the state of modern economics is in some sense not all that it might be. And second there is a presumption that, whatever the limitations I have in mind, an ontological turn promises to be a solution or anyway helpful. I do indeed hold to both these assessments. But a good deal

of elaboration is required to convey both what I take to be the current state of the economics discipline and also what I suppose an ontological turn is able (and not able) to achieve. It is with these two issues that the current essay is primarily concerned.

2 The state of modern social theory

The first thing to note about the state of modern economics is that it is dominated by a mainstream tradition, and is so to an extent that is remarkable. Most observers of modern economics do recognise this. However, there is surprisingly little sustained discussion or analysis of (as opposed to a few quick assertions about) the nature of that mainstream project (even though practising economists usually suggest that they know it when they see it).

Some commentators suppose modern economics is concerned to defend the *status quo*. But it is not; most of it carries few practical implications at all (see *e.g.*, Lawson, 2005). Other commentators think that the project's defining feature is a concern with the assumption that human beings behave rationally. This assumption is indeed prominent and this warrants explanation. But it is not universal within economics, and some mainstream contributions can find no place for the assumption of rationality at all (Lawson, 2005).

In contrast to many critical observers of modern economics, I contend that the essence of the modern mainstream project is an insistence that methods of mathematical deductivist modelling be everywhere employed. I also contend that this formalistic mainstream tradition is not in a very healthy state. Let me briefly elaborate.

3 The formalistic nature of the mainstream

The one feature that is common to all mainstream contributions, that survives that project's flits in fads and fashions, is its insistence that economics everywhere employs methods of mathematical deductivist modelling. Formalistic modelling is now the core of modern economics, whether taking the form of micro modelling, macro modelling or econometrics. To see this, it is enough to browse the pages of any modern economics journal regarded as prestigious. But for now, consider the observations and/or testimony of various prominent mainstream economists themselves.

For example, Lipsey (2001, p.184), an author of a best selling mainstream economic texts book, acknowledges:

“[...] to get an article published in most of today's top rank economic journals, you must provide a mathematical model, even if it adds nothing to your verbal analysis. I have been at seminars where the presenter was asked after a few minutes, ‘Where is your model?’. When he answered ‘I have not got one as I do not need one, or cannot yet develop one, to consider my problem’ the response was to turn off and figuratively, if not literally, to walk out.”

Or consider the assessments of Leontief, Friedman and Coase, all Nobel Memorial Prize winners in economics:

“Page after page of professional economic journals are filled with mathematical formulas leading the reader from sets of more or less plausible but entirely arbitrary assumptions to precisely stated but irrelevant theoretical conclusions.....Year after year economic theorists continue to produce scores of mathematical models and to explore in great detail their formal properties; and the econometricians fit algebraic functions of all possible shapes to essentially the same sets of data without being able to advance, in any perceptible way, a systematic understanding of the structure and the operations of a real economic system.” (Leontief, 1982, p.104)

“[...] economics has become increasingly an arcane branch of mathematics rather than dealing with real economic problems.” (Friedman, 1999, p.137)

“Existing economics is a theoretical [meaning mathematical] system which floats in the air and which bears little relation to what happens in the real world.” (Coase, 1999, p.2)

This is just a sample of assessments. Many more are provided elsewhere (for example, Lawson, 2003, Chap. 1). Of course, heterodox economists do often capture the situation best. Consider the very apt assessment of Strassmann, the editor of *Feminist Economics*. Like other heterodox economists Strassmann certainly does not reduce economics to mathematical formalism but notices that this is an essential feature of the mainstream:

“To a mainstream economist, theory means model, and model means ideas expressed in mathematical form. In learning how to ‘think like an economist’, students learn certain critical concepts and models, ideas which typically are taught initially through simple mathematical analyses. These models, students learn, are theory. In more advanced courses, economic theories are presented in more mathematically elaborate models. Mainstream economists believe proper models - good models - take a recognisable form: presentation in equations, with mathematically expressed definitions, assumptions, and theoretical developments clearly laid out. Students also learn how economists argue. They learn that the legitimate way to argue is with models and econometrically constructed forms of evidence. While students are also presented with verbal and geometric masterpieces produced in bygone eras, they quickly learn that novices who want jobs should emulate their current teachers rather than deceased luminaries.”

Because all models are incomplete, students also learn that no model is perfect. Indeed, students learn that it is bad manners to engage in excessive questioning of simplifying assumptions. Claiming that a model is deficient is a minor feat – presumably anyone can do that. What is really valued is coming up with a better model, a better theory. And so, goes the accumulated wisdom of properly taught economists, those who criticise without coming up with better models are only pedestrian snipers. Major scientific triumphs call for a better theory with a better model in recognisable form. In this way economists learn their trade; it is how I learned mine.

Therefore, imagine my reaction when I heard feminists from other disciplines apply the term *theory* to ideas presented in verbal form, ideas not containing even the remotest potential for mathematical expression. “This is theory?” I asked. “Where’s the math?” (Strassmann, 1994, p.154).

To repeat, then, my contention is that the mainstream project of modern economics ought not to be characterised in terms either of substantive results (such as demonstrating the desirability of the current economic order) or in terms of basic units of analysis (rationalistic or optimising individuals), but in its orientation to method. The mainstream

project just is a commitment to investigating economic phenomena using mathematical forms of reasoning. This is the one feature that remains common to all contributions regarded as mainstream, and a feature not accepted by its heterodox critics.

4 The disarray of modern economics

If modern mainstream insists that methods of mathematical modelling be everywhere used, I want now to suggest that an additional feature of this formalistic project is that it is not in a particularly healthy state. Indeed, I would suggest that, although it is institutionally very powerful, intellectually the project is in a state of some disarray.¹ To convey at least some support for this claim I can once more rely on the assessments of spokespeople of the mainstream tradition themselves.²

We have already seen passing admissions by certain Nobel Memorial Prize winners that “Page after page of professional economic journals are filled with mathematical formulas leading the reader from sets of more or less plausible but entirely arbitrary assumptions to precisely stated but irrelevant theoretical conclusions” (Leontief, 1982, p.104); that “economics has become increasingly an arcane branch of mathematics rather than dealing with real economic problems” (Friedman, 1999, p.137); that “Existing economics is a theoretical system which floats in the air and which bears little relation to what happens in the real world” (Coase, 1999, p.2). Consider in addition the reflections of the mainstream ‘theorist’ Rubinstein (1995, p.12):

“The issue of interpreting economic theory is... the most serious problem now facing economic theorists. The feeling among many of us can be summarised as follows. Economic theory should deal with the real world. It is not a branch of abstract mathematics even though it utilises mathematical tools. Since it is about the real world, people expect the theory to prove useful in achieving practical goals. But economic theory has not delivered the goods. Predictions from economic theory are not nearly as accurate as those by the natural sciences, and the link between economic theory and practical problems... is tenuous at best.”

Rubinstein adds:

“Economic theory lacks a consensus as to its purpose and interpretation. Again and again, we find ourselves asking the question ‘where does it lead?’”

The problem, though, is not just the project’s lack of direction and limited explanatory and predictive power. In addition the project’s theory and practice are highly inconsistent. For example econometricians put huge resources into elaborating the methods they take to be appropriate and justified, yet their practices diverge wildly from their own methodological strictures. Consider the reflections of Leamer (1978, p.vi), a respected econometrician:

“The opinion that econometric theory is largely irrelevant is held by an embarrassingly large share of the economics profession. The wide gap between econometric theory and econometric practice might be expected to cause professional tension. In fact, a calm equilibrium permeates our journals and our meetings. We comfortably divide ourselves into a celibate priesthood of statistical theorists, on the one hand, and a legion of inveterate sinner-data analysts, on the other. The priests are empowered to draw up lists of sins and are revered for the special talents they display. Sinners are not expected to avoid sins; they need only confess their errors openly.”

Moreover, those who teach econometric theory and those who practise econometric modelling are usually the same individuals flitting between the noted incompatible activities. Consider Leamer (1978, p.vi) again:

“I began thinking about these problems when I was a graduate student in economics at the University of Michigan 1966-1970. At that time there was a very active group building an econometric model of the United States. As it happens, the econometric modelling was done in the basement of the building and the econometric theory courses were taught on the top floor (the third). I was perplexed by the fact that the same language was used in both places. Even more amazing was the transmogrification of particular individuals who wantonly sinned in the basement and metamorphosed into the highest of high priests as they ascended to the third floor.”³

I could go on. More mainstream testimony of the problems of their project are again provided elsewhere (Lawson, 2003, Chap. 1). All in all the discipline is replete with theory/practice inconsistencies, fares poorly by its own criteria, and lacks any clear idea as to where it is going. It is also full of anomalies that range over its various sub-programmes. If a summary statement is required it is perhaps best provided by Blaug, a methodologically oriented economist, who has spent considerable resources throughout his career attempting to shore up aspects of the mainstream tradition. Associating modern economics with its hugely dominant mathematical mainstream component, Blaug’s (1997, p.3) current assessment runs as follows:

“Modern economics is sick. Economics has increasingly become an intellectual game played for its own sake and not for its practical consequences for understanding the economic world. Economists have converted the subject into a sort of social mathematics in which analytical rigour is everything and practical relevance is nothing.”

5 Ontology

If the case for a reorientation of the discipline is clear, why do I suggest specifically that any project such as a green economics that is concerned to do better might consider giving explicit attention to ontology, the study of the nature and basic structure of the phenomena of social reality? Surely, if I am supposing that ontology can help resolve the problems of modern economics, I must be claiming too much for it. Maybe, but I think not. Let me indicate how I believe ontology can and cannot contribute.

One thing ontology cannot do is substitute for substantive economics or social theory more widely (Lawson, 1997, p.326; 1999, p.14; 2003, pp.53–54, 61). Nor even can it indicate how social theorists including economists *must* proceed (see Lawson, 2003, Chaps. 2 and 3). What it can do is guide or under-labour for the substantive social theorising by indicating, amongst other things, dangers and contingencies for which researchers might sensibly be prepared. Let me briefly elaborate.

To see how ontology can make a difference it is important to consider two of the roles that can be accepted for it. First, we must recognise that specific methods and criteria of analysis are appropriate to the illumination of *some* kinds of objects or materials *but not others*. For the nature of the material studied will always make a difference to how we can and cannot know it.

Here research methods must be viewed as tools. A pneumatic drill is good for making a hole in the road. But if for that reason I recommended it be used to clean a glass window, I would be regarded as being rather silly. But why would I? Because we know enough about the nature of the glass and the conditions under which the drill is useful to know that they are not the same. Now determining the conditions under which the drill is useful is like determining the ontological preconditions of research methods. I am going to argue that using mathematics in social theory is a bit like using the drill to clean the window. Mathematical modelling like the drill is a useful tool, but only under certain conditions, when applied to certain sorts of materials.

The point is not new. For example, Marx (1974, p.90) once remarked that ‘in the analysis of economic forms neither microscopes nor chemical reagents are of assistance’. But the point does seem to have been lost over the last century or so, and I am merely re-emphasising it.

One role for ontological enquiry, then, is to determine the (usually implicit) conceptions of the nature and structure of reality presupposed by the use of any specific set of research practices and procedures. Equivalently, ontology can identify conditions under which specific procedures are relevant and likely to bear fruit.

A second, equally fundamental, role for ontology is the elaboration of as complete and encompassing as possible a conception of the nature and structure of phenomena of a relevant domain of reality as appears feasible. The aim is to derive a general conception that seems to include all actual developments or features as special configurations.

Now, the (of course always fallible, situated and practically conditioned) results achieved by ontology in each of these roles can be used in numerous ways. But of particular interest at this juncture is a recognition that the results achieved in these two roles can be used to especially good effect in combination. For we can compare the ontological presuppositions of specific methods with our best account of the nature of social reality. The application of ontological insight in this fashion can reveal in particular both the foolhardiness, and the non-necessity, of universalising any highly specific approach or stance *a priori*. Ontology, so employed, can identify the error of treating special cases as though they are universal or ubiquitous.

My assessment, elaborated at length elsewhere (*e.g.*, Lawson, 1997; 2003), is that the problems of modern economics stem largely from its failure to match its methods to the nature of its subject matter. Indeed, modern economics provides a very clear example of a rather narrow way of doing research being unthinkingly universalised *a priori*, with unfortunate consequences. For it is fairly easy to establish that the sorts of formalistic methods everywhere advocated by modern mainstream economists are in fact appropriate to at best a small sub-set of possible social configurations. This, I argue, is why the modern discipline of economics is in such disarray. The theories formulated by economists are necessarily restricted to conform to the worldview presupposed by their formalistic methods. Because this latter worldview is found not to typify human society, it is not surprising that mainstream theories are found hardly to contribute very little to advancing understanding in most of the contexts for which they are constructed.

6 The preconditions of mainstream deductivist modelling

The argument is a long one but it can be quickly summarised. The insistence on mathematical modelling commits the modern mainstream economist to a deductivist form of explanation. This is a type of explanation in which regularities of the form ‘whenever event x then event y ’ (or stochastic near equivalents) are a necessary condition. Such regularities are held to persist, and are often treated, in effect, as laws, allowing the deductive generation of consequences, or predictions, when accompanied with the specification of initial conditions.

Systems in which such regularities occur are said to be *closed*.⁴ Of course, a closure is not restricted to cases of correlations between just two events or ‘variables’; there can be as many of the latter as you like. Nor is a closed system avoided by assuming a non-linear functional relationship or by pointing out, as in chaos theory or some such, that what happens may be extremely sensitive to initial conditions. If, given the exact same conditions, the same outcome does (or would) follow (or follows on average, *etc.*, in a probabilistic formulation) the system is closed in the sense I am using the term.

Let me emphasise that it is the *structure* of explanation that matters here. The possibility either that many of the entities which economists interpret as outcomes, including events or states of affairs, are fictitious, or that claimed correlations do not actually hold, does not undermine the thesis that deductivism is the explanatory *mode* of this project. In other words, by deductivism, I just mean explanation requiring closed systems as an essential component; no commitment to the realisticness of any closures or regularities posited is presupposed by my describing the mainstream project as deductivist.⁵

Now if deductivist explanatory methods necessitated by the mainstream insistence on mathematical formalism requires that formulations take the event regularity form, the generation or construction of these regularities in turn requires analyses couched in terms of (1) isolated (2) atoms.

The metaphorical reference to atoms here is not intended to convey anything about size. Rather the reference is to items that exercise their own separate, independent and invariable (and so predictable) effects (relative to, or as a function of, initial conditions).

Deductivist theorising of the sort pursued in modern economics ultimately has to be couched in terms of such ‘atoms’ just to ensure that under given conditions x the same (predictable or deducible) outcome y always follows. If any agent in the theory could do other than some given y in specific conditions x – either because the agent is intrinsically structured and can just act differently each time x occurs, or because the agent’s action possibilities are affected by whatever else is going on – the individuals of the analysis could not be said to be atomic, and deductive inference could never be guaranteed.

It is immediately clear, I think, that these latter conditions *need* not characterise the social realm. And the theory of social ontology that I think to be most sustainable (see *e.g.*, Lawson, 1997; 2003), gives reason to suppose that the noted conditions for closure may actually be rather rare in the social realm. Let me briefly indicate something of this ontological conception.

7 A theory of social ontology

By *social reality* or the social realm I mean that domain of all phenomena whose existence depends at least in part on us. Thus, it includes items like social relations which depend on us entirely, but also others like technological objects, where I take technology to be that domain of phenomena with a material content but social form.

Now if social reality depends on transformative human agency, its state of being must be intrinsically dynamic or *processual*. Think of a language system. Its existence is a condition of our communicating via speech acts, *etc.* And through the sum total of these speech acts the language system is continuously being reproduced and, under some of its aspects at least, transformed. A language system, then, is intrinsically dynamic, its mode of being is a process of transformation. It exists in a continual process of becoming. But this is ultimately true of all aspects of social reality, including many aspects of ourselves including our personal and social identities. The social world turns on human practice.

The social realm is also highly *internally related*. Aspects or items are said to be internally related when they are what they are, or can do what they do, in virtue of the relation to others in which they stand. In other words, internally related features are, in part, constituted by such relations.

Obvious examples are employer and employee, teacher and student, landlord/lady and tenant or parent and offspring. In each case you cannot have the one without the other. In contrast, externally related features are not at all constituted by the relations in which they stand. Two passing strangers, a barking dog and a person who delivers the mail, or fish and chips, are examples.

In the social realm, it is found that it is social *positions* that are significantly internally related. It is the position I hold as a university lecturer that is internally related to the positions of students. Each year different individuals slot into the position of students and accept the obligations, privileges and tasks determined by the relation. Ultimately we all slot into a very large number of different and changing positions, each making a difference to what we can do. The social realm, then, is highly internally related or 'organic'.

The social realm is also found to be *structured* (it does not reduce to human practices and other actualities but includes underlying structures and processes of the sort just noted and [their] powers and tendencies). The fact that social structure is ontologically irreducible to human practices can be seen if we consider the threat of workers, often posed in the UK, to 'work to rule'. If human practices were the same as the rules guiding them the threat would be unintelligible and indeed unenforceable.

Notice that the irreducibility of social structure to human practice can be rendered intelligible only if we recognise the reality of processes of emergence, underpinning emergent social and psychological realms in particular (see, *e.g.*, Lawson, 1997, especially Chaps. 6 and 13, 2003). Let me briefly elaborate.

A strata of reality can be said to be emergent, or as possessing emergent powers, if there is a sense in which it (1) has arisen out of a lower strata, being formed by principles operative at the lower level, and (2) remains dependent on the lower strata for its existence but (3) contains causal powers of its own which are both irreducible to those operating at the lower level and (perhaps) capable of acting back on the lower level. Thus organic material emerged from inorganic material. And, according to the conception I am defending, the social realm is emergent from human (inter-) action, though with properties irreducible to, yet capable of causally affecting, the latter.

So interpreted, the theory of emergence commits us to a form of materialism which ultimately entails the unilateral ontological dependence of social upon biological upon physical forms coupled with the taxonomic and causal irreducibility of each to any other. Thus, although, for example, the geo-historical emergence of organic from inorganic matter and of human beings from hominids can be acknowledged, when we come to explain those physical and biological states which are due, in part, to intentional human agency it is necessary to reference properties, including powers, not designated by physical or biological science (again see Lawson, 1997).

Finally, the stuff of the social realm is found, in addition, to include *value* and *meaning* and to be *polyvalent* (for example absences are real), and so forth.

This broad perspective, as I say, is elaborated and defended at length elsewhere (see for example Lawson, 1997; 2003). But I doubt that, once reflected upon, the conception is especially contentious. Nor in its basic emphasis on organicism or internal-relationality is it especially novel. However, it should be clear that if the perspective defended is at all correct, it is *prima facie* quite conceivable that the atomistic and closure preconceptions of mainstream economics may hold not very often at all.

I must emphasise, though, that the possibility of closures of the sort pursued by modern mainstream economists cannot be ruled out *a priori*. Certainly, there is nothing in the ontological conception sketched above which rules out entirely the possibility of regularities of events standing in causal sequence in the social realm (any more than it is possible *a priori* to stipulate that a fair coin tossed a thousand times will not show a thousand heads). But the conception sustained does render the practice of universalising *a priori* the sorts of mathematical-deductivist methods economists employ somewhat risky if not foolhardy, requiring or presupposing, as it does, that social event regularities of the relevant sort are ubiquitous.

To the point, if the social ontology sketched above does not altogether rule out the possibility of social event regularities of the sort in question occurring here and there, it does provide a rather compelling explanation of the *a posteriori* rather generalised lack of (or at best limited) successes with mathematical-deductivist or closed-systems explanatory methods to date.

Actually, this ontological conception is more explanatorily powerful still. For not only does it explain the widespread continued explanatory failures of much of modern economics over the last 50 years or so, but also it can account for both (1) the *prima facie* puzzling phenomenon that mainstream economists everywhere, in a *manner* quite unlike researchers in other disciplines, suppose that (acknowledged) fictionalising is almost always *necessary* (typically with human beings portrayed as versions of isolated atoms), and (2) the types of conditions that prevail when mathematical methods in economics achieve such (limited) successes as are experienced. These, though, are not claims I can develop here (but see Lawson, 2003, Chap. 1).

I can, though, briefly comment on the earlier noted assessment of many that mainstream economics is defined in terms of theorising about rational, meaning optimising, decision making. For the construction of optimising scenarios is the easiest, or anyway (widely considered to be) most compelling, way of achieving set ups with predictable or deducible outcomes. An isolated situation constructed so as to contain a unique optimum, coupled with the assumption that agents always optimise, meets, with relative ease, the (atomistic and isolationist) requirements for formalistic

deductivist modelling to proceed (thus explaining, of course, why so many commentators have interpreted the mainstream project as defined by its attention to the optimising individual atom).

Of course, we can now see that this strategy, though explicable, is not essential. Assumptions, say, to the effect that (isolated) agents follow fixed rules irrespective of context, will equally do the job (see for example Lawson, 1997, Chap. 8).

8 Implications for social theorising more widely

I now turn to consider some of the wider implications of ontology for social theorising. Before I do so, however, let me acknowledge that an ontological conception, just like any other, is inevitably fallible and partial and, in some aspects at least, doubtless transient.

I must also re-emphasise that philosophy in the form of social ontology can never be a substitute for social theorising. Any derivation of substantive theoretical results, reliance on specific methods and/or support for concrete policy proposals, requires that the ontological conception sustained be augmented by specific empirical claims.

If philosophy in the form of ontology cannot replace substantive theorising, research practice or policy analysis, it can, however, under-labour for these activities. In this, it can reveal methodological errors and dangers, as well as help clarify and give directionality to research practice. Let me briefly elaborate.

9 Errors and dangers

Ontology can reveal errors of, or dangers for, research practice, by (amongst other things) revealing various outcomes or configurations to be but special cases of the range of outcomes or configurations possible, and thereby drawing attention to risks involved in universalising them *a priori*.

Above we saw the example of misplaced universalising of formalistic-deductivist methods in modern mainstream economics. But there are other examples of universalising of this sort also prominent in modern social theorising, all of which are easily recognised once the ontological conception set out above is accepted. Such cases are obviously too numerous for a complete coverage to be attempted. But let me briefly give a few illustrations.

Consider the case of the human individual first. It is a practice of some modern social theorists to assume that human nature is everywhere the same. Others, though, have universalised in a somewhat contrary fashion. They have focused on specific differences between human beings and their experiences or practices, and universalised the feature of difference instead. In other words, some recent social theorists have tended to treat the uniqueness of personal identities and individual experiences, as a feature of all aspects of human nature or being (see Lawson, 2003, Chap. 9; 2007). According to this latter perspective there are only differences.

Ontological analysis of the sort sketched above, however, reveals both forms of universalising to be suspect (see Lawson, 2003, especially Chap. 9; 2007). By uncovering the ontological depth of all human beings, such analysis identifies how commonality remains feasible *in the midst of difference*. For example, although we possibly all develop

a unique mix of language capabilities, and everywhere engage in, and experience, unique forms of speech acts, all such developments presuppose a common capacity for language *per se*. More generally, although we daily experience possibly unique social encounters we share a common capacity to enter social being, whatever the form or manner in which it is realised.

The same sorts of opposed, but equally suspect, universalising tendencies are sometimes found in analyses of social-economic systems. A first questionable move, here, lies in supposing that because *specific* relations, rules, positions, institutions, or mechanisms of production, are features of one socio-economic system (say of capitalism) these same examples of rules and relations (say specific market or class relations), *etc.*, must be present in all socio-economic systems (including say of feudalism).

Probably the most pervasive error of this sort lies in assuming that, because all capitalist societies consist in social relations, rules, institutions, *etc.*, then social and economic forces, including those of technology, work the same everywhere.

However, each region, including each nation, has its own history, culture, and combination of religious, ethnic, and other groupings and divisions. It is a mistake, easily revealed by ontological analysis, to suppose that what can be achieved in some region, at a give point in time, say in the UK at the start of the 21st century, can simultaneously and in an identical manner be achieved in, say, the Ukraine, South Africa, Iraq or Japan (and of course vice-versa). History and culture, *etc.*, always matters.

An opposing move, equally suspect in that it relies on questionable forms of universalising, is to suppose that because everyday, including working, practices vary across social-economic systems, societies or communities, there cannot also be commonality in these systems. Ontological reasoning, however, reveals all such social systems to be composed of social relations, rules, positions, institutions, and the like. It is, indeed, just in virtue of some such features that we can distinguish the objects of reference as (examples of) social-economic systems (or whatever), *i.e.*, as different examples of the *same* kind of thing.

A further common example of misplaced universalising is the often found presumption that where an agent acts in a certain way on a given occasion he or she (or we all) will act in that way on all occasions.

A related error is to suppose that whatever the outcome associated with an action in one situation the same outcome will follow from this particular action in all cases. Thus, it is supposed that because on a previous occasion a specific amount (or form) of government expenditure led to a given increase in, say, the numbers employed, the same outcome will arise from a similar policy action on a different occasion.

Ontological analysis, though, reveals social reality to be open, with the likelihood that in each different context of policy action a quite different array of accompanying causal forces and conditions will be in play, affecting the outcome that emerges.

As a final example let me note the inference often made that because some features of social reality appear to be successfully explained in a certain sort of way (*e.g.*, in terms of certain units of analysis), so all features can be. Most typically, it is reasoned that because some social phenomena appear to be explicable largely, or solely, in terms of individuals and their preference (*e.g.*, the item selected from a short menu by an individual sitting alone in a restaurant), therefore all social events can be explained in merely individualistic terms. In this way a methodological individualist stance is considered justified.

The ontological conception reported above, however, quickly reveals any such reductionist orientation to be significantly mistaken. Specifically, because of the fact of emergence (*i.e.*, because social structure, though dependent on human agency, has powers that are irreducible to it) methodological individualism is seen to be false. For forms of social structure are as explanatory of (condition or facilitate) the things individuals do, as the actions of individuals in total, are explanatory of the reproductions and transformations of social structure.

More generally, because of the complicated ways in which social structure (in all its forms) and human agency depend upon, but remain irreducible to, each other, all methodological reductionist positions must be rejected. This applies not only to methodological individualism but also to methodological holism (social wholes are always the main unit of analysis) methodological institutionalism (institutions are always the main unit of analysis) methodological evolutionism (evolutionary processes are always the main unit of analysis) and much else.

I have provided here merely a selection of examples where particularities not only may be, but frequently are, erroneously universalised in modern social theorising. I do emphasise that. Although the types of misplaced universalisation just discussed are easily recognised as such, at least in the light of the ontological perspective set out, the examples provided are actually very prominent. A reorientation of social theorising turning on the take up of ontology is able to avoid such errors. More generally, it can under-labour for all social theorising where questions or issues of commonality and difference, generality and particularity, continuity and change, connection and distinction, *etc.*, are found. It is able to provide insights to analytical possibilities and limitations for social theorising at large. In this way it helps avoid very many problems of specificity (or generality) as currently abound.

10 Clarification

Besides helping to identify errors including inconsistencies and fallacies (including that of misplaced universalisation), ontology can contribute in more positive ways, including clarification. Amongst other things, it provides a categorical grammar against which more substantive social theoretical conceptions and distinctions can sometimes be better understood. However, the manner and extent to which ontology will prove helpful in this way will depend on the context, the questions being pursued, and so forth.

For example, consider recent discussion and debate about whether the increased degree, scale and speed of global interaction is best conceptualised as one of *globalisation* or merely increased *internationalisation* (Held and McGrew, 2000). These social-substantive categories are rarely well defined, but the contrast in question seems usually to rest on the idea of increased integration versus increased interaction.⁶ Once we possess the categories of internal and external relations, and recognise that those talking of globalisation mostly refer to the spread of the former and those emphasising inter-nationalisation mainly refer to the latter, it is easier to understand the nature of the issues involved and how the differences can be resolved.

Once, too, we recognise that it is quite possible for two aspects of reality to be simultaneously both internally and externally related we begin to understand the reasons for the continuing miscomprehension involved in such debates. (We can see, for example, that when some participants maintain that aspect *X* is an example of increased internationalisation and others attribute it to globalisation, both may be right).

Various further conceptions, often conflated with others or poorly articulated, can be systematically developed from the basic categories identified above. For example, all social systems and collectivities can be recognised as ensembles of networked, internally related, positions (in process) with associated rules and practices. This applies to the state, schools, hospitals, trade unions, the household, and so forth. Subdistinctions can be made. A social system can be recognised as a structured process of interaction; an institution, as already noted, as a social system/structure (or even a form of behaviour) that is relatively enduring and perceived as such; a collectivity as an internally related set of social positions along with their occupants, and so forth (see Lawson, 1997, pp.165–166).

The basic categories elaborated also provide the framework for a theory of *situated rationality* (Lawson, 1997, Chap. 13). Various real interests, as well as possibilities for action, depend upon the internally related positions in which individuals are situated. Of course, we all stand in a large number of (evolving and relationally defined) positions (as parents, children, immigrants, indigenous, old, young, teachers, *etc.*). Hence there exist (often unrecognised) possibilities of (evolving) conflicts of interest and intentions at the level of each individual, in addition to those relating to collective or shared concerns.

This conception, then, also provides the basis for a meaningful a theory of distribution, one concerned especially with the allocation of resources to positions, as well as of positions to people.

More generally, an ontological conception such as that defended here encourages and informs a reconsideration of the many categories of social theorising taken for granted in modern economics. The list includes not only the already noted categories of institutions, systems and rationality, but also other equally central to economics such as money, markets, uncertainty, order and numerous others (see Lawson, 2003, Chap. 2).

Further, by examining a contributor's ontological preconceptions it is often possible to throw further light on the nature and/or meanings of their substantive claims and contributions, especially where the latter may be open to a many ill-grounded interpretations (again see Lawson, 2003, Chap. 2).

And ontology may assist in pursuing a range of further issues that gain their interest from context, including questions relating to the nature of a discipline such as economics itself. What, for example, is the legitimate scope or subject-matter of economics? Is it possible and/or meaningful to demarcate a *separate* science or even domain of economics? Ontology, given its focus on the nature of being, including of the 'objects' of study, holds out some promise for providing a handle on these sorts of issues. (The question of whether the specific ontological conception sketched above, suitably supplemented with other insights, is of any help in this is explored explicitly in Chap. 6 of Lawson (2003).)

Further there are issues to pursue concerning the heterodox traditions in modern economics. If the mainstream tradition is marked by a neglect of explicit ontology and an adherence to methods that presuppose a largely untenable ontology, presumably the persistent heterodox opposition to the mainstream reflects a quite different orientation to ontology? (This and related questions are pursued in Part III of Lawson, 2003, in the context of examining aspects of post Keynesianism, (old) institutionalism and feminist economics, respectively).

11 Directionality

I consider now some of the numerous ways ontology, and in particular the derived ontological conception briefly sketched above, may impart directionality to social research.

Most clearly because the social world is found to be structured (it is irreducible to such actualities as events and practices) it follows that social research will need to concern itself not only with correlating, or otherwise describing, surface actualities, but also, and seemingly primarily, with identifying the latter's underlying causal conditions. Indeed, explaining surface phenomena in terms of its underlying conditions is seen to be a proper, and perhaps the central, task of social research.

If patterns in surface social phenomena have scientific value it is in some part through their providing access to the structural conditions in virtue of which the former are possible. Of course, structural conditions in turn have their own conditions, so that the process of seeking to explain phenomena at one level in terms of causes at a deeper one may be without limit.

Further, to the extent that social phenomena not only depend upon transformative human agency and so are processual but also are highly internally related, it is *prima facie* rather unlikely they are manipulable in any useful or meaningful way by experimental researchers and others. Social research, in consequence, will typically need to be backward looking, being concerned to render intelligible what has already occurred, rather than interventionist/experimentalist and so predictionist. Certainly it would be rather risky to insist only on (learning and teaching) methods which presuppose that parts of social reality can be treated as isolatable and stable chunks.

It is also easy to see that ontology can carry implications for matters of ethics and so for the sorts of practical projects and policy concerns of special interest to green economists. For example, the ontological conception sketched above bears the implications that, because all human beings are both shaped by the evolving relations (to others) in which they stand as well as being differently (or uniquely) positioned, all actions, because they are potentially other-affecting, have a moral aspect. Further, any policy programmes formulated without attention to differences, that presume homogeneity of human populations, are likely to be question begging from the outset. Certainly, programmes of action that ignore their likely impact on the wider community are immediately seen as potentially deficient.

Eventually, such considerations point to questions of power, democracy and legitimacy. They raise questions of who should be taking decisions in a world of different identities where most of us are likely in some way (differentially) affected by actions

taken by others. And indeed they invite a questioning of whether anything less than the whole of humanity (and possibly much more) can constitute a relevant unit of focus in the shaping of emancipatory projects and actions.

12 The context of ontology

One final observation warrants emphasis. I have emphasised that ontology, including and specific results achieved, though practically conditioned, historical and fallible, always requires supplementing with rather more context-specific empirical claims before it can bear on substantive or concrete issues, whether concerning theory, method, politics or policy. However, it should be equally clear that those who contribute to ontology do not, and *are not even able to*, avoid invoking fairly context specific empirical claims continuously. Ontological theorising everywhere goes hand in hand with such empirical assessments.

For example, although my aim with this essay is to make a case for an ontological turn in social theorising, the case made is in large part empirical in nature. It rests on the assessment that the state of modern social theory, and especially economics, is none too healthy, more specifically that a central feature of modern economics is a tendency to universalise certain (mathematical-deductivist) methods *a priori*, and that explicit ontological reasoning has, until very recently at least, been overly neglected in modern social theory including economics, and so on. All such assessments are, in some part at least, empirical in nature.

Irrespective of their validity I might have avoided making them. But only at the cost of leaving my discussion and advocacy of ontology at this time without motivation, point or context. Thus, I indicated above how the ontological conception sustained gives reason to be very cautious about universalising certain insights, or practices *a priori*. But to demonstrate just how relevant are the insights sustained for modern economics it was useful to remind the reader (*i.e.*, to advance empirical assessments) of how widespread are existing practices of universalising highly particular conceptions of individuals, socio-economic systems, human practices and explanatory orientations.

The general point I am working towards here is that we each contribute always from within a context; we are always situated in very particular ways, with very definite socio-cultural-political interests. In contributing we act on our situated interests, value assessments and perspectives. There is no escaping from any of this, nor from the implication that there is always an empirical grounding of our particular pursuits, orientations, justifications and so on. Like any other theoretical project an ontological one such as described here is a product of its place and time, as in particular are the motivations of those who contribute to it and the uses to which it is put.

But none of this detracts from the clear worth of extending the ontology project in social theorising in general, and within a Green Economics in particular. For far too long now social theorists have proceeded under the assumption that methods and policy goals can be determined in a more or less *a priori* fashion. They have proceeded without consideration of the nature of the materials for which methods are to be applied or the contexts (including cultural, religious, ethnic, gender and environmental, *etc.*, conditions) and (so) real needs of the populations on whose behalf they profess to work. From this perspective it is not surprising that disciplines like economics are in intellectual disarray and unsure where they are headed.

It is also plain to see how the situation can be improved: through a reorientation of social theorising that places explicit and systematic ontology back on the agenda. Actually there are signs that ontology is gradually becoming once more appreciated in a few small heterodox quarters of economics (see Lawson, 2003, Chap. 2). How it all works out in practice, of course, will doubtless depend not only on the specific ontology defended but also the resources including socio-cultural situation and perspective of the investigators. But there is every reason to suppose that a return to successful social theorising, especially in economics, depends on projects such as these not only surviving but also greatly expanding.

There are also signs in the inaugural issue of the *International Journal of Green Economics* that the emerging Green Economics may adopt such an explicitly ontological orientation more consistently than most alternative economic projects and traditions (see especially Kennet and Heinemann, 2006a–b). Indeed, it is not surprising that a project concerned in a realistic way with society and its consequences as a dynamic whole should adopt such an orientation, so I am optimistic that a concern for ontology will remain prominent. A green economics may thereby prove to be not only successful in addressing the sorts of environmental and ecological issues with which it is primarily concerned but also, through example, instrumental in transforming the modern economics discipline along the way.

References

- Blaug, M. (1997) *Ugly Currents in Modern Economics*, Options Politiques, September, pp.3–8.
- Castells, M. (1996) *The Rise of the Network Society*, Oxford: Blackwell.
- Coase, R. (1999) 'Interview with Ronald Coase', *Newsletter of the International Society for New Institutional Economics*, Vol. 2, Spring, No. 1.
- Dicken, P. (1998) *Global Shift*, London: Paul Chapman.
- Dore, R. (Ed.) (1995) *Convergence or Diversity? National Modes of Production in a Global Economy*, New York: Cornell University Press.
- Friedman, M. (1999) 'Conversation with Milton Friedman', in B. Snowdon and H. Vane (Eds.) *Conversations with Leading Economists: Interpreting Modern Macroeconomics*, Cheltenham: Edward Elgar, pp.124–44.
- Gillies, D. and Ietto-Gillies, G. (2002) 'Keynes's notion of *Causa Causans* and its application to the globalisation process', in P. Arestis, M. Desai and S. Dow (Eds.) *Methodology, Microeconomics and Keynes, Essays in honour of Victoria Chick*, London: Routledge, Vol. 2.
- Held, D. and McGrew, A. (Eds.) (2000) *The Global Transformations Reader*, Cambridge: Polity Press.
- Hendry, D.F., Leamer, E.E. and Poirier, D.J. (1990) 'The ET dialogue: a conversation on econometric methodology', *Econometric Theory*, Vol. 6, pp.171–261.
- Hirst, P. and Thompson, G. (1999) *Globalization in Question*, 2nd ed., Cambridge: Polity Press.
- Howell, D. (2000) *The Edge of Now: New Questions for Democracy and the Network Age*, London: Macmillans.
- Jameson, F. (1991) *Postmodernism: The Cultural Logic of Late Capitalism*, London: Verso.
- Kennet, M. and Heinemann, V. (2006a) 'Foreword', *International Journal of Green Economics*, Vol. 1, Nos. 1–2, pp.1–10.
- Kennet, M. and Heinemann, V. (2006b) 'Green economics: setting the scene. Aims context, and philosophical underpinning of the distinctive new solutions offered by green economics', *International Journal of Green Economics*, Vol. 1, Nos. 1–2, pp.68–102.

- Kozel-Wright, R. and Rowthorn, R. (1998) 'Spoilt for choice? Multinational corporations and the geography of international production', *Oxford Review of Economic Policy*, Vol. 14, No. 2, pp.74–92.
- Lawson, T. (1997) *Economics and Reality*, London and New York: Routledge.
- Lawson, T. (1999) 'Developments in economics as realist social theory', in S. Fleetwood (Ed.) *Critical Realism in Economics: Development and Debate*, London and New York: Routledge.
- Lawson, T. (2003) *Reorienting Economics*, London and New York: Routledge.
- Lawson, T. (2005) 'A perspective on modern economics', in G. Steinmetz (Ed.) *The Politics of Method in the Human Sciences*, Durham, USA: Duke University Press, pp.366–392.
- Lawson, T. (2007) 'Gender and social change', in J. Brown (Ed.) *The Future of Gender*, Cambridge: Cambridge University Press (forthcoming).
- Leamer, E.E. (1978) *Specification Searches: Ad hoc Inferences with Non-experimental Data*, New York: John Wiley and Sons.
- Leontief, W. (1982) *Letter in Science*, Vol. 217, pp.104–107.
- Lipsev, R.G. (2001) 'Successes and failures in the transformation of economics', *Journal Of Economic Methodology*, June, Vol. 8, No. 2, pp.169–202.
- Marx, K. (1974) *Capital: Volume 1*, in F. Engels (Ed.), London: Lawrence and Wishart.
- Rubinstein, A. (1995) 'John Nash: the master of economic modelling', *Scandinavian Journal of Economics*, Vol. 97, No. 1, pp.9–13.
- Sterling, R.W. (1974) *Macropolitics: International Relations in a Global Society*, New York: Knopf.
- Strassmann, D. (1994) 'Feminist thought and economics; or, what do the Visigoths know?', *American Economic Review, Papers and Proceedings*, pp.153–158.

Notes

- 1 How a project that performs poorly in terms of social illumination can hold on to institutional power is an issue explored in Lawson (2003, Chap. 10.)
- 2 Informed external observers have noted the problems of the discipline themselves, of course. Thus the former British Minister Lord Howell (2000, Chap. 5) assesses the state of modern economics as follows:

“The paradox of modern economics is that while the computers are churning out more and more figures, giving more and more spurious precision to economic pronouncements, the assumptions behind this fiesta of quantification are looking less and less safe. Economic model making was never easier to undertake and never more disconnected from reality.

Somewhere along the way economics took a wrong turn. What has occurred, and what been vastly accentuated by the information revolution and its impact, is that economists have drained economic analysis both out of philosophy and out of real-life, and have produced an abstract monstrosity, a world of models and assumptions increasingly disconnected from everyday experience and from discernible patterns of human behaviour, whether at the individual or the institutional level.

As a result, economists have not only failed to discern, explain or predict most of the ills which beset the world economy and society, but they have actively encouraged a deformity of perception amongst policymakers and communicators, which has led in turn to a deep public bewilderment and distrust of government authorities - and this at the very time when the need is greater than ever for a bond of trust between government and society.

This misleading 'black box' view of the world purveyed by the economics profession (with heroic exceptions), at all levels from the most intimate micro workings of markets to the macro level of nation states and their jurisdictions, has been vastly reinforced by compliant statisticians who have brought a spurious precision and quantification to entities and concepts which may not in fact have any existence outside economic theory, or whose validity has been sapped away by the impact of information technology."

- 3 Consider, too, the assessment of Hendry, a second leading econometrician, remarking on Leamer's observations 12 years on:

"At present there are peculiar gaps between theory and what people actually do: I think the sinners and preaches analogy in Leamer (1978) is the correct one here. The theoretical econometrician says one thing but as a practitioner does something different. I am trying to understand why economists do that, given that they know the theory, and they are obviously trying to solve practical problems." (Hendry *et al.*, 1990, p.179)
- 4 I am aware that across different literatures or disciplines (including mathematics) the category of closure is used to mean different things. Here, as I say (and elaborate at length in previous contributions, *e.g.*, Lawson, 2003) I take a closed system to be one in which event regularities of the noted kind occur.
- 5 Observe, too, that it does not make any difference whether an inductive or *a priori* deductive emphasis is taken. If mathematical methods of the sort economists mostly fall back on are to be employed, closures are required (or presupposed), whether they are sought-after in observation reports or 'data' or are purely invented. Deductivism is an explanatory form that posits or requires such closures (whether or not any are actually found). And deductivism, so understood, clearly encompasses the greater part of modern economics including most of modern microeconomics, macroeconomics and econometrics.
- 6 Those emphasising increased integration or globalisation often focus on the changing configuration and distribution of power at a world level. It is noticed that there is a reordering of power relations between and across the regions of the world in such a manner that the sites of power and of those subject to it are often continents apart. Power is increasingly exerted at a distance from the locales in which it most heavily experienced (Castells, 1996; Dicken, 1998; Jameson, 1991). Those stressing increased interaction or internationalism argue that international developments and wielding of power do not necessarily penetrate the domestic economy. And where they do, they need not do so directly. Rather they are refracted through national policies and processes. It is argued that international and domestic policy fields tend to remain fairly separate (Sterling, 1974; Dore, 1995; Hirst and Thompson, 1999; Kozel-Wright and Rowthorn, 1998). Such differences in viewpoint have recently taken on a such a significance as to constitute the 'great globalisation debate' (see, *e.g.*, Held and McGrew, 2000, especially the introduction). A useful recent account raising important issues of causality in this context is Gillies and Ietto-Gillies (2002).