On What is Valuable in Law and Economics

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Introduction

In the course of my previous work on law and economics I have repeatedly criticised what I regard as Ronald Coase's inflated claims for the range of applicability of economic analysis.[1] However, in the light of personal correspondence from Dr Simon Deakin of Peterhouse College Cambridge and Professor John Donohue III of the Northwestern University School of Law, I am now aware that as previously stated this criticism is unsatisfactory,[2] and I should like here[3] to restate it in a way which leads to a more sophisticated evaluation of Coase's work and, through this, of what is valuable in law and economics.

Neo-classical economics and the problem of realism

The first or basic claim of welfare economics[4] is that a market which conforms to the assumptions established by neo-classical micro-economics for general competitive equilibrium is a perfectly efficient mechanism for the allocation of goods.[5] Under general competition, goods will be exchanged up to the point where the increase in one person's utilities achieved by further exchange would be more than offset by the diminution in the sum of another person's. At this point of "Pareto optimality,"[6] the market is in equilibrium because there are no further mutually beneficial exchange opportunities and, vitally importantly, it has been brought there by the uncoordinated working out of voluntary exchanges which automatically identify the point of Pareto optimality by reaching equilibrium. The beautiful symmetry of the model lies in its being driven by voluntary exchange and working only because it is so driven. This is the source of the power of the rejection of "patterned principles" of distribution[7] in favour of the "pure procedure" of the market[8] in liberal political philosophy, for any state imposition of a "fair" distribution of goods *must* prevent the perfectly efficient distribution which would be voluntarily reached at general competitive equilibrium.[9] It would appear that in its modern form this model is non-defective, so that we must say that general competitive equilibrium *is* the optimal mechanism for the allocation of goods.

Accepting this property of the market of course obliges one to allow the plausibility of the claim that the price system should be the basis for conducting economic affairs, that is to say, to accept the "spontaneous order"[10] of the "invisible hand"[11] as the basis of social solidarity. However, before taking this plausible claim to be convincing, one is also rather quickly obliged to address

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the question (amongst other questions) of why there is a decided lack of perfect efficiency in any empirical market one has come across. If one accepts the Pareto optimality of general competitive equilibrium, this must be because empirical markets do not satisfy the assumptions necessary for that equilibrium.[12] One can state these assumptions at various levels of generality and brevity, and in the simplest statement of which I am aware they are reduced to two: convexity and the existence of all relevant markets.[13] Let me deal with each in turn.

Convexity is the graphical property displayed by mapped sets of consumption and production vectors under what would presently seem to be the weakest possible assumptions about the action of households and firms that will bring that action within general equilibrium theory at all.[14] These assumptions are that action must display the internal rationality of complete commitment to the maximisation of individual utilities. For example, the non-transitive set of preferences that arises when an agent prefers good A to good B and good B to good C but also prefers good C to good A is not analysable within neo-classical economics. (Graphs plotted of these consumption functions would be absurdly badly behaved.) Such a *clear* lack of rationality is by no means a problem for neo-classical economics, for the lack tells us precisely that we are not dealing with economically rational action but with, say, a pathology or the whim of a despotic planner. (I drafted this shortly after reading that a recently privatised UK rail company, attempting to reduce the volume of use of one of the stations it took over as a prelude to closing it, attempted to charge more for a shorter journey to that station than for a longer one to the next station, and has thus been pushed into trying oppressively to fine customers who bought tickets to the further station and got off at the nearer.) Much more problematically, however, the rationality which can be neo-classically analysed is a very simple individual utility maximisation,[15] and this simplicity poses severe restrictions on the type of action that can readily be brought under neo-classical analysis.[16]

The existence of all relevant markets refers to the necessity that markets exist to deal with all aspects of the allocation of a good. Perfectly rational exchange of a good, say a consignment of steel, requires not merely a physical market in steel (or, rather, markets for all the physical components of steel and for all alienable stages of the production process) but also a market for the risk of non-delivery, for the risk that the steel may not have a productive use after delivery, for the risk of fluctuations in the value of the currency in which payment is made, *etc*. It can be demonstrated that equilibrium of all the necessary "contingent markets" may be established,[17] but, of course, as fully contingent markets can be established only with complete information about the state of the world as it affects all relevant exchanges and complete transparency in communication of that information, it is the purest fiction to imagine that such equilibrium will ever actually occur.

That its assumptions do not hold for plausible empirical situations[18] poses an obvious problem for neo-classical economics[19] and, other than ignoring or belittling that problem, which neo-classical economics has an undistinguished history of doing,[20] the responses which have been made to it really boil down to the proposal of three remedies.[21] Law and economics, which is one of the bodies of work which have arisen (in part) in response to this lack of realism, embraces two of these three remedies. The first remedy is to commit economics to forms of explanation which are immediately realistic, but this typically entails foregoing the use of the simplifying assumptions which permit formal rigour of analysis. Modern law and economics eschews this remedy and embraces a second which is of a quite opposite nature. It attempts to bring all action, particularly such action as *prima facie* is not economic at all, under rigorous economic analysis. This is in many ways a very uncompelling remedy indeed, and that the relevance of what results is highly questionable is what first strikes anyone other than an economist reading those results. Nevertheless, there can be no doubt that Coase subscribed to it and he made this perfectly explicit in some remarks on economic philosophy. However, it is crucial to grasp that Coase's substantive work displays little sign of this and, indeed, what characterises that work is its immense carefulness about the institutional context of economic action. It is, I will suggest, Coase's particular contribution to have developed in his substantive work a third remedy, which is appreciation of the institutional context of economic action in such a way as still allows us to use neo-classical analysis. Coase evidently thought these latter two remedies complementary. I will argue, however, that the latter contradicts the former and though the former is more widely known, particularly in legal scholarship, it is the latter that constitutes what is valuable in law and economics.

The pursuit of the first of the three remedies for lack of realism is presently generating an extensive research programme in (or, leaving aside work on rational expectations after Lucas,[22] perhaps it should be said at the edges of[23]) economics which seeks to describe the "embeddedness" of economic action in social structure.[24] However, though now backed up by a realist epistemology[25] which itself *is* substantially novel, the emerging "behavioural economics,"[26] "economic sociology,"[27] "evolutionary economics,"[28] "moral economics"[29] or even "political economy"[30] are merely the latest in a long line of works stressing the economic significance of "institutions," principally the law, which has always run parallel to neo-classical economics in response to its obvious lack of realism. Because Coase himself focused on the institutional context of economic action, work by economists following his line is known as the "new institutional economics,"[31] the adjective "new" being used to distinguish it from the "old" institutional economics which gained prominence during the Progressive Era (*circa* 1890-1920).[32] In these economics, formal rigour was eschewed in favour of detailed appreciation of the institutional structure of the economic system,[33] and particularly the legal constitution of that system.[34] This work is of great interest, is rightly undergoing something of a revival at present,[35] and cannot be too highly recommended.[36]

Coase himself, however, had no time whatsoever for the "dreary subject" of old institutional economics, and one of the reasons he gave for this was that "it had no positive doctrines" but only "a stance of hostility to the standard economic theory."[37] Now, this is wrong, for while one may struggle to detect any sort of general economic theory in some quite minor figures or in some major but very confusing figures of institutionalism, one has such a theory thrust at one by Veblen,[38] the proximate source of institutionalism, and Veblen's theory of instincts was given a most interesting restatement by one of the leading institutionalists, Clarence Ayres.[39] What is more, this is a puzzling mistake for Coase to have made. Not only can one find aspects of institutionalism to which Coase should have been very sympathetic, such as Commons' thorough knowledge of the law, but, as we shall see, Coase's own work is intrinsically critical of "mainstream economic theory"[40] and he has bitterly complained of hostility from "standard" economists.[41] Last but not least, Coase has made repeated reference to the positive effects of the study of the empirical detail of industrial organisation, both hortatively[42] and in respect of what he himself learned from its study under Arnold Plant at the LSE between 1929-31.[43] Work such as Plant's was obviously in the spirit of Alfred Marshall,[44] but not the Marshall who wrote *The Principles of Economics*,[45] arguably the most influential microeconomics textbook ever written; rather the Marshall who wrote *Industry and Trade*, a historical account of industrial development in which empirical richness is substituted for mathematical austerity in order to come to terms with "the various uncertainties of demand on the one side and supply on the other."[46] It should be said that one can find in the works of the institutionalists theoretical tomes to compare with *The Principles of Economics*[47] as well as empirical studies like *Industry and Trade*,[48] but it is in any case to the influence of the *latter* on his own work that Coase has attested.[49]

It seems that the real issue for Coase must have been not that old institutionalism lacked a theory but that its theory rejected neo-classical economics as a general social scientific methodology and, behind this, the price system as the basis of social solidarity. For Coase, both of these positions were anathema. Coase's fundamental political views in his later life turned on his "conviction...that the principles under which the American economic system generally operates are fundamentally sound."[50] He accordingly always sought to ensure that his work was "operational" in the sense of being amenable to expression and use in neo-classical terms.[51] Coase obviously believed that achieving this entailed being sympathetic to the second remedy for the lack of realism of neo-classical economics identified above, of attempting to preserve formal rigour when extending economic reasoning to what *prima facie* is non-economic action, pursuit of which has been, after Becker and Posner, the major strain of law and economics.

Individual Utility Maximisation Assumptions and their Application in the Law and Economics of Everything

The second of the remedies I have distinguished for neo-classical economics' lack of realism is the, as it were, "economic imperialist"[52] stance of bringing all action, especially *prima facie* non-economic action, under economics. Gary Becker has shown himself to be the paradigmatic such economic imperialist.[53] Becker sees little or no limit to the scope of the applicability of the economic approach:

> I have come to the position that the economic approach is a comprehensive one that is applicable to all human behaviour...The heart of my argument is that human behaviour is not compartmentalised, sometimes based on maximising, sometimes not, sometimes motivated by stable preferences, sometimes by volatile ones, sometimes resulting in an optimal accumulation of information, sometimes not. Rather, all human behaviour can be viewed as involving participants who maximise their utility from a stable set of preferences and accumulate an optimal amount of information and other inputs in a variety of markets.[54]

It unarguably is Becker's achievement to have developed mathematical techniques which seem decidedly to stretch the requirement of convexity whilst still displaying rigour of analysis, and in 1993 he received the Nobel Prize for work in which he applied these techniques to areas of human action, particularly crime[55] and familial relationships,[56] which it seems far-fetched to regard as essentially economic. Becker has made what seem to be quite amazing strides towards integrating much of this into general theories of expenditure of time[57] and of investment in human capital.[58] However, his work is characterised by a mixture of crude simplicity of motivational analysis and extreme complexity of the mathematics necessary to get that analysis to begin to work. One example of the former should suffice (I leave it to the masochistic to look into the latter):

> For most parents, children are a source of psychic income or satisfaction, and, in the economist's terminology, children would be considered a consumption good. Children may sometimes provide money income and are then a production good as well. Moreover, neither the outlays on children nor the income yielded by them are fixed but vary in amount with the child's age, making children a durable consumption and production good.[59]

Becker is by no means an idiot and on this occasion he goes on to say: "[i]t may seem strained, artificial, and perhaps even immoral to classify children with cars, houses, and machinery." To this one has to answer "yes." However, all of Becker's other than outright technical work somewhere enters some such caveat about its basic thrust - even his Nobel Lecture begins with a hedge to this effect that surely was quite bizarre in the circumstances[60] - and then proceeds regardless. But it is not enough to recognise that one is being "strained, artificial and perhaps even immoral" to absolve oneself from being so. I do not know whether Becker has a religion or what it may be, but his evident belief in the power of repeated confession to absolve repeated sin leads one to formulate a hypothesis.

Now, Becker is obviously driving at something, for in his work on the family, for example, he is building on:

> the assumption that when men and women decide to marry, or have children, or divorce, they attempt to raise their welfare by comparing benefits and costs. So they marry when they expect to be better off than if they remained single, and they divorce if that is expected to increase their welfare.[61]

Up to a point this assumption is, as Becker claims,[62] obviously correct, and to deepen our knowledge of what we think is obvious here, may be of great value. But there is a very big difference between people acting because "they expect to be better off" and acting "to increase their welfare," and as Becker does not see this, he cannot make the difference clear and so make what may be valuable in his work clear. Even if one allows that almost *all* action displays "economic" aspects, this hardly entails allowing the claim that *all* action is in some way basically economic.

The principal attempt to elaborate essentially Becker's position within sociology is the "rational choice theory" of James Coleman. Coleman's recent *Foundations of Social Theory* [63] magisterially sums up 40 years of distinguished work, but I cannot call to mind a less convincing brilliant book. It is a paradigmatic expression of the broad methodology lying behind much law and economics in that its specific character resides in merely *overstating* an otherwise interesting claim about the usefulness of appreciating the exchange dimensions of action set out in a balanced way in a group of works traceable to Homans[64] of which Blau's *Exchange and Power in Social Life* [65] is now the most well known. In fact, whilst it derives much of its methodology from the *Geisteswissenchaften* of late nineteenth century German social sciences which is the principal source of interpretative social theory, neo-classical economics has never particularly bothered with assessing the adequacy of its understanding of the meaning of what it claims to be economic action,[66] and Becker's work carries to an almost self-parodying excess a hermeneutic mistake which Weber identified at least 50 years ago:

> The construction of a purely rational course of action...serves the sociologist as a type (ideal type) which has the merit of clear understandability and lack of ambiguity [This is] only a methodological device. It certainly does not involve a belief in the actual predominance of rational elements in human life, for on the question of how far this predominance does or does not exist, nothing whatever has been said. That there is, however, a danger of rationalistic interpretations when they are out of place cannot be denied. All experience unfortunately confirms the existence of this danger.[67]

If, like I do, one feels that the main thrust of Becker's work is quite trivial and so far has produced specific results that (though often politically significant) are flatly implausible and without interest when put in the one-dimensional way he insists upon putting them, then one is not really rejecting the detail of that work in particular but is stating a fundamental disagreement with the economic imperialism he represents as such, and the direction he has given to law and economics.[68]

By far and away the most effective proponent of Chicagoan law and economics to lawyers has been Richard Posner, who clearly has been the most influential writer on law in the common law world over the last quarter century.[69] Unlike Becker, Coase and Coleman, Posner is by no means a first rank intellectual,[70] but it was precisely his rather simplistic view of matters that allowed him early to formulate, to his own satisfaction, the basic ideology of law and economics when a more subtle mind would have had doubts. He therefore was able, in his earlier work, to produce particularly clear statements of the basic implications of that ideology for a vast range of issues both legal and merely tangential to law - including adoption,[71] aids[72] and aging,[73] and this is just to stay within topics beginning with the letter "a" - when no one who felt obliged fully to understand those issues before writing about them would have put pen to paper.[74] With tremendous energy,[75] Posner has taken his line from Becker[76] and built it up into an ideology of law and economics which, by dispensing with the rather hard math and ignoring or disparaging, with various degrees of disingenuousness, all objections, he has pushed everywhere it possibly could go. In a sense, one has to take one's hat off to work in which, for example, the notion we have encountered that children are consumer durables is pushed through to advocacy of running adoption as a market, but, of course, taking one's hat off is often merely a preliminary to scratching one's head.

Posner's major product has been a deservedly successful textbook (and a series of expository essays covering the same ground in greater depth) on *The Economic Analysis of Law*[77] which displays an extraordinary gift for advocacy.[78] But writing of this quality obviously loses its impact when set out at a higher level of scholarship, and almost all of Posner's later work is an attempt doggedly to defend himself, against criticism to which he has always been ready to reply but loathe to take onboard, from various positions it would have been wise not to have staked out so brazenly in the first place.

Posner's work on adoption, for example, is galvanised by his concern that "The baby shortage would be considered an intolerable example of market failure if the commodities were telephones rather than babies," and turns on the belief that:

> The facts that many people who are capable of bearing children do not want to raise them, many other people who cannot produce their own children want to raise them, and the costs of production to natural parents are much lower than the value that many childless parents attach to children, suggest the possibility of a market in babies for adoption.[79]

Given the distribution of wealth in the US, if this proposal is at all effective it must move desirable (healthy, good looking and presumably white) babies into wealthy (presumably white) families,[80] and Posner acknowledges the criticism that "the rich would end up with all the babies, or at least all the good babies."[81] His response has been to dilute his proposal from "a market" to the "limited experimental step"[82] of regulating baby selling "less stringently."[83] Of course, less stringent regulation of an administrative procedure leaves it as an administrative procedure rather than a market, and so Posner is giving up everything that was characteristic about his proposal. In essence, he is denying ever "advocating a free market in babies."[84] But Posner's treatment of this issue in the second edition of his textbook *did* appear under the heading "The Legal Protection of Children and the Case for Legalising Baby Sales".[85] That the words after "Children" are omitted in a later edition, whilst it tells us nothing about the issue, tells us everything about the way Posner thinks it fit to conduct debate. For one *can* hold on to one's original positions by this sort of unscrupulous weakening of them, but such a defence is tantamount to surrender of the belief, except that one is weaselling about the defeat which makes rational discussion impossible. This, unfortunately, is an almost defining characteristic of Posner's later work.[86] And as even the revised modest proposal must tend to give the rich "all the good babies," Posner even goes on to deny the logic of his own original claim in defence of that claim. "Such a result," we are told, "is unlikely to materialise. Because people with high incomes tend to have high opportunity costs as to time, the wealthy usually have smaller families than the poor."[87]

Posner's defences of his proposal are, then, that he did not propose it or, if he did, that it will not work.

I do not want to dwell on this sort of stuff here but, having hopefully indicated the nature and consequences of the economic imperialism Becker represents in theory[88] and Posner in policy,[89] I want to show that there is something very different in Coase.[90]

Coase's philosophy of economics

Coase did not write a book setting out his views in general, but in 1988 the University of Chicago Press published *The Firm, the Market and the Law* in which was collected his principal papers and Coase prefaced this collection with a new chapter, also entitled 'The Firm, the Market and the Law,' which purports to give an overview of his work. This chapter makes a claim for the applicability of economic analysis of "choice" to the analysis of all human action which clearly is wholly sympathetic to Becker. In a number of methodological statements, Coase indeed took Beckerís line to an extreme one had not thought one would encounter in high level social science since positivism became something of a dirty word. Coase looked forward not only to the unification of economics with what he believed to be the natural sciences, so that economics will embrace all sentient creatures (including the "rat, the cat and the octopus"),[91] but to the complete mathematisation of the unified science.[92] I have said enough in criticism of this elsewhere and will not repeat it here. But though I do not mean to withdraw this earlier criticism, I would now like to focus it much more narrowly by identifying it as a criticism *only* of Coase's statements of methodological sympathy with Beckerís imperialism.[93] For what is wrong with this criticism is that it does not point up the way in which, though as the unusually active editor of *The Journal of Law and Economics*[94] Coase himself helped fashion many expositions of Beckerís line, the bulk of his own *substantive* work displays little sign of the effects of this baneful methodology. Rather what characterises that work is, as I have said at the outset, its immense carefulness about the institutional context of rational economic action. Let us now turn to this substantive work.

Transaction Costs and the New Institutional Economics

In his 1937 paper 'The Nature of the Firm,' Coase asked what now seems a very obvious question indeed: if markets are efficient, why are there firms at all? If this question is analysable as a problem of seeking allocative efficiency, the answer must be that, in certain circumstances which would seem to be of very wide application in the capitalist economy, the firm is a cheaper way of organising production than the market. If one assumes the existence of a fully contingent market, this cannot be the case, but, of course, we have seen that this assumption has no empirical plausibility. It has been Coase's basic insight to clarify why "market failure" occurs by drawing attention to the existence of what have come to be known as "transaction costs," the costs of producing an allocative outcome:

> In order to carry out a market transaction, it is necessary to discover who it is that one wishes to deal with, to inform people that one wishes to deal and on what terms, to conduct negotiations leading up to a bargain, to draw up a contract, to undertake the inspection needed to make sure that the terms of the contract are being observed, and so on.[95]

Fully contingent markets are markets at zero transaction costs, that is to say with information gathering and communication costless. But information gathering and communication costs will *always* be positive, so that the existence of such markets is a "very unrealistic assumption."[96] The thrust of Coase's work is to reject the view of "the economic system as it is normally treated by the economist"[97] and demonstrate that "there is a cost of using the price mechanism,"[98] in order to *draw attention* to the existence of transaction costs in empirical markets and therefore to call for the explanation of particular markets as *specific social institutions*. After Coase, we can say that neo-classical economic analysis, which typically assumes a market at zero transaction costs, should be used as a guide to economic policy formulation only when balanced by an appreciation of the importance of the institutional structure of transactions, including those made in a market. As empirical markets have positive transaction costs, these must be weighed against alternatives - which boil down to the firm or the state (though a large literature is growing on "hybrid" forms[99]) - with the firm itself being explained as a structure which minimises transaction costs under certain conditions.

This is the foundation of law and economics because, of course, the principal such institution to which one turns to explain the form of markets, firms and regulation is the law:

> If we move from a regime of zero transaction costs to one of positive transaction costs, what becomes immediately clear is the importance of the legal system in the new world...what are traded on the market are not, as is often supposed by economists, physical entities but the rights to perform certain actions, and the rights which individuals possess are established by the legal system...the legal system will have a profound effect on the working of the economic system and may in certain respects be said to control it.[100]

This insight should be applied to *all* structures for the governance of transactions, including particular markets, even that modern talisman, the securities market:

> commodity exchanges and stock exchanges...are normally organised by a group of traders (the members of the exchange) which owns (or rents) the physical facility within which transactions take place. All exchanges regulate in great detail the activities of those who trade in these markets (the times at which transactions can be made, what can be traded, the responsibilities of the parties, the terms of settlement, etc), and they all provide machinery for the settlement of disputes and impose sanctions against those who infringe the rules of the exchange. It is not without significance that these exchanges, often used by economists as examples of a perfect market and perfect competition, are markets in which transactions are

> highly regulated (and this quite apart from any government regulation that there may be). It suggests, I think correctly, that for anything approaching perfect competition to exist, an intricate system of rules and regulations would normally be needed.[101]

This is simply exemplary in the way its insistence upon the institutional structure of markets acts as a necessary corrective to the typical assumption of fully contingent markets in neo-classical economics. It is Coase's achievement to have shown, as a third remedy to neo-classical economics' lack of realism, how instead of implausibly assuming the existence of necessary relevant markets, the application of those economics may be sought within a realistic institutional context:

> many propositions of modern welfare economics [are more] concerned with diagrams on a blackboard than with the real effects of such policies on the working of the economic system. I have referred to this type of economics as "blackboard economics" because...the whole process takes place on a blackboard. This is not the way one operates with a social system. All that can be done is set up a new agency, or change the rules under which an old agency operates, or take some other similar action. All that is possible is to operate on social institutions and to discuss social policy in a sensible way; it is necessary to consider the effect of changing the social institutions with which we work.[102]

Crucially, this institutional context may be established only by eschewing pursuit of the fully contingent market as a realistic goal of economic policy:[103]

> Contemplation of an optimal system may suggest ways of improving the system, it may provide techniques of analysis that would otherwise have been missed, and, in certain special cases, it may go far to providing a solution. But in general its influence has been pernicious. It has directed economists' attention away from the main question, which is how alternative arrangements will actually work in practice. It has led economists to derive conclusions for economic policy from a study of an abstract model of a market situation...Until we realise that we are choosing between social arrangements which are all more or less failures, we are not likely to make much headway.[104]

With this, law and economics has produced a conclusion as important as any in modern social theory, but the appreciation of this, the core of what is valuable in law and economics, has been hindered because it is at complete variance to the principal way in which Coase's work has been taken up in law and economics dominated by Chicago, most notably in the development of the baneful "Coase Theorem".

The Coase Theorem

That work of Coase which marks the creation of modern law and economics was not 'The Nature of the Firm' but a much later, 1960, paper, 'The Problem of Social Cost.' In this paper, Coase assesses what contribution the law of tort may make to dealing with the problem of pollution and the first thing he says is that it is wrong to regard the aim of tort as the prevention of pollution but rather it is the establishment of the socially acceptable level of risk. One *can* (let us allow for the sake of argument) have zero pollution, but only at the cost of ceasing industrial production, and whilst there is support for taking this step, it is overwhelmingly widely accepted that (with foreseeable technology) the costs of obtaining zero pollution outweigh the benefits of so doing.[105] Once Coase had - rightly and brilliantly - set up "The Reciprocal Nature of the Problem"[106] in this way, then it became immediately arguable that this usefully may be analysed as an economic problem, for the sum of welfare produced by a certain level of pollution may be weighed against the sum of welfare produced by other (including zero) levels.[107]

Why, before Coase, this was not typically analysed in this way was that the costs of pollution were regarded as "social costs" or "externalities" because they were taken to be examples of market failure in that it was hard to make them bear a price. On this basis, dealing with pollution typically has been regarded as requiring public investment in the "public goods" of pollution control, that is to say, an "economic" decision is taken about pollution control, but through the state decision-making process rather than through the market. This process must produce an allocation that is sub-optimal by comparison to the Pareto optimal one that would be reached were the costs of pollution to have a fully specified price, and the empirical evidence of the history of pollution regulation both in the capitalist and more particularly in the state communist countries shows that the degree of sub-optimality is non-negligible. Coase shows that it is not enough to show that the market does not work optimally. We must also show that the proposed alternative would work better.

These notions of "externalities" and "public goods" were, however, the central ones of the dominant line of welfare economics during Coase's professional lifetime, a line identified with the work of AC Pigou[108] which tended to produce regulatory solutions, including public ownership, to perceived market failures.[109] The key to the interpretation of Coase's work after 'The Nature of the Firm' is to see it as an attempt to undermine Pigou's dominance. Coase seems to have conceived a personal dislike of Pigou,[110] and one might speculate that this may have been the motivation of Coase's writing a damaging paper on part of Pigou's career which, though fair to Pigou, seems of merely antiquarian interest, although Coase thought it important enough to reprint in the second collection of his papers.[111] However this is, as the suggestion has been recently raised that Coase's treatment of Pigou is unfair,[112] it is as well for me to state that it is my opinion that Coase's dislike of Pigou does not seem to undercut his (Coase's) treatment of him (Pigou) at all, for where he draws attention to weaknesses in Pigou's "manner of working,"[113] he always makes out a good case for so doing.

After 'The Nature of the Firm', Coase largely worked on a number of empirical studies of governance structures, particularly the state regulation of industry. Whereas the power of his account of the firm lies in the way it shows that the market has positive transaction costs, the power of these studies shows that regulation had such costs too, and that simply to advocate regulation because one was dissatisfied with the market was absurd. What one needed to do was compare the costs of firm, market and state governance under the empirical circumstances and choose the cheapest. Coase was able to make terrific fun of many regulatory initiatives, showing that broadly Pigovian solutions simply were not well enough thought out because Pigou typically failed to inquire into the working of the regulation he advocated but rather worked by "assuming the existence of (almost) perfectly functioning public bodies."[114] 'The Problem of Social Cost' worked up the general implications of one of these studies, a 1959 article on the regulation of broadcasting,[115] into a devastating critique of Pigou,[116] the final nail in Pigou's coffin being hammered home in 1974 in 'The Lighthouse in Economics.'[117]

When searching for an obvious example of a social good, a great many important textbooks, including Pigou's own,[118] have hit on lighthouse services as an example of a good which must be publicly provided because it is hard to create a private market in that good. In a truly brilliant way, Coase not only showed that the Pigovian argument is very woolly indeed but, and this is the Coase touch, that there was a perfectly thriving private market in British lighthouse services prior to 1842, which was ended only by the state buying the private lighthouses at enormous expense![119] Of course, lighthouse services now typically *are* publicly provided, and Coase concluded the paper by responding to this fact in this way: "How such governmental systems actually operate, I do not know. Bierce's definition of an American lighthouse - 'A tall building on the seashore in which the government maintains a lamp and the friend of a politician' - presumably does not tell the whole story."[120]

There can be little doubt that Coase, who left Britain for the USA in 1947 in part because of "a lack of faith in the future of socialist Britain,"[121] was highly anxious to stress the costs of regulation. However, 'The Problem of Social Cost' contains a condensed version of 'The Nature of the Firm's' statement that the market has its costs,[122] and there is nothing in the transaction cost argument derived from these papers that authorises a bias against state governance, unless asking that it be adopted *only* when it is the best form of governance is such a bias. What transaction cost analysis *authorises* is an informed choice between alternatives, none of which will work perfectly.[123] What, however, it *has been taken as authority for* is a predilection towards market solutions based on an interpretation of 'The Problem of Social Cost' which has set up what has come to be known as the "Coase Theorem." In its very many uses,[124] with all of which I cannot begin to deal here,[125] the Coase Theorem has become a complicated and silly way of saying something initially quite simple and it should, in my opinion, now be abandoned because it is too vexed an idea for productive use.[126]

Though by no means denying that the ideas summed up in the phrase the Coase Theorem are to be found in his work, Coase has always been anxious to disavow authorship of that phrase, which he attributes to his friend George Stigler,[127] an economist whom Coase greatly admired.[128] Amongst Stigler's achievements is a standard textbook on microeconomics now called *The Theory of Price*,[129] in the 1966 edition of which appeared a claim dubbed the "Coase Theorem" that "under perfect competition private and social costs will be equal."[130] On the assumptions necessary for general equilibrium, this claim is a truism, for in a general competitive market there are no "external" ("social"), as opposed to "internal" ("private"), costs as all relevant contingent markets exist and therefore *all* costs are internal.[131] Thus it can be said that there are no social costs in a general competitive market.

Now, this is a striking thing to say, but it is important to be clear why it is striking. It obviously does not mean that the harmful effects of, say, pollution formerly understood as social costs would no longer exist (rather it asserts that an allocation at which the optimal level of pollution is established such that welfare is optimised would be reached at general equilibrium). On the other hand, it certainly does mean that state regulation would be unnecessary, indeed harmful, in a general competitive market, and this is a useful corrective to assuming that phenomena such as pollution inevitably are "social" costs. It is essentially this that Coase establishes in the early part of 'The Problem of Social Cost' which assumes that "there were no costs involved in carrying out market transactions."[132]

This theoretical argument leads to the policy conclusion that rather than immediately moving from perceived market failure to government intervention, it is wise to consider reducing the transaction costs which presently prevent the contingent markets from being available. These would be necessary to approximate to general competition, which typically would be a matter of creating effective "property rights" such that those markets are established. The alternatives could then be compared. In respect of pollution, before concluding regulation is necessary, we should much more carefully consider the costs of alternative governance structures such as the private law of nuisance which could operate were individuals to have private property rights which adequately created an interest in, say, having drinkable water. Coase illustrated his argument with learned references to the common law of nuisance which show the plausibility of negotiation or litigation between private property rights holders to solve problems such as obtaining clean air in specific cases.[133] This seems to me to be wholly right,[134] and it has served a most useful role as one of the correctives to the statist bias of the Pigovian tradition of welfare economics (and other systems of economic planning).

But it must also be remembered that this can be taken only so far for, of course, there is no empirical possibility of there being a world of zero transaction costs, as Stigler was at pains to emphasise when saying of the "Coase Theorem" that: "If this proposition strikes you as incredible on first hearing, join the club. The world of zero transaction costs turns out to be as strange as the physical world would be without friction,"[135] and that this world of zero transaction costs had a very limited indeed empirical domain.[136] It seems absurd to have to point out, but the evidence of the quality of the majority of interpretations of Coase's work confirms that it is necessary,[137] that in 'The Problem of Social Cost' the early assumption of zero transaction costs is dropped and alternative governance structures considered when "The Cost of Market Transactions [is] Taken Into Account."[138] Once this cost is taken into account, then Coase emphasises that the "operations [necessary to carry out a market transaction] are often extremely costly, sufficiently costly at any rate to prevent many transactions that would be carried out in a world in which the pricing system worked without cost."[139] It is on this basis that Coase compares the market, the firm and the state and, to the extent that 'The Problem of Social Cost' advances any concrete policy proposals, it is that the state is best fitted to handle certain forms of pollution:

> It is clear that an alternative form of economic organisation which could achieve the same result at less cost than would be incurred by using the market would enable the value of production to be raised...the firm represents such an alternative to organising production through market transactions. Within the firm, individual bargains between various co-operating factors of production are eliminated and for a market transaction is substituted an administrative decision...This solution would be adopted whenever the costs of the firm were less than the costs of the market transaction that it supersedes...But the firm is not the only answer to this problem. The administrative costs of organising transactions within the firm may also be high, and particularly so when many diverse activities are brought within the control of a single organisation. In the standard case of a smoke nuisance, which may affect a vast number of people engaged in a wide variety of activities, the administrative costs might well be so high as to make any attempt to deal with the problem within the confines of a single firm impossible. An alternative solution is direct governmental regulation...It is clear that the government has powers which might enable it to get some things done at a lower cost than could a private organisation...But the governmental administrative machine is not itself costless. It can, in fact, on occasion be extremely costly...From [this consideration] it follows that direct governmental regulations will not necessarily give better results than leaving the problem to be solved by the market or the firm. But equally there is no reason why, on occasion, such governmental regulation should not lead to an improvement in economic efficiency. This would seem particularly likely when, as is normally the case with the smoke nuisance, a large number of people is involved and when therefore the costs of handling the problem through the market or the firm may be high.[140]

Rather than this disinterested weighing of alternatives, however, what has typically happened, however, is that Coase's (and Stigler's) position has been vulgarised out of sight for the "Coase Theorem" has been used to sanction a more or less general claim that a market allocation is better than a state allocation. If, taking the "zero transaction costs postulate" to be a solution to governance problems when it is merely a stage in the analysis of such problems, one assumes that empirical markets will tend to be markets at zero transaction costs, then the superiority of the market just emerges from the very unfair comparison between a market assumed to be perfectly efficient and a state known not to be so. This is to assume the existence of all relevant markets and, as a guide to economic policy, it is precisely Coase's contribution to have shown us that there is no more ridiculous assumption one could make. Or rather, there is only one as ridiculous, for this bias towards the market is just the opposite error to Pigou's "assuming the existence of (almost) perfectly functioning public bodies" which Coase has shown to be so silly as to be "laughable today."[141]

The power of works on property rights and the principal reason for their success is that they *have* identified what, because of them, are now recognised as widespread regulatory failures. In doing this they *have* revived the plausibility of some market based solutions when that plausibility wrongly had been thought generally extinguished. The shortcoming of these works is that many of them tend to substitute for the careful evaluation of alternative governance structures recommended by Coase a blithe recitation of formulaic solutions to hugely complicated problems. Driven by the baneful bias in favour of markets that lies behind "the Coase Theorem," a huge, pointless literature has been developed elaborating such solutions, and the good point that we should be very careful to appreciate the costs of regulation has been turned into many claims that a market would be the optimal governance structure which, when appraised with any sort of awareness of empirical circumstances, manifestly are absurdly reckless. As Williamson rightly has said of the unrestrained or selective invocation of the assumption of zero transaction costs, "However powerful and useful it is for classroom purposes and as a check against loose public policy descriptions, it easily leads to extreme and untenable 'solutions.'"[142]

The fantastic quality of some of these solutions really has to be seen to be believed. Those familiar with this literature will have their own particularly daft examples. During some time I spent in Hong Kong, my then colleague Bryan Bachner drew my attention to Kwong's extraordinarily naive and insensitive *Market Environmentalism*,[143] which advocated property rights solutions to more or less all of Hong Kong's environmental problems. I do not want to say overmuch about Kwong's argument as such, for as she does not even consider the general problem that the shamefully slow and expensive civil legal system in Hong Kong plays almost no role in resolving the existing civil legal grievances of the overwhelming majority of the Chinese population, that argument would barely be worthy of notice were it not for the political support it receives.[144] However, Kwong is foolish enough to invite direct comparison with Coase by discussing lighthouses, and perhaps a word about this is instructive. Coase did *not* advocate a market in lighthouse services in 'The Lighthouse in Economics'; he merely showed the implausibility of the Pigovian understanding of the problem and then had the good sense to leave for "more detailed studies"[145] the possible form of provision of lighthouse services. Kwong's own treatment of the lighthouse problem[146] is in marked contrast. In one paragraph, and what is more a paragraph which is entirely devoted to a quotation from an author who *has no knowledge at all* of the situation in Hong Kong, she thinks she has sufficiently dealt with the issue by advocating such a market. This is simply rubbish, and the general acceptance of the plausibility of law and economics depends on it being recognised to be such. To the very limited extent that Kwong's book actually makes any concrete environmental proposals, they are all hopelessly general and entirely subject to Coase's strictures against economists who have not "made a detailed study...or read a detailed study by some other economist."[147]

Coase on the Coase Theorem

As I hope I have made clear, it seems manifest to me that Coase would have disapproved of most of what is claimed for the Coase Theorem, for the very good reason that it cuts wholly against what he is trying to say. Summing up the reception of 'The Problem of Social Cost' in 1986 he said: "The world of zero transaction costs has often been described as a Coasean world. Nothing could be further from the truth. It is the world of zero transaction costs, one which I was hoping to persuade economists to leave"[148] for, "It would not seem worthwhile to spend much time investigating the properties of such a world."[149] More generally, he observed:

> The extensive discussion [of my article] in the journals has concentrated almost entirely on the 'Coase Theorem,' a proposition about the world of zero transaction costs. This response, though disappointing, is understandable. The world of zero transaction costs is the world of modern economic analysis, to which the Coase Theorem applies, and economists therefore feel quite comfortable handling the intellectual problems it poses, remote from the real world though they may be.[150]

And on the proper use of transaction cost analysis, in 1991 Coase wrote:

> I regard the Coase Theorem as a stepping stone on the way to an analysis of an economy with positive transaction costs. The significance to me of the Coase Theorem is that it undermines the Pigovian system. Since standard economic theory assumes transaction costs to be zero, the Coase Theorem demonstrates that the Pigovian solutions are unnecessary in these circumstances. Of course, it does not imply, when transaction costs are positive, that government actions...could not produce a better result than relying on negotiations between individuals in the market. Whether this would be so could be discovered not by studying imaginary governments but what real governments actually do. My conclusion: Let us study the world of positive transaction costs.[151]

The forms of idiotic ideological argument associated with the Coase Theorem should not be allowed to obscure this conclusion, which is wholly opposed to their thrust.

The cast of Coase's mind that I am trying to drive at was made most clear in some comments on Posner made in 1992. Coase's response to a conference paper in which Posner had thought to eulogise his (Coase's) name by sticking it on to a lot of his (Posner's) own ideas was as follows:

> My first reaction on reading Posner's paper was one of amusement. It recalled to my mind Miss Elliott's description of Alfred Marshall's lectures on Henry George. She said that Marshall reminded here of a boa-constrictor that slobbered over its victim before swallowing it. In saying this, I had no intention of equating Posner with Marshall, still less with any kind of snake, although I did confess that the wicked thought did flicker through my mind as I studied his paper with more care and ceased to be amused. Posner says that the first part of his paper describes "the conception of the field [the new institutional economics] held by Ronald Coase." Reading this part of his paper recalled to my mind Horace Walpole's opening remarks in his book on King Richard the Third: "So incompetent has the generality of historians been for the province they have undertaken, that it is almost a question, whether, if the dead of past ages could revive, they would be able to reconnoitre the events of their own times, as transmitted to us by ignorance and misrepresentation." I have only one foot through the door, but should the final yank come before this piece is published, Horace Walpole's words would apply exactly to Posner's highly inaccurate account of my views.[152]

I cite this at length to emphasise that the law and economics represented by Posner is not only not exhaustive of law and economics outwith Chicago[153] but also does not help us to come to terms with what Chicago has produced that is productive. If I have at all managed to convey the quality of Posner's mind accurately, it may now be supererogatory to add that his response to this was to maintain that he knew what Coase meant better than Coase himself[154] and to let a paper he had written purporting to set out Coase's methodological views go through to publication.[155]

Conclusion: the explanation of transaction costs

Although, then, it is clear that there is a very considerable distance between what is valuable in Coase and the dominant thrust of Chicagoan law and economics, it is evidently the case that Coase did not make his taking of that distance sufficiently clear. Amongst the reasons one might advance for this, one is his commitment to Becker's methodology. Though, as we have seen, Coase is highly critical of "mainstream economic theory," his fundamental aim is *not* to challenge that theory but to *defend* it against criticism of its manifest lack of realism by providing, in transaction costs, a way of bringing realism into the analysis *as a set of boundary conditions*. Coase uses transaction costs to describe the institutions necessary for allocations to take place, and in particular the specific market institutions within which exchange can take place. Economic action is therefore provided with a realistic context which deflects criticism of the non-existent empirical domain of such action and thus creates the possibility of neo-classical analysis, and does so *without changing the core concepts of the analysis which produced the problem of lack of realism in the first place:*

> What differentiates [my writings] is not that they reject existing economic theory, which...is of wide applicability, but that they employ this theory to examine the role which the firm, the market and the law play in the working of the economic system.[156]

The fundamental claims of mainstream economic theory are accepted, with the refinement that the institutional context of their application is not, as in that theory, ignored, but analysed as transaction costs.

The aim of the analysis is, of course, to drive these costs down, for that is what one should do with costs, but this makes sense *only* if a residual transacting mechanism is assumed. This is precisely what neo-classical economics *does* assume in the concept of individual utility maximisation, and Coase himself makes a similar assumption. Coase follows Becker in believing that there is some essential quality about human beings as such that makes them exchange on a rational utility maximising basis[157] or, as he has it, choose, in the ways analysable by neo-classical economics:

> I believe that human preferences came to be what they are in those millions of years in which our ancestors (whether or not they can be classified as human) lived in hunting bands and were those preferences which, in such conditions, were conducive to survival.[158]

Coase readily concedes - in fact it is more fair to say that he centrally urges the recognition - that transactions at zero cost will never empirically obtain, but the point is to approximate towards the zero cost ideal. However, this is a paradoxical and confusing goal because he does not understand why it is unobtainable. The negotiating, information gathering, organising, *etc.* within which transactions take place are not only costs, they are also the social relations which are essentially facilitative of the transaction. Negotiation is a cost, but what contract could be made without language? Information gathering is a cost, but what contract could be made in complete ignorance? All actions, including all transactions, can take place only within constitutive social relations. The stress on the reduction of transaction costs has a technical function of the first importance but inevitably is carried too far if that technical function is confused, as it typically is in law and economics, with a basic analysis of the ontological character of economic action. If one really took away all the costs of exchanging, the exchange would not take place cost free, it would not take place. This should tell us that, regardless of its technical usefulness, the transaction cost approach cannot begin to stand as an understanding of economic actions.

Coase has made an immense contribution by establishing the institutional prerequisites of rational economic action but he does not think it necessary to explain rational economic action itself as an institution or, better, as a specific form of action constituted within specific social relations.[159] This, however, is precisely what is needed. Further development of the employment of neo-classical technique requires that it be put to work within a sound, sociological framework. In essence, it is necessary to accomplish exactly what Coase has attempted - the provision of an appropriate framework in which neo-classical economic analysis can have a use - though in a rival fashion.[160]

The principal attempt to do this within economics[161] is, however, precisely the "old" institutionalism which Coase rejects.[162] Whilst I do not wish to claim that an adequate social theory may be found within that body of thought, what I would claim is to be found is an acknowledgement of the necessity of the development of such a theory as a condition for the further development of economics. By attempting to associate his work with that of Becker, Coase undercuts what is best in his work. Coase's work requires a full account of the institutions of capitalist exchange and yet Becker places the principal such institution, the technical-rational orientation of economic action, beyond the range of economic (or social) analysis by locating it within the assumptions of rational utility maximisation that are identified with human action as such. What is at issue has been clearly enough identified by Ayres:

> What was most basically wrong with the conception of the economy in terms of 'enlightened self-interest' and the 'self-regulating market' was the whole conception of the nature of man and society of which that conception of the economy was a particular expression. The error, fundamental as it is, can be stated very simply and briefly...the nature of man was presumed to be antecedent to organised society. Thus society in general and the economy in particular were conceived to derive their character from the pre-existent character of man. The whole conception of the nature of man and society is now known to be quite false. Human nature as we know it is not antecedent to society. On the contrary, it is a function of society.[163]

Old institutionalism accordingly contains a number of accounts of the historical development of the capitalist economy and of the orientation of action on which that economy turns that are of real interest. When, by comparison, we turn to what Coase tells us of capitalist development, we find things like the following:

> Like galaxies forming out of primordial matter, we can imagine the institutional structure of production coming into being under the influence of forces determining the interrelationships between the costs of transacting and the costs of organising. These relationships are extremely complex, involving...pricing practices, contractual arrangements, and organisational forms.[164]

And this is where we are left.[165] It is, I think, sufficient compliment to Coase that one is simply jarred by the contrast between this *Readers' Digest* sort of talk of galaxies and primordial matter and the carefulness about institutional detail that one identifies with his substantive work. If we are to take Coase's institutional method, and with it law and economics, through to a real grasp of the economic institutions of capitalism, then it can only be by rejection of this type of ludicrous generality which follows from economic imperialism of Becker's sort. It is a baneful mistake, though unfortunately a common one, to identify, through Posner, law and economics with this sort of economic imperialism. The specification of the institutional framework of transacting which the realisation of what is most valuable in law and economic requires must be carried out on an entirely different basis.

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1 D Campbell and DR Harris, 'Flexibility in Long-term Contractual Relationships: The Role of Co-operation' (1993) 20 *Journal of Law and Society* 178-9 and D Campbell, 'Ayres *Versus* Coase: An Attempt to Recover the Issue of Equality in Law and Economics' (1994) 21 *British Journal of Law and Society* 434. I have applied this argument to contract, company law and the analysis of national economic policy in D Campbell, 'Introduction,' in D Campbell and S Clay, *Long-term Contracting*, Oxford, Centre for Socio-legal Studies, 1995, pp 3-38; D Campbell, 'Why Regulate the Modern Corporation: The Failure of Market Failure?' in J McCahery *et al*, eds, *Corporate Control and Accountability*, Oxford, Clarendon Press, 1993, pp 103-31 and D Campbell, 'Economic Ideology and Hong Kong's Governance Structure After 1997,' in R Wacks, ed, *Hong Kong, China and 1997*, Hong Kong, Hong Kong University Press, 1993, pp 87-122.

2 Professor Donohue seems to have had to undertake some such re-evaluation himself. JJ Donohue, 'Diverting the Coasean River: Schemes to Reduce Unemployment Spells' (1989) 99 *Yale Law Journal* 549; RC Ellickson, 'The Case for and Against "Coaseanism"' (1989) 99 *Yale Law Journal* 611 and JJ Donohue, 'Reply' (1989) 99 *Yale Law Journal* 635.

3 I have approached another more theoretical economic aspect of the matter in D Campbell, 'The Relational Constitution of Contract and the Limits of "Economics": Kenneth Arrow on the Social Background of Markets,' in S Deakin and J Michie, eds, *Contracts, Co-operation and Competition*, Oxford, Oxford University Press, forthcoming.

4 KJ Arrow, 'Pareto Optimality with Costly Transfers,' in KJ Arrow, *Collected Papers*, vol 2, Cambridge (USA), Belknap Press, 1983, p 290.

5 HH Gossen, *The Laws of Human Relations*, Cambridge (USA), MIT Press, 1983, ch 7; WS Jevons, *The Theory of Political Economy*, Harmondsworth, Penguin Books, 1970, ch 4; C Menger, *Principles of Economics*, New York (USA), New York University Press, 1981, ch 5, sec 3 and L Walras, *Elements of Pure Economics*, Philadelphia (USA), Orion Editions, 1983, lesson 12.

6 V Pareto, *Manual of Political Economy*, New York (USA), Augustus M Kelley, 1971, ch 6, sec 33.

7 R Nozick, *Anarchy, State and Utopia*, New York (USA), Basic Books, 1974, pp 155-60.

8 J Rawls, *A Theory of Justice*, Cambridge (USA), Belknap Press, 1971, pp 83-90.

9 FA Hayek, *Law, Legislation and Liberty*, Chicago (USA), University of Chicago Press, 1976, ch 9.

10 *Ibid*, vol 1.

11 A Smith, *The Wealth of Nations*, Oxford, Oxford University Press, 1976, p 412.

12 FH Knight, 'Some Fallacies in the Interpretation of Social Costs,' in KJ Arrow and T Scitovsky, eds, *Readings in Welfare Economics*, London, George Allen and Unwin, 1969, pp 226-7.

13 Arrow, 'Pareto Optimality with Costly Transfers,'í p 291.

14 KJ Arrow, 'General Economic Equilibrium,' in Arrow, *Collected Papers*, vol 2, p 216.

15 Gossen, *The Laws of Human Relations*, ch 1; Jevons, *The Theory of Political Economy*, ch 3 and Menger, *Principles of Economics*, ch 2.

16 AK Sen, 'Rational Fools: A Critique of the Behavioural Foundations of Economic Theory' (1977) 6 *Philosophy and Public Affairs* 317.

17 KJ Arrow and G Debreu, 'Existence of an Equilibrium for a Competitive Economy,' in Arrow, *Collected Papers*, vol 2, Belknap Press, 1983, pp 220-2.

18 I mean by this failure to refer to a flat lack of realism in *any* neo-classical account and not to the more specific claim that general competitive equilibrium is a poor description of the basic structure of the advanced capitalist economy. JM Keynes, *The General Theory of Employment, Interest and Money*, London, Macmillan, 1973, p 3.

19 W Leontief, 'Theoretical Assumptions and Nonobserved Facts' (1971) 61 *American Economic Review* 1.

20 M Toruño, 'Appraisals and Rational Reconstructions of General Competitive Equilibrium Theory,' (1988) 22 *Journal of Economic Issues* 127.

21 I ignore the special case of "Austrian" economics, the neo-Kantian epistemology of which grants a certain distance from the necessity to make realist empirical claims. FA Hayek, 'Scientism and the Study of Society' (1942) 9 *Economica* NS 267; (1943) 10 *Economica* NS 34; (1944) 11 *Economica NS* 27; LM Lachman, *The Market as an Economic Process*, Oxford, Basil Blackwell, 1986; C Menger, *Investigations into the Method of the Social Sciences with Special Reference to Economics*, New York (USA), New York University Press, 1985, bk 1, ch 4 and L von Mises, *Epistemological Problems of Economics*, New York (USA), New York University Press, 1981.

22 R Lucas, 'Expectations and the Neutrality of Money' (1972) 4 *Journal of Economic Theory* 102.

23 P Bauer and A Walters, 'The State of Economics' (1975) 18 *Journal of Law and Economics* 7.

24 M Granovetter, 'Economic Action and Social Structure: A Theory of Embeddedness' (1985) 91 *American Journal of Sociology* 481.

25 T Lawson, 'A Realist Perspective on Contemporary "Economic Theory" (1995) 24 *Journal of Economic Issues* 1.

26 B Gilad *et al*, 'From Economic Behaviour to Behavioural Economics' (1984) 13 *Journal of Behavioural Economics* 1.

27 R Swedborg, 'Economic Sociology: Past and Present' (1986) 35 *Current Sociology* 1; R Swedborg, 'Major Traditions of Economic Sociology' (1991) 17 *Annual Review of Sociology* 251 and R Swedborg *et al*, 'The Paradigm of Economic Sociology,' in S Zukin and P DiMaggio, eds, *Structures of Capital*, Cambridge, Cambridge University Press, 1990, ch 3.

28 RR Nelson and SB Winter, *An Evolutionary Theory of Economic Change*, Cambridge (USA), Harvard University Press, 1982. Evolutionary economics should be distinguished from the "biological economics" to which we will see that Coase subscribed.

29 A Etzioni, *The Moral Dimension: Towards a New Economics*, New York (USA), Free Press, 1988.

30 PC Ordeshook, 'The Emerging Discipline of Political Economy,' in K Alt and J Shepsle, eds, *Perspectives on Positive Political Economy*, Cambridge, Cambridge University Press, 1990, ch 1.

31 OE Williamson, *Markets and Hierarchies*, New York (USA), Free Press, 1975, ch 1.

32 AG Gruchy, *The Reconstruction of Economics*, New York (USA), Greenwood Press, 1987 and GM Hodgson, *Economics and Institutions*, Philadelphia (USA), University of Pennsylvania Press, 1988..

33 T Veblen, *The Theory of Business Enterprise*, New York (USA), Mentor Books, 1958.

34 JR Commons, *The Legal Foundations of Capitalism*, New York (USA), Macmillan, 1924.

35 GM Hodgson, 'The Return of Institutional Economics,' in NJ Smelser and R Swedberg, eds, *The Handbook of Economic Sociology*, New York (USA), Princeton University Press, 1994, ch 3.

36 Campbell, 'Ayres *versus* Coase: An Attempt to Recover the Issue of Equality in Law and Economics.'

37 RH Coase, 'The New Institutional Economics' (1984) 140 *Journal of Institutional and Theoretical Economics* 229.

38 T Veblen, *The Instinct of Workmanship*, New York, Augustus Kelley, 1964.

39 CE Ayres, *The Theory of Economic Progress*, 3rd edn, Kalamazoo (USA), New Issues Press, 1978.

40 Coase, 'The Firm, the Market and the Law' in RH Coase, *The Firm, the Market and the Law*, Chicago (USA), University of Chicago Press, 1988, p 5.

41 RH Coase, 'The Nature of the Firm: Influence,' in OE Williamson and SG Winter, eds, *The Nature of the Firm*, Oxford, Oxford University Press, 1991, ch 5.

42 RH Coase, 'Industrial Organisation: A Proposal for Research,' in Coase, *The Firm, the Market and the Law*, ch 3.

43 RH Coase, 'Economics at LSE in the Thirties: A Personal View,' in RH Coase, *Essays on Economics and Economists*, Chicago, University of Chicago Press, 1994, ch 15; RH Coase, 'The Institutional Structure of Production,' p 6 and RH Coase, 'The Nature of the Firm: Origin,' in Williamson and Winter, eds, *The Nature of the Firm*, p 37. Cf RH Coase, 'Arnold Plant,' in Coase, *Essays on Economics and Economists*, pp 179-82.

44 Coase, 'Industrial Organisation: A Proposal for Research,' p 61.

45 A Marshall, *Principles of Economics*, 8th edn, London, Macmillan, 1920.

46 A Marshall, *Industry and Trade*, London, Macmillan, 1919, p 195.

47 Eg JR Commons, *Institutional Economics: Its Place in Political Economy*, New York (USA), Macmillan, 1934.

48 Eg JR Commons et al, *History of Labour in the United States*, New York (USA), Macmillan, 1958.

49 Coase, 'Economics at LSE in the Thirties: A Personal View,' p 214. Cf RH Coase, 'Marshall on Method,' in Coase, *Essays on Economics and Economists*, ch 11.

50 RH Coase, 'Why Not Use the Pricing System in the Broadcasting Industry?' (July 1961) 11(7) *The Freeman* 52.

51 Coase, 'The Nature of the Firm,' p 34.

52 R Brenner, 'Economics: An Imperialist Science?' (1980) 9 *Journal of Law and Economics* 179; RD Cooter, 'Law and the Imperialism of Economics' (1982) 29 *UCLA Law Review* 1258; RD Cooter, 'Law and Unified Social Theory' (1995) 22 *Journal of Law and Society* 50; J Hirshleifer, 'The Expanding Domain of Economics' (1985) 75 *American Economic Review* 53; GJ Stiglre, 'Economics: The Imperial Science?' (1984) 86 *Scandinavian Journal of Economics* 301.

53 JR Shackleton, 'Gary S Becker: The Economist as Empire Builder,' in JR Shackleton and G Locksley, eds, *Twelve Contemporary Economists*, London, Macmillan, 1981, ch 2.

54 GS Becker, 'The Economic Approach to Human Behaviour,' in GS Becker, *The Economic Approach to Human Behaviour*, Chicago (USA), University of Chicago Press, 1976 p 14.

55 GS Becker, 'Crime and Punishment: An Economic Approach,' in GS Becker, *The Essence of Becker*, Stanford (USA), Hoover Institution Press, 1995, ch 19.

56 GS Becker, *A Treatise on the Family*, rev edn, Cambridge (USA), Harvard University Press, 1991.

57 G Becker, 'A Theory of the Allocation of Time,' in Becker, *The Essence of Becker*, ch 4.

58 GS Becker, *Human Capital*, 3rd edn, New York (USA), Columbia University Press, 1993.

59 GS Becker, 'An Economic Analysis of Fertility,' in Becker, *The Essence of Becker*, pp 242-3.

60 GS Becker, 'The Economic Way of Looking at Behaviour,' in Becker, *The Essence of Becker*, p 632.

61 *Ibid*, p 643.

62 *Ibid*, p 644.

63 JS Coleman, *Foundations of Social Theory*, Cambridge (USA), Belknap Press, 1990. Becker's endorsement of this book in the publisher's blurb on its cover is as enthusiastic as one would expect.

64 G Homans, 'Social Behaviour as Exchange' (1958) 65 American Journal of Sociology 597.

65 PM Blau, *Exchange and Power in Social Life*, New York (USA), John Wiley, 1964.

66 R Boudon, 'Subjective Rationality and the Explanation of Social Behaviour,' in HA Simon *et al*, *Economics, Bounded Rationality and the Cognitive Revolution*, Aldershot, Edward Elgar, 1992, ch 7.

67 M Weber, *Economy and Society*, Berkely (USA), University of California Press, 1978, pp 6-7.

68 M Kelman, 'Misunderstanding Social Life: A Critique of the Core Premises of "Law and Economics"' (1983) 33 *Journal of Legal Education* 274.

69 N Duxbury, *Law, Economics and the Legacy of Chicago*, Hull, Hull University Law School, 1994.

70 A DíAmato, 'As Gregor Samsa Awoke One Morning from Uneasy Dreams He Found Himself Transformed into an Economic Analyst of Law' (1989) 83 *Northwestern University Law Review* 1012.

71 EM Landes and RA Posner, 'The Economics of the Baby Shortage' (1978) 7 *Journal of Legal Studies* 323.

72 TJ Philipson and RA Posner, *Private Choices and Public Health: The AIDS Epidemic in an Economic Perpsective*, Cambridge (USA), Harvard University Press, 1993.

73 RA Posner, *Aging and Old Age*, Chicago (USA), University of Chicago Press, 1995.

74 AM Polinsky, 'Economic Analysis as a Potentially Defective Product: A Buyer's Guide to Posner's Economic Analysis' (1974) 87 *Harvard Law Review* 1655.

75 It is manifest that, despite his own quibbles about it (RA Posner, *The Economics of Justice*, Cambridge (USA), Harvard University Press, 1981, ch 4), which are wholly confusing (CJ Veljanovski, 'Wealth Maximisation, Law and Ethics' (1981) 1 *International Review of Law and Economics* 1), Posner is elaborating Benthamite utilitarianism in much of his earlier work. However, the main way in which he calls Bentham to mind is that he seems to be a rather better candidate than Bentham himself for that criticism which Marx made of the latter: "[I]n no time and no country has the most homespun manufacturer of commonplaces ever strutted about in so self-satisfied a way...With the dryest naiveté he assumes that the modern...bourgeois...is the normal man. He applies this yardstick to the past, the present and the future [and with this] kind of rubbish...the brave fellow, with his motto "Never a day without its line," has piled up mountains of books. If I had the courage...I should call [him] a genius in the way of bourgeois stupidity." K Marx, *Capital*, vol 1, Harmondsworth, Penguin Books, 1976, p 758 n 51.

76 RA Posner, 'Gary Beckerís Contribution to Law and Economics' (1993) 22 *Journal of Legal Studies* 211.

77 RA Posner, *Economic Analysis of Law*, 4th edn, Boston (USA), Little, Brown, 1992.

78 JJ Donohue and I Ayres, 'Posnerís Symphony Number 3: Thinking About the Unthinkable' (1987) 39 *Stanford Law Review* 762.

79 Posner, *Economic Analysis of Law*, p 151.

80 JM Cohen, 'Posnerism, Pluralism, Pessimism' (1987) 67 *Boston University Law Review* 105; M Kelman, 'Production Theory, Consumption Theory and the Ideology of the Coase Theorem' (1979) 52 *Southern California Law Review* 669 and JRS Prichard, 'A Market for Babies?' (1984) 34 *University of Toronto Law Journal* 341.

81 Posner, *Economic Analysis of Law*, p 153.

82 RA Posner, 'The Regulation of the Market in Adoptions' (1987) 67 *Boston University Law Review* 64.

83 *Ibid*, 72.

84 *Ibid*, 58.

85 RA Posner, *Economic Analysis of Law*, 2nd edn, Boston, Little Brown, 1977, p 111.

86 Campbell, 'Ayres *Versus* Coase: An Attempt to Recover the Issue of Equality in Law and Economics,' nn 103, 108, 124.

87 Posner, *Economic Analysis of Law*, p 153.

88 L Udéhn, 'The Limits of Economic Imperialism,' in U Himmelstrand, ed , *Interfaces in Economic and Social Analysis*, 1991, ch 6.

89 CE Baker, 'The Ideology of the Economic Analysis of Law' (1975) 5 *Philosophy and Public Affairs* 3; CE Baker, 'Posnerís Private Mystery and the Failure of the Economic Analysis of Law' (1978) 12 *Georgia Law Review* 475; JM Buchanan, 'Good Economics - Bad Law' (1974) 60 *Virginia Law Review* 483; Campbell, 'Ayres Versus Coase: An Attempt to Recover the Issue of Equality in Law and Economics;' TC Heller, 'The Importance of Normative Decisionmaking: The Limitations of Legal Economics as a Basis for Legal Jurisprudence' [1976] *Wisconsin Law Review* 385; Hovekamp, 'Law and Economics in the United States;' JE Krier, 'Review of *Economic Analysis of Law* by Richard A Posner' (1974) 122 *University of Pennsylvania Law Review* 1664; AA Leff, 'Economic Analysis of Law: Some Realism About Nominalism' (1974) 60 *Virginia Law Review* 451; HH Liebhafsky, 'Price Theory As Jurisprudence: Law and Economics Chicago Style' (1976) 10 *Journal of Economic Issues* 23; RP Malloy, 'Is Law and Economics Moral?' (1990) 24 *Valparaiso University Law Review* 147; RS Markovits, 'A Basic Strucutre for Microeconomic Policy Analysis in Our Worse-than-Second-Best World: A Proposal and Related Critique of Chicago Law and Economics' [1975] *Wisconsin Law Review* 950; FM Scherer, 'The Posnerian Harvest: Separating the Wheat from the Chaff' (1977) 86 *Yale Law Journal* 974 and LH Tribe, 'Policy Science: Analysis or Ideology?' (1972) 2 *Philosophy and Public Affairs* 66.

90 P Schlag, 'An Appreciative Comment on Coase's 'The Problem of Social Cost:' A View from the Left' [1986] *Wisconsin Law Review* 919.

91 Coase, 'The Firm, the Market and the Law,' p 3.

92 Coase, 'The Institutional Structure of Production,' p 14.

93 RH Coase, 'Economics and Contiguous Disciplines,' in Coase, *Essays on Economics and Economists*, pp 40-1 and Coase, 'The Firm, the Market and the Law,' p 2.

94 WM Landes *et al*, 'On the Resignation of Ronald H Coase' (1983) 26 *Journal of Law and Economics* iii.

95 Coase, 'The Problem of Social Cost,' p 114.

96 Coase, 'The Problem of Social Cost,' p 114.

97 Coase, 'The Nature of the Firm,' p 34.

98 Coase, 'The Nature of the Firm,' p 38.

99 W Powell, 'Hybrid Organisational Arrangements: New Form or Transitional Development?' (1987) 30 *California Management Review* 67.

100 Coase, 'The Institutional Structure of Production.' p 11.

101 Coase, 'The Firm, the Market and the Law,' pp 9-10. Cf Coase, 'The Institutional Structure of Production,' p 12.

[102] RH Coase, 'The Theory of Public Utility Pricing and Its Application' (1970) 1 *Bell Journal of Economics and Management Science* 119.

[103] G Calabresi, 'The Pointlessness of Pareto: Carrying Coase Further' (1991) 100 *Yale Law Journal* 1211.

[104] RH Coase, 'The Regulated Industries: Discussion' (1964) 54 *American Economic Review (Papers and Proceedings)* 195.

[105] RH Coase, 'Discussion,' in G Anastaplo *et al*, *Legal and Economic Aspects of Pollution*, Chicago (USA), Centre for Policy Study, University of Chicago, 1970, p 16.

[106] Coase, 'The Problem of Social Cost,' p 96.

[107] RH Coase, 'Comment,' in WJ Samuels and HM Trebing, eds, *A Critique of Administrative Regulation of Public Utilities*, East Lansing (USA), Institute of Public Utilities, Graduate School of Business Administration, Michigan State University, 1971, p 313.

[108] AC Pigou, *The Economics of Welfare*, 4th edn, London, Macmillan, 1932, pt 2.

[109] RH Coase, 'George J Stigler,' in Coase, *Essays on Economics and Economists*, p 205.

[110] RH Coase, 'Law and Economics and AW Brian Simpson' (1996) 25 *Journal of Legal Studies* 103.

[111] RH Coase, 'The Appointment of Pigou as Marshall's Successor,' in Coase, *Essays on Economics and Economists*, ch 10. The research for this paper no doubt was merely part of some ongoing research of Coase's into Marshall's career (Coase, *Essays on Economics and Economists*, p viii), but, of course, this research did not itself involve the effort involved in writing up this paper for publication.

[112] AWB Simpson, 'Coase v Pigou Reexamined' (1996) 25 *Journal of Legal Studies* 53. This is not to say that Coase comes particularly well out of the subsequent exchange with Simpson, where Coase's usual balance and wit seems to desert him. Coase, 'Law and Economics and AW Brian Simpson' and AWB Simpson, 'An Addendum' (1996) 25 *Journal of Legal Studies* 99.

[113] Coase, 'The Firm, the Market and the Law,' n 33.

[114] Coase, 'The Firm, the Market and the Law,' p 22.

[115] Coase, 'The Problem of Social Cost,' n 1. The paper on broadcasting is RH Coase, 'The Federal Communications Commission' (1959) 2 *Journal of Law and Economics* 1.

[116] Coase, 'The Problem of Social Cost,' pp 133-53.

[117] RH Coase, 'The Lighthouse in Economics,' in Coase, *The Firm, the Market and the Law*, ch 7.

[118] Pigou, *The Economics of Welfare*, pp 183-4.

[119] Coase, 'The Lighthouse in Economics,' p 201.

[120] *Ibid*, p 213. In the modern edition, the definition is to be found in A Bierce, *The Enlarged Devilís Dictionary*, London, Victor Gollancz, 1967, p 181.

[121] RH Coase, 'Ronald H Coase,' in W Breit and RW Spencer, *The Lives of the Laureates*, 3rd edn, Cambridge (USA), MIT Press, 1995, p 239.

[122] Coase, 'The Problem of Social Cost,' p 116.

[123] An exemplary exchange of views is given in G Calabresi and AD Melamed, 'Property Rules, Libility Rules and Inalienability: One View of the Cathdral Crypt' (1972) 85 *Harvard Law Review* 1089 and P Burrows, 'Nuisance, Legal Rules and Decentralised Decisions: A Different View of the Cathedral Crypt,' in P Burrows and CJ Veljanovski, eds, *The Economic Approach to Law*, London, Buttterworths, 1981, ch 6.

[124] RD Cooter, 'The Coase Theorem,' in , J Eatwell *et al*, eds, *The New Palgrave*, London, Palgrave, 1987, p 457-60; G Daly, 'The Coase Theorem: Assumptions, Applications, Ambiguities' (1974) 12 *Economic Inquiry* 203 and RO Zerbe, 'The Problem of Social Cost in Retrospect' (1980) 2 *Research in Law and Economics* 83.

[125] In particular, I shall ignore the claim, made most stridently by Posner, that in a competitive market initial allocations of property rights are irrelevant to the ultimate allocation of goods. This is of less importance because in his recent Chorley Lecture, Professor Charles Goodhart has said just what I have said, had I the ability, about this logically correct but empirically utterly implausible claim. C Goodhart, 'Economics and the Law: Too Much One Way Traffic,' *Modern Law Review*, forthcoming.

126 RD Cooter, 'The Cost of Coase' (1982) 11 *Journal of Legal Studies* 1; C Fried, *Right and Wrong*, Cambridge (USA), Harvard University Press, 1978, ch 4; D Kennedy, 'Cost-benefit Analysis of Entitlement Problems: A Critique' (1981) 33 *Stanford Law Review* 33; DH Regan, 'The Problem of Social Cost Revisited' (1972) 15 *Journal of Law and Economics* 427 and LH Tribe, 'Technology Assessment and the Fourth Discontinuity: The Limits of Instrumental Rationality' (1973) 46 *Southern California Law Review* 617.

127 RH Coase, 'A Note on the Problem of Social Cost,' in Coase, *The Firm, the Market and the Law*, p 158 and Coase, 'The Institutional Structure of Production,' p 10.

128 Coase, 'George J Stigler.'

129 GJ Stigler, *The Theory of Price*, 4th edn, New York (USA), Macmillan, 1987.

130 GJ Stigler, *The Theory of Price*, 3rd edn, New York (USA) 3rd edn, 1966, p 113.

131 Coase, 'The Problem of Social Cost,' p 112.

132 *Ibid*, p 114.

133 *Ibid*, pp 107-14, 123.

134 DM Newberry, 'Missing Markets: Consequences and Remedies,' in F Hahn, ed, *The Economics of Missing Markets, Information and Games*, Oxford, Oxford University Press, 1989, pp 214-8.

135 GJ Stigler, 'The Law and Economics of Public Policy: A Plea to the Scholars' (1972) 1 *Journal of Legal Studies* 12.

136 GJ Stigler, 'Two Notes on the Coase Theorem' (1989) 99 *Yale Law Journal* 631.

137 MC Munger, 'Review of *The Firm, the Market and the Law*' (1990) 65 *Public Choice* 295

138 Coase, 'The Problem of Social Cost,' p 114.

139 *Ibid.*

140 *Ibid*, pp 115-8.

141 Coase, 'The Firm, the Market and the Law,' p 22.

142 OE Williamson, 'Franchise Bidding for Natural Monopolies,' in *Economic Organisation*, p 259.

143 JA Kwong, *Market Environmentalism*, Hong Kong, Chinese University of Hong Kong Press, 1990.

144 B Bachner, 'Regulating Pollution in the People's Republic of China' (1996) 7 *Colorado Journal of International Environmental Law and Policy* 393-6.

145 Coase, 'The Lighthouse in Economics,' p 213

146 Kwong, *Market Environmentalism*, p 24.

147 Coase, 'The Lighthouse in Economics,' p 211.

148 Coase, 'Notes on the Problem of Social Cost,' p 174.

149 Coase, 'The Firm, the Market and the Law,' p 15.

150 *Ibid.*

151 Coase, 'The Institutional Structure of Production,' p 11.

152 Coase, 'Coase on Posner on Coase' 96.

153 Symposium, 'Post-Chicago Law and Economics' (1989) 65 *Chicago-Kent Law Review* 3 and Symposium, 'Non-Posnerian Law and Economics' (1989) 12 *Hamline Law Review*

154 RA Posner, 'The New Institutional Economics Meets Law and Economics' (1993) 149 *Journal of Institutional and Theoretical Economics* 73.

155 RA Posner, 'Nobel Laureate: Ronald Coase and Methodology' (1993) 7 *Journal of Economic Perspectives* 195.

156 Coase, 'The Firm, the Market and the Law.' p 5.

157 RH Coase, 'Adam Smithís View of Man,' in Coase, *Essays on Economics and Economists*, ch 7.

158 Coase, 'The Firm, the Market and the Law,' p 4.

159 DC North, 'Institutions and Credible Commitment' (1993) 149 *Journal of Institutional and Theoretical Economics* 11.

160 The law of contract is making steps in this direction with the development of a "relational theory of contract" heavily indebted to the work of Ian Macneil. IR Macneil, *The New Social Contract*, New Haven (USA), Yale University Press, 1980. I have tried to provide an overview of Macneil's work in D Campbell, 'The Social Theory of Relational

Contract: Macneil as the Modern Proudhon' (1990) 18 *International Journal of the Sociology of Law* 75.

161 I believe that Marx made a more profound but certainly less explicit attempt to do this. D Campbell, *The Failure of Marxism*, Aldershot, Dartmouth Press, 1996, ch 5.

162 Campbell, 'Ayres *Versus* Coase: An Attempt to Recover the Issue of Equality in Law and Economics;' C Gunnarsson, 'What is New and What is Old in New Institutional Economics?' (1991) 39 *Scandanavian Economic History Review* 43; VP Goldberg, 'Commons, Clark and the Emerging Post-Coasian Law and Economics' (1976) 10 *Journal of Economic Issues* 877; GM Hodgson, 'Institutional Economic Theory: The Old Versus the New' (1989) 1 *Review of Political Economy* 249; GM Hodgson, 'Institutional Economics: Surveying the "Old" and the "New"' (1993) 44 *Metroeconomica* 1; H Hovenkamp, 'The First Great Law and Economics Movement' (1990) 42 *Stanford Law Review* 993; H Hovenkamp, 'Law and Economics in the United States' (1995) 19 *Cambridge Journal of Economics* 333-4; TW Hutchison, 'Institutional Economics Old and New' (1984) 140 *Journal of Institutional and Theoretical Economics* 20; MC Rutherford, 'What is Wrong with the New Institutional; Economics (And What Is Still Wrong with the Old)' (1989) 1 *Review of Political Economy* 299; WJ Samuels, 'Law and Economics,' in GM Hodgson *et al*, eds, *The Edward Elgar Companion to Instituional and Evolutionary Economics*, Aldershot, Edward Elgar, 1994, pp 8-12; WJ Samuels, 'Institutionalism, "Old" and "New,"' in Hodgson *et al*, eds, *The Edward Elgar Companion to Institutional and Evolutionary Economics*, pp 397-402 and WJ Samuels, 'The Present State of Institutional Economics' (1995) 19 *Cambridge Journal of Economics* 569.

163 CE Ayres, *The Industrial Economy*, Boston, Houghton Mifflin, 1952, pp 10-11.

164 Coase, 'The Nature of the Firm: Influence,' p 73.

165 As part of my original criticism of Coase, I drew attention to the way in which his eschewing of social theory pushed him to embrace "sociobiology." Coase, 'The Firm, the Market and the Law,' p 4. One is hardly surprised to see just this line also being taken by Becker. GS Becker, 'Altruism, Egoism and Genetic Fitnes: Economics and Sociobiology,' in Becker, *The Essence of Becker*, ch 13. The naturalistic strain which has always been present in political economy is, in fact, being given a statement as a general theory of "biological economics" at the moment. J Hirshleifer, 'Economics from a Biological Point of View' (1978) 20 *Journal of Law and Economics* 1.