RONALD COASE'S 'THE PROBLEM OF SOCIAL COST'

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I INTRODUCTION

The most cited law review article ever published,[1] the late Ronald Coase's 'The Problem of Social Cost'[2] is one of the foundations of the 'law and economics' movement that has come to play such an important role in US law schools, and therefore in legal education and research worldwide.[3] It is principally for writing this article that Coase is regarded as one of the 'founding fathers', if not the founding father, of law and economics.[4] However, this aspect of TPoSC will not be discussed here. In part this is because I have had my say on law and economics in many previous pieces of work, the latest of which, focused on Coase's treatment of case law in TPoSC, will have appeared in print only shortly before this article itself.[5] But, more positively, like Coase,[6] I believe that the principal contribution of TPoSC has been, not in founding the sub-discipline of law and economics, but in improving our understanding of economic action as such, though it has indeed largely done this by casting new light on the importance of law and regulation for such action. The effect of this has by no means been confined to theoretical debate. TPoSC has been at the core of the contribution of the 'Second Chicago School' of economics to the 'neo-liberal revolution', with Coase being one of a handful of academics whose contribution to that revolution was exceeded only by Milton Friedman. In sum, TPoSC played an essential part in the Kuhnian paradigm shift in our understanding of the regulation of economic action that has had so marked effect on economic policy since the 1970s.

Putting to one side its importance, the reason that TPoSC is a personal favourite of mine is that one can chart the development of this paradigm shift over the course of the article. TPoSC is a generalisation of the theory behind a specific policy argument about broadcasting that Coase had made in an earlier article on 'The Federal Communications Commission'.[7] Over these two articles, Coase moves to what we can now be confident are the views on economic policy he intended to put forward, but it is only by the end of TPoSC that those views become at all clear. In particular, the understanding of TPoSC has been hindered by a failure adequately to recognise that Coase himself conceived of it principally as a polemic against the welfare economics

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1 F R Shapiro and M Pearse, 'The Most-cited Law Review Articles of All Time' (2012) 110 *Michigan Law Review* 1483, 1489. See further R H Coase, 'The Problem of Social Cost: The Citations' (1996) 71 *Chicago-Kent Law Review* 809.

2 (1960) 3 *Journal of Law and Economics* 1; reprinted with minor changes in R H Coase, *The Firm, the Market and the Law* (1988) 95; hereinafter TPoSC. All page references are to the original and then, after a semi-colon, to the reprint.

3 N Duxbury, *Patterns of American Jurisprudence*, (corrected edition, 1997), ch 5.

4 Hence the inclusion of R H Coase, 'The Relevance of Transaction Costs in the Economic Analysis of Law' in F Parisi and C K Rowley (eds) *The Origins of Law and Economics: Essays by the Founding Fathers* (2007) 199.

5 D Campbell and M Klaes, 'What Did Ronald Coase Know About the Law of Tort?' (forthcoming 2016) 39 *Melbourne University Law Review*.

6 R H Coase, 'Law and Economics at Chicago' (1993) 36 *Journal of Law and Economics* 239, 250.

7 (1959) 2 *Journal of Law and Economics* 1, hereinafter FCC.

of AC Pigou; to some extent, no doubt, because this polemic is not made express until the latter part of the article. Pigouvian welfare economics have played a major role in giving us the public sector that we now have, and Coase wrote TPoSC in order to show that these economics had 'basic defects'. That one can chart the development of Coase's views in this way in part follows from undeniable presentational shortcomings which have played their part in making TPoSC's reception a history of profound misunderstanding. But it also makes coming to terms with the article a fascinating and pleasurable intellectual exercise.

II THE RECIPROCAL NATURE OF THE PROBLEM

TPoSC begins with Coase telling us that it 'is concerned with those actions of business firms which have harmful effects on others, [the] standard example being that of a factory, the smoke from which has harmful effects on those occupying neighbouring properties'.[8] He then says that his argument is directed against what, writing in 1959-60, he described as the usual economic analysis of such actions, which is based on Pigou's *The Economics of Welfare*.[9] Though, as I have said, criticism of Pigou is at the core of TPoSC, I shall reserve express discussion of Pigou until section VI of this article and shall first consider Coase's argument in general terms. Coase tells us that the usual economic analysis leads to the conclusion 'that it would be desirable'[10] for the government to intervene 'to make the owner of the factory liable for the damage caused'[11] in order to counter the 'harmful effects'[12] of the smoke. Coase concludes section I by stating his intention to argue that this course of action is 'inappropriate in that [it] leads to results which are not necessarily, or even usually, desirable'.[13]

Section II of TPoSC, headed 'The Reciprocal Nature of the Problem', sets out the first step of this argument. This section is less than a page long. I do not suppose more has been done in a work of social science in so short a passage of writing. A useful way of looking at what Coase does is to see it as a response to the linguistic burden of describing the results of the actions in question as 'harmful effects'.[14] If it is right to say that an economic action causes a harm, this has the implication that the action should be prevented.[15] 'But', Coase tells us, 'this is wrong'.[16] Prevention imposes the costs of preventive measures and of lost output, and complete prevention is inconsistent with industrial production, which would have to cease. If we value industrial production, prevention cannot be the aim of economic policy. The aim must be determining the optimal level of the action causing the harm, taking the overall value of the action into account.[17] Policy cannot turn on whether or not those effects are conventionally classified as desirable or harmful, about which classification we should be indifferent; though this does not, of course, mean that we deny that, as it were, a physical matter, things such as smoke pollution are harmful. This is the 'indifference' argument of TPoSC, one of three arguments, together with the generally

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8 Coase, above n 2, 1; 95.
9 (2002) 184. This was a revised version of A C Pigou, *Wealth and Welfare* (1912) 159.
10 Coase, above n 2, 1; 95.
11 Ibid.
12 Ibid, 2; 95.
13 Ibid, 2; 96.
14 Ibid, 2; 95.
15 Ibid, 2; 96.
16 Ibid.
17 Ibid, 42; 153.

recognised if variously identified 'efficiency' and 'invariance' arguments, that form the theoretical structure of the first part, composed of sections I-V, of the article.

This reinterpretation of harmful effects shows that, when it pursues the prevention of (or unbalanced precaution against) harm, or regards environmental policy as in principle not subject to 'economic' considerations, environmental concern (and, we shall see, similarly grounded arguments for intervention in other areas) is fundamentally mistaken. The problem is a reciprocal one: the benefit of reduced harm can be obtained only at a cost, which makes a focus only on benefit irrational. What is more, appreciation of this makes it difficult to see (without further consideration of the issues) why the level of harmful effects should be determined in a way different to that which we normally use to determine the optimal level of a particular economic activity, that is by exchange. Assuming that the factory emitting the smoke is making steel, then the amount of steel produced will be determined by, on the one hand, the company operating the factory buying, say, pig iron and electricity, obtaining the benefit of ownership of these goods by incurring the cost of payment for them; and, on the other hand, selling the steel, incurring the cost of manufacture in order to obtain the benefit of revenue. The various exchanges determine how much steel is made. Why should exchange not determine the amount of steel made, and therefore the level of the smoke harm, by taking into account the smoke harm?

III The Coase Theorem

In sections III and IV of TPoSC, Coase theoretically demonstrates that allowing exchange to determine the level of harmful effects is not merely possible but will automatically determine the optimum level of those effects. In section II, Coase had mentioned 'straying cattle which destroy crops on neighbouring land' as an example of the reciprocal nature of the problem: 'If it is inevitable that some cattle will stray, an increase in the supply of meat can only be obtained at the expense of a decrease in the supply of crops. The nature of the choice is clear'.[18] The indifference argument shifts the focus from the harmful effect of the destruction of crops, which the rhetoric of harm leads one to think should be prevented, to the reciprocal effect of prevention on the supply of meat. In section III, Coase uses this as a worked example of reciprocal effects. Reasons of space prevent me from reproducing the example, but in any case I recommend readers who have not done so to work through Coase's various pay-off matrices themselves – the mathematics required is elementary and my use of 'matrices' to describe the reasoning is overblown – in the hope that they will have the pleasure of feeling the penny drop that I did myself when coming to terms with TPoSC.[19] But I will state the conclusion which readers who do this should reach.

The value of the cattle and the value of the crops are determined by the revenues which can be obtained from their respective sales, and the size of the damage to the crops is determined by the propensity of cattle to wander. On the assumption in

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[18] Ibid, 2; 96.

[19] If the resolutely innumerate reader feels she needs a guide, a lucid one may be found in the only full length biography of Coase, still a reference point though now somewhat out of date, not least in its representation of its author's own views: S G Medema, *Ronald H Coase* (1994) 71-74.

section III that the rancher is liable for damage to the crops, the size of the herd will be determined (putting aside other costs of its rearing) by the cost of the loss of crop yield, for which the rancher, because it is liable, must pay. If an increase in herd size yields revenues which allows the rancher to pay for the crop damage and still enjoy greater profitability, it will take place. But if the increase does not do this, it will not take place. One could go on to hypothesise about shifts in the values of cattle and crops that leads to a reduction of herd size or even to the cessation of ranching. But this will not be because our policy was one of prevention of harm. It will be the result of payments by the rancher to the farmer, ie it will be the 'result of market transactions'.[20]

Readers at all familiar with law and economics will recognise here the 'Coase Theorem', an argument now so familiar as to have been accorded axiomatic status in numerous statements of the core propositions of modern economics, a particularly influential one of which, that of Stigler, I shall consider below. The Theorem demonstrates that, if one creates legal liability for the harmful effect but, recognising the reciprocal nature of the problem, regards the harm with indifference and allows unconstrained exchange about it, its optimal level will be established as the automatic result of bargaining about it by involved parties. This is the efficiency argument of TPoSC.

What is more, in section IV, Coase reverses the argument in order to establish the invariance argument of TPoSC. Having assumed that the rancher is liable, in section IV he assumes that the rancher is not liable but then shows this makes no difference. It merely means that the farmer must pay the rancher to stop the cattle wandering, and he will do so, perhaps increasing the amount of land under crops, if it is more profitable for him to do so, once the payment to the rancher is factored in. The result is invariant regardless of the initial allocation of liability.

IV The Expansion of the Pareto Domain

The impact of the indifference, efficiency and invariance arguments on economists addressing the problem of harmful effects was profound and strongly resisted. But, without at all attempting a full survey, I believe the objections to these arguments raised within legal scholarship can be brought under four heads: Coase's 'economic' approach is morally inappropriate; the Coase Theorem is purely theoretical and of no empirical relevance; the invariance argument in particular is an inaccurate account of the law; and Coase was biased against intervention.[21]

The first objection arises from the denial that the appreciation of resource constraint that naturally arises from market economics should play much or any role in a wide range of expenditure decisions that is an important component of public opinion in the welfare state. As it happens, in other work Coase did make some remarks about the width of the use of economics[22] that I myself find most

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[20] Coase, above n 2, 5; 101.

[21] These objections were all raised by the late Brian Simpson in a particularly powerful attack on Coase: A W B Simpson, 'Coase v Pigou Reexamined' (1996) 25 *Journal of Legal Studies* 53, revised as 'The Story of Sturges v Bridgman: The Resolution of Land Use Disputes Between Neighbours' in Gerald Korngold and Andrew P Morriss (eds) *Property Stories*, (2nd edition, 2004) 11. Campbell and Klaes, above n 5, responds to Simpson at length.

[22] Eg R H Coase, 'The Firm, the Market and the Law' in *The Firm, the Market and the Law*, above n 2, 1, 2-3.

unconvincing.[23] But these can be put to one side without discussion here because if Coase had not set out the position he did about determining whether harms could be subject to economic analysis, no one would care about these remarks. By raising public consciousness of the resource implications of even the most worthy projects, Coase's indifference argument has made a major contribution to our attempt to determine the proper size and scope of the market sphere, even if one would not agree with Coase about the desirable extent of that sphere.

If one turns to objections to the efficiency argument, one finds flat denials that the Coase Theorem can do useful work because it is purely theoretical. But no-one has done more than Coase to insist that the Coase Theorem indeed is purely theoretical. To successfully criticise the efficiency argument, it is first necessary to acknowledge that it works on its own assumptions and can be challenged only by pointing to the very limited nature of its domain. That domain is the 'perfect market' of the theory of general competitive equilibrium, in which transaction costs are zero and welfare automatically reaches its optimum. Throughout the discussion of the rancher and farmer example Coase assumed zero transaction costs. Though in his defence sections II-IV of TPoSC both start with and contain other statements to this effect, Coase did not make sufficiently clear what is involved in this assumption, as the history of the reception of TPoSC emphatically confirms. Let me try to be more clear.

The first theorem of welfare economics is Pareto optimality, which states that an economy is in an equilibrium constituting optimum welfare when all exchanges of goods between economic actors have taken place, this being identified by the impossibility of a reallocation of goods that would not leave at least one actor worse off. There surely can be few if any statements in social thought which seem so dry and yet are more densely packed with social content. In the ideal typical market economy, goods are allocated by the free choices of economic actors given effect in voluntary economic exchanges institutionalised in contractual agreements. Economic actors are motivated by self-interest, but exchanges must be voluntary and so can take place only when the parties both perceive an advantage to be gained. When all the possibilities of mutually advantageous exchange have been exhausted, further reallocation cannot take place save by, say, a 'contract' which is not actually an agreement, or a transfer by government ultimately dependent on the monopoly of violence, for this reallocation must be to at least one actor's disadvantage as the actor defines it. If it were not to the actor's disadvantage, there would be no need to induce it by contractual force or fraud or compel it by government. It would automatically follow from actors' pursuit of their self-interest.

To establish a Pareto optimum, then, all mutually beneficial exchanges must have taken place, which would, of course, require economic actors to identify all the possibilities of such exchange and to bring them all about. And this is just what would happen given general competition, for in this theoretical situation actors do possess all the necessary knowledge, computational capacity, ability to negotiate and perform contracts, etc. As Kenneth Arrow, one of those most responsible for the formal statement of general competitive equilibrium, has put it: 'First theorem of welfare

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[23] D Campbell, 'On What is Valuable in Law and Economics' (1996) 8 *Otago Law Review* 489, 496.

economics: every competitive equilibrium *is* Pareto-efficient'.[24] One way of stating the conditions for general competition is to say that transactions costs, ie the information, computational, negotiation, etc costs of making exchanges, are zero. This is what Coase assumed in sections III and IV of TPoSC.

But, of course, general competition cannot possibly obtain in the real world, as Coase insisted when in section IV he dropped the assumption of zero transaction costs and 'The Cost of Market Transactions [was] Taken into Account':

> The argument has proceeded up to this point on the assumption … that there were no costs involved in carrying out market transactions. This is, of course, a very unrealistic assumption. 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 the contract, to undertake the inspection needed to make sure that the terms of the contract are being observed, and so on. These operations 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.[25]

Before turning to Coase's analysis of the empirical world of positive transactions costs, it would perhaps be useful to indicate why and how general competition has a value even for the analysis of that world.

Pareto optimality might usefully be said to be what Kant called a 'regulative' idea or principle. It states an end which is of great value in ordering our thought and action, though it is not vouchsafed to us to realise that end. Pareto optimality allows us to understand the voluntary nature of economic action, but, as general competition cannot be established, Pareto optimality is of no direct value at all to the analysis of any empirical process of Pareto optimisation, of which the complete satisfaction of voluntary choices is the unrealisable but nevertheless essential goal. However, acceptance of Pareto optimality as a regulative idea leads to the general attitude that we should strive to expand the market sphere, or Pareto domain, of economic action as an approximation to the complete actualisation of an economy of voluntary choice. If one accepts this, then TPoSC's revealing, against the then prevailing consensus in economic thought, of the possibility of expanding the Pareto domain to include harms in a way previously thought impossible, was as an enormously valuable contribution. This contribution is often regarded as leading to a specifically 'Coasean bargaining' about harms. The development of this concept has thrown up helpful and, in my opinion, much more significantly unhelpful ideas which I cannot discuss here. But the most important thing to realise about Coasean bargaining as Coase himself saw it in FCC and TPoSC is that it is merely ordinary bargaining, but over issues formerly thought categorically to be outside the Pareto domain.

In FCC, Coase addressed the problem of allocating wavelengths to broadcasters. The then standard practice was to do this administratively, the Commission being the Federal agency charged with this responsibility. The

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24 K J Arrow, 'Pareto Optimality with Costly Transfers' in *Collected Papers*, (1983) vol 2, 290 (emphasis added). I must add that no important economist would assert that general competition is empirically relevant in any direct way. Arrow himself said this repeatedly and has set out one of the most influential programmes for the exploration of the distance between the theoretical world of general competition and the empirical world of markets which is discussed 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* (1997) 307.

25 Coase, above n 2, 15; 114.

Commission saw the prevention of 'interference' with the broadcasts of those to which it had allocated wavelength by the broadcasts of unauthorised rivals as one of its tasks. I hope readers are now in a position to anticipate Coase's argument about this. The Commission was treating interference as a harm to be prevented but, of course, given the reciprocal nature of the problem, this is the wrong approach. Interference was a harm only if one accepted the Commission's administrative allocation of wavelengths. It should rather have been seen as a reciprocal cost, and, this being the case, the question was, not insistent maintenance of the Commission's allocation, but rather devising a procedure for allocating frequencies, bearing in mind that one broadcaster's interference was another broadcaster's access to the spectrum. Coase's change of focus has been an essential foundation of the 'spectrum auctions', though the idea did not originate with him, that are now the preferred means of allocating broadcasting frequencies in the US and elsewhere. For our purpose, it is necessary only to note just how challenging Coase's approach was at the time. Economics experts reviewing grant funded research he had done on spectrum allocation were of the opinion that the research was an incompetent failure to recognise a good which, of its nature, inevitably had to be allocated by the state, and when Coase put forward the idea of the auction in evidence to a hearing of the Commission, he was asked whether he was making a joke.[26]

The significance of this can be appreciated only when set against Coase's critique of Pigou and this will be reserved until section VI. But TPoSC was first and foremost intended as a generalisation of the argument for spectrum auctions as a particular expansion of the Pareto domain. The advantages of such an expansion are very substantial. The 'beauty contest' in which applicants for wavelength make every legitimate effort, and sometimes more than this, to appear attractive to politicians and officials making an allocation on grounds that boil down to administrative discretion are avoided. The power of the market to reach an optimal allocation of scarce resources by reference ultimately to consumers' preferences is employed. A major attraction of this to Coase himself was the avoidance of authoritarian power even if the process of administrative allocation was robust. In 1950 Coase had written a scathing criticism of the BBC's 'unified' broadcasting policy under Lord Reith. One can hardly suppose there has ever been a less corrupt public servant than Reith and his commitment to BBC content being of an improving nature was adamantine. A cogent defence of Reith, though it is not easily applied to the contemporary BBC, can be mounted. But 'the main disadvantage' of the Reithian determination of policy, Coase told us, was that in order to defend it 'it is necessary first to adopt a totalitarian philosophy or at any rate something verging on it'.[27]

The rancher and farmer example in TPoSC should be seen as a statement at the most general level, that of general competitive equilibrium, of the argument for a particular expansion of the Pareto domain in FCC. By creating a market (auction) in what formerly was perceived as a harm, the bargaining of affected parties will establish the optimal level of what properly should be seen as reciprocal demands, in just the same way as the market is normally used to allocate scarce resources.

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[26] R H Coase, 'Comment on Thomas W Hazlett, Assigning Property Rights to Radio Spectrum Users: Why Did FCC License Auctions Take 67 Years?' (1998) 41 *Journal of Law and Economics* 577, 579-80.

[27] R H Coase, *British Broadcasting* (1950) 191.

Accepting as he did 'that the principles under which the American economic system generally operates are fundamentally sound', Coase simply proposed 'that the American broadcasting industry adopt those principles' and bring to broadcasting 'the same advantages as [their] use confers on the rest of the American economy'.[28] Coase's aim in TPoSC was to generalise this specific case and to show that, on the face of it, harms may be treated just like other problems of the allocation of scarce resources normally regarded as within the Pareto domain.

At this point readers, especially if they have any knowledge of the difficulties of spectrum auctions, may criticise what Coase has said as itself merely theoretical in the way that the Coase Theorem has been criticised. But, I repeat, the Coase Theorem *is* purely theoretical. The rancher and farmer example works perfectly only because it is hypothetical. Coase made no claim that spectrum auctions would work perfectly. What he claimed was that they could work. Whilst by no means saying that Coase stated his argument clearly, one of the theoretical benefits of the way Coase proceeds is that, if one accepts the reciprocal nature of the problem of harms, and so the couching of the argument in market terms, showing that there is no reason in principle why the market cannot deal with harms leads one to ask why, in fact, they often have not been dealt with in this way. One reason is, of course, the mistakes in policy which we will see Coase traces to Pigou. But the other reason reflects the very important aspect of economic action which Coase assumed away in sections III and IV: the existence of transaction costs. Far from advocating the Coase Theorem as a sensible approach to empirical allocations, Coase's great achievement was to show that the existence of transaction costs makes perfect market reasoning of no direct relevance to economic policy formulation.

V Transaction Costs, 'Choosing the Appropriate Social Arrangement', and the Formulation of Economic Policy

In a 1937 paper on 'The Nature of the Firm',[29] Coase addressed a then influential statement of what we can anachronistically recognise as general competition and asked whether this was an accurate description of empirical market economies. Answering no, Coase pointed to the existence of firms in the market economy, for within firms allocation is by command under the hierarchical authority of management, ie is by planning which is private but nevertheless is 'akin to what is normally called economic planning', and therefore 'the distinguishing mark of the firm is the suppression of the price mechanism'.[30] But if general competition automatically yielded a Pareto optimum, why should the market ever be voluntarily suppressed? Coase's answer was that the presence of the transaction costs of exchange sets a limit to the exchanges necessary for Pareto optimality, and, that being the case, perhaps methods of allocation other than the market might be better than the market.

Coase was at this time a socialist and the question that drove the research that led to 'The Nature of the Firm' was whether a generally planned economy could be superior to a market economy. Thinking, not merely communist or socialist thinking, on the firm was dominated by the concept of returns to scale which seemed to convey an important advantage to increasing the size of economic organisations, and initially

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[28] R H Coase, 'Why Not Use the Price System in the Broadcasting Industry?' (July 1961) 11(7) *The Freeman* 52, 52-53.

[29] (1937) 4 ns *Economica* 386; reprinted with minor changes in R H Coase, *The Firm, the Market and the Law* (1986) 33. References here are to the reprint.

[30] Ibid, 35, 36.

it was not obvious to Coase why it would not be wise to run an economy, as Lenin put it, as 'like a single factory'.[31] In a process I have examined elsewhere,[32] Coase's socialism was somewhat modified (and subsequently 'fell away' as he himself later put it)[33] because over the course of writing 'The Nature of the Firm' he arrived at the view that in a competitive market economy the relationship of private planning within firms and market allocation outside them was in principle superior to general planning. The market not being costless, the firm will emerge as an alternative. However, the firm has its own transaction costs, the costs of private hierarchy, and there will come a point where the firm reaches its optimum size because its further growth would involve bringing within the firm allocations which it would be cheaper to leave to the market outside the firm. Within a competitive market economy, the size of firms, and hence the overall optimum size of the firm sector (and therefore the market sector) will be determined by 'competition' between market allocation and planned allocation, and this is an enormous advantage over the generally planned economy from which such competition is eliminated: 'In a competitive system, there is an "optimum" amount of planning!'[34]

Though, as we have seen, the principal aim behind TPoSC was to argue for expansion of the Pareto domain, and, as we shall see later, Coase held strongly conservative economic views, one cannot understand the argument and effect of TPoSC unless one recognises that, drawing on 'The Nature of the Firm',[35] the shift in the analysis from zero to positive transaction costs has made Coase one of the most successful critics of the theory of general competitive equilibrium. He himself does not deny the integrity of the theory, but he insists it has no direct empirical relevance, and this led him to rework even the fundamental concept of the market, which he shows can exist only within a legal framework which constitutes the rights to be exchanged[36] and regulates the manner of their exchange. [37] The market itself, Coase claimed, had 'entirely disappeared' from the modern economics textbook in which 'an elaborate analysis of individuals exchanging nuts for apples on the edge of the forest or some similar fanciful example' abstracts from the institutional character and precise functioning of specific markets.[38]

One consequence of this has been the reinvigoration of 'institutional economics', with Coase being hailed as a founder of, not only the sub-discipline of law and economics, but of the 'new institutional', or 'transaction cost' economics, in which the major figure is Oliver Williamson. Though it had attracted little attention up to that point, in the wake of the attention paid to TPoSC great interest was taken in 'The Nature of the Firm', and its explanation of firm size has become a cornerstone of the study of industrial organisation. But from his earliest days as an academic economist,

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31 V I Lenin, 'The State and Revolution' in *Collected Works*, (1964) vol 25, 381, 474.

32 D Campbell and M Klaes, 'The Principle of Institutional Direction: Coase's Regulatory Critique of Intervention' (2005) 29 *Cambridge Journal of Economics* 263.

33 R H Coase, 'The Nature of the Firm: Origin' in O E Williamson and S G Winter (eds) *The Nature of the Firm* (1991) 34, 39.

34 Coase, above n 29, 37 n 14.

35 Coase, above n 2, 16 n 14; 115 n 14.

36 Ibid, 43-44; 155.

37 Ibid, 29; 134. See further R H Coase, 'The Institutional Structure of Production' in *Essays on Economics and Economists* (1994) 1, 11.

38 Coase, above n 22, 7-8.

Coase had specialised in highly detailed analysis of empirical economic institutions, his work on broadcasting being an example which seems to have been broadly confirmed by subsequent scholarship. His book on the BBC is, in my opinion, a model of the right approach. Succeeding the founding Editor Aaron Director at the recently launched *Journal of Law and Economics* after he went to Chicago, Coase sought to encourage this type of work.

What are the welfare implications of this institutionalist approach? Though general competition must yield an optimum of welfare at zero transaction costs, every empirical market will have positive transaction costs, and so it is simply wrong to assume, not merely that an empirical market will establish a Pareto optimum, for this is impossible, but even that an empirical market will optimise welfare even in the practical sense of the argument of FCC. In an unfortunate but perhaps inevitable instance of that credulous belief in the empirical applicability of abstract concepts of general competition that is the 'professional deformation' of most economists and, it seems, most contributors to law and economics, commentary on TPoSC in the quarter century after its publication was dominated by the belief that the Coase Theorem was a direct guide to economic policy. This was directly contrary to Coase's position as he had worked it out by the end of TPoSC and, as he later told us, very disappointing. He had been trying to persuade economists to leave the world of zero transactions costs with which they were familiar and to which the Theorem applies for the 'real world'.[39]

Having shown that there is no reason in principle why the market cannot handle harms, Coase turns the argument on its head. Though the theoretical market at zero transaction costs will necessarily handle *every* problem of allocation, including harmful effects, in the optimum way, it is quite wrong therefore to assume that an empirical market at positive transaction costs will even be the optimal way of handling *any* problem of allocation. This turning of the argument on its head still, it must be said, escapes most commentary on Coase, but it was put at the centre of a reinterpretation of TPoSC led in the history of economics by Steven Medema and in law by Pierre Schlag, to which I believe myself to have made a contribution.[40] The biggest contributor to this reinterpretation was, however, Coase himself, who, particularly in new chapters he wrote for the first of two selections from his articles published by the University of Chicago Press and in his Nobel Prize lecture included in the second selection, disavowed the Coase Theorem as anything more than a theoretical position.

How, then, did Coase conceive of economic policy towards what had been seen as harms (and by extension all problems of allocation) when transaction costs were positive, ie in all empirical circumstances? Other than deciding to do nothing as no policy would bring about an improvement, he saw it as a question of 'choosing the appropriate social arrangement for dealing with the harmful effects',[41] and in section IV he identified three alternative arrangements, or governance structures as it is now put: the market, the firm and the government.[42] Many hybrid structures would now be

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[39] Coase, above n 22, 15 and R H Coase, 'Notes on The Problem of Social Cost' in *The Firm, the Market and the Law*, above n 2, 157, 174.

[40] Campbell, above n 23 and Campbell and Klaes, above n 32.

[41] Coase, above n 2, 18; 118.

[42] Coase actually identified four alternatives. As part of the way he distinguished market and government he treated the legal aspects of the operation of markets as a matter of common law adjudication and treated legislation and the like as a matter of the operation of government. This approach obviously is, as Coase was well aware (above n 2, 28-29; 133), not entirely factually correct, but it is defensible in its way. What is not defensible is that Coase then conflated the common law which establishes the framework for the operation of the market, leaving outcomes to the choices of economic actors within that framework, and the common law which actually

considered, but in essence the question is one of a choice between the market and the state, and so determining the sizes of the Pareto domain and the public sector. Which was best could be determined only by an even-handed assessment of their transaction costs, for these determined their capacities and costs of operation, and this required 'patient study of how, in practice, the market, firms and governments handle [*inter alia*] the problem of harmful effects'[43] in a way wholly foreign, indeed completely opposed to, an abstract economic approach.

When Coase was awarded the Nobel Prize, the two of his works specifically cited were 'The Nature of the Firm' and TPoSC, and, despite being separated by 23 years, these articles are even closer than is now recognised by those conversant with Coase's work. It is not merely the concept of transaction costs that is taken from the earlier article but the entire method of determining the size of, in a sense, competing sectors. In 'The Nature of the Firm' the size of the firm, and therefore of the firm and market sectors, is determined by the firm's diminishing marginal competitive advantage over the market. In TPoSC, the size of the market and the state are determined in the same way.[44] The 'cheapest' method of governing an activity is best.[45]

That these views involve a contradictory attitude towards the state would seem to emerge from the description Coase gave of it in section VI in order to set it up as one of the alternative 'appropriate social arrangements':

> The government is, in a sense, a super-firm (but of a very special kind) since it is able to influence the use of factors of production by administrative decision. But the ordinary firm is subject to checks in its operations because of the competition of other firms which might administer the same activities at lower cost, and also because there is always the alternative of market transactions against organisation within the firm if the administrative costs become too great. The government is able, if it wishes, to avoid the market altogether, which a firm can never do … the government can conscript or seize property [and] decree that factors of production can be used in such and such a way. Such authoritarian methods save a lot of trouble (for those doing the organising).[46]

Despite it being clear from the last sentence, as it was in all the later Coase's work, that Coase was highly suspicious of state power, his entire argument depends on there being some overall objective method of comparing the costs of market and state governance and ensuring the cheapest was adopted. The influence of the reasoning of 'The Nature of the Firm' on section VI of TPoSC, in which the assumption of zero

stipulates outcomes. Campbell and Klaes, above n 5, shows that this confusion runs throughout TPoSC but particularly characterises the treatment of case law in sections V and VII, and it is this confusion that is the foundation of the sub-discipline of law and economics, certainly in its principal, Posnerian form.

43 Coase, above n 2, 18; 118.

44 Ibid, 43; 153-54.

45 Williamson has (pretentiously to my mind, but nevertheless very influentially) placed a formalised 'discriminating alignment hypothesis' at the heart of transaction cost economics: 'align transactions, which differ in their attributes, with governance structures which differ in their costs and competencies, in a discriminating (mainly transaction costs economising) way': O E Williamson, 'Strategising, Economising and Economic Organisation' in *The Mechanisms of Governance* (1996) 307, 311.

46 Coase, above n 2, 17; 117.

transactions costs is dropped, is vital. In 'The Nature of the Firm', the mechanism of comparison was competition between firm and market in an overall competitive market economy. Coase's view that the principles of the US economy were 'fundamentally sound' allowed him to believe that the requisite mechanism was operating there. But as the state 'is able, if it so wishes, to avoid the market altogether', the economy or society which Coase has in the back of his mind at this point of his argument cannot be competitive in this way. What is the mechanism for comparing costs and ensuring that the cheapest governance structure is adopted in this situation?

Coase's theory of choice of governance structure would seem to rely on, ultimately, the state objectively assessing the alternatives and picking the best. Coase's actual concept of what is the best, the 'maxim[isation] of the value of production',[47] is open to many objections as an economic principle, but these need not be discussed here. The point is that behind any such economic principle must lie a state which will pursue it, and it seems that the many times the later Coase criticises government intervention runs rather counter to his basic thinking's implicit postulation of an essentially benign government. Coase advances no political theory which addresses this contradiction, [48] quite contrary in spirit to the condemnation of regulation by other contributors to the Second Chicago School, exemplified, as we shall see, by Stigler. But it is worth emphasising at this point that, though Coase has been criticised for being simply prejudiced against intervention, his concept of choice of alternative governance structures only works if the choice is even-handed. It is significant that there is little mention in the immense literature of the way that the smoke harm was actually dealt with in TPoSC. Though the difficulties of devising intervention against the smoke harm are set out in a way which indeed makes them seem very daunting,[49] to the extent that it makes any policy recommendation at all, TPoSC nevertheless concludes that it 'would seem particularly likely' that 'governmental … regulation [would] lead to an improvement in economic efficiency' in the case of the 'smoke nuisance [when] a large number of people is involved and the costs of handling the problem through the market or the firm may be high'.[50]

I have mentioned that there were three arguments in the earlier sections of TPoSC, the indifference, the efficiency, and the invariance arguments. We are now in a position to assess the last of these. We have seen that Coase assumed the rancher to be liable in section III of TPoSC and not to be liable in section IV, the point of section IV being to show that the initial allocation of legal liability was irrelevant to the outcome, which is the same on either assumption. Many critics of Coase have found this a particularly hard part of the Coase Theorem to swallow. We can now deal with such critics by saying that they are right, but only if one applies the invariance argument to the empirical world. The reversal of liability cannot effect the outcome at zero transactions costs because all the bargaining necessary to reach Pareto optimality will necessarily take place as that bargaining is costless. But with positive transactions costs the situation is entirely different, so that the institutional – including legal – structure within which the problem is handled becomes vitally important, and the legal

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[47] Eg, ibid, 42; 153.

[48] The influence of 'The Nature of the Firm' is generously acknowledged in the preface to Duncan Black's *The Theory of Committees and Elections*, one of the foundations of public choice economics. However, though it might be said that Black's entire work turns on the existence of transaction costs, I myself cannot find a direct trace of this influence in Black's book, and Coase himself has said Black was 'over-generous': R H Coase, 'Duncan Black' in *Essays on Economics and Economists*, above n 37, 185, 190-91.

[49] Coase, above n 2, 151-53.

[50] Ibid, 118. See also FCC, above n 7, 29.

system is therefore made integral to any empirically relevant economic analysis.[51] With the rancher and farmer, whether the former is or is not liable for the destruction of the crops does not, at zero transaction costs, ultimately affect the number of cattle (and so the crop yield) but only identifies which party has to start the negotiations about this. But with positive transaction costs, initial legal liability will certainly affect how many cattle are raised.[52] The point of the example if one reads beyond sections III and IV, as economists rarely do, is to place a very heavy weight on the legal design of economic institutions, and it is really this that is the message of TPoSC.

Whilst the interpretation of TPoSC remained dominated by the Coase Theorem, the invariance argument did a lot of mischief, which, like the Theorem, continues. If initial legal rights ultimately do not matter, why spend overmuch time on legal institutional design? It was but a short step from this to claiming that 'regulation' would prevent competition yielding Pareto optimality, and so deregulation would generally be a wise policy. Now, this claim is correct, but only if general competition would prevail in the absence of regulation, and, whilst it seems economists do in a vague way think this will happen, the only situation in which it is the case is the theoretical one of zero transaction costs. For any empirical situation, regulation is indispensable, for without the legal establishment of the framework for bargaining, no bargaining can take place, and it cannot be decided in advance of institutional analysis whether regulation should take the form of promotion of market or government.

The later Coase was indeed committed to deregulation, but only as the elimination of bad regulation, and he insisted that 'A call for sensible regulation is not a call for no regulation'.[53] Coase generally worked with a concept of 'regulation' as 'the establishment of the legal framework within which economic activity is carried out'.[54] The width of this concept has been criticised for causing a loss of focus, but this width is the foundation of a productive relationship between economic and legal theory because it draws attention to the necessity of a public regulatory framework even for private economic action, thereby establishing a common basis on which alternative governance structures might be compared.

I hope to have drawn out what is valuable in the earlier part of TPoSC: a theoretical expansion of the Pareto domain, coupled to statements both of the necessity of regulation as the basis of the entire economy and of a principle for determining the sizes of that domain and the public sector. I would be the last to claim that TPoSC does this clearly. Leaving aside the confusion caused by Coase's handling of legal materials which is not discussed here,[55] it may be asked why Coase proceeded by setting up the Coase Theorem and then tearing it down? I long ago formed the opinion that it would be better to entirely drop the Coase Theorem,[56] and I think Coase came to that opinion too.[57] But there is no point in saying this now. It is a settled position in

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51 Coase, above n 39, 178 and Coase, above n 37, 11.

52 Coase, above n 39, 175-77.

53 R H Coase, 'Social Cost and Public Policy' in G A Edwards (ed) *Exploring the Frontiers of Administration* (Bureau of Research, Faculty of Administrative Studies, York University, Toronto 1970) 33, 40.

54 R H Coase, 'Advertising and Free Speech' (1977) 6 *Journal of Legal Studies* 1, 5.

55 See above n 42.

56 Campbell, above n 23, 500.

57 Eg in a 2012 interview Coase said: 'I never liked "the Coase Theorem" … I don't like it because it's a proposition about a system in which there were no transaction costs. It's a system which

mainstream economics, which, of course, may tell one something about mainstream economics. We must understand why Coase did what he did. An overall reason is that, seeking to change the general approach of economists, he had to address general competition if he was to address his audience. But a more specific reason lies in the way TPoSC was conceived as a polemic against Pigou.

VI The Critique of Pigou

A *Pigou and the Externality*

Though he used a terminology of the divergence between the private and the social net products of an investment, Pigou is, as Coase's criticism of him has done much to establish, the source of the concept of the externality, which term Coase tells us was coined by Samuelson in the fifties.[58] I cannot go into the fundamentals of economic theory which are raised by Pigou's putting important concerns for social improvement onto what appears to be a basis consistent with modern economics, and will merely assert that Pigou has provided the theoretical justification of the growth of piecemeal intervention that has been a central feature of economic policy since the First World War. I use 'piecemeal' in the sense established by Popper when he distinguished piecemeal from 'utopian' social engineering, finding the former to be 'methodologically sound',[59] though Popper's condemnation of the latter is, of course, a landmark of modern political philosophy.

Pigou was sympathetic to socialism but, whilst he seems to have acknowledged the possibility of an ultimately completely planned economy, his views in this respect were so gradualist as to have no real definition, and he was, for all practical purposes, committed to a mixed economy. Maintaining that 'the working of self-interest is generally beneficent',[60] he conceived of intervention as an exceptional policy. He regarded the first task of regulation as the creation of a framework which channels self-interest, which can, of course, be exercised in destructive ways, into the beneficent form of market exchange,[61] and Coase, who we have seen insisted on the necessity of regulation, was, of course, in complete agreement with this.[62] Though Pigou thought intervention necessary only when the operation of self-interest did not work acceptably, he was of the opinion that, even within the regulative framework, there were occasions when it did not do so. *The Economics of Welfare* is a compendious attempt to identify those circumstances in which intervention would improve welfare.[63]

Pigou identified the externality as the second of three classes of divergence between the private and social net products.[64] A private investor must calculate the

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couldn't exist. And therefore it's quite unimaginable': Russ Roberts, Interview with R A Coase (8 May 2012) <http://www.econtalk.org/archives/2012/05/coase_on_extern.html>.

58 Coase, above n 22, 23 n 35.

59 K R Popper, *The Open Society and Its Enemies* (5th edition 1966) vol 1, 158.

60 Pigou, *Economics of Welfare*, above n 9, 128, quoting Edwin Cannan, *The History of the Local Rates in England* (2nd edition, 1912) 176.

61 Pigou, *The Economics of Welfare*, above n 9, 128.

62 Coase, above n 2, 29; 134.

63 Pigou, above n 9, xii.

64 Ibid, 174, 183. Very penetrating recent commentary has shown that more sympathetic reflection on Pigou's other classes of divergence and related arguments in *The Economics of Welfare* than that of Coase himself (above n 2, 35-39; 144-49) reveals Pigou to have anticipated some of the points about transactions costs which Coase was trying to make: N Aslanbeigui and S G Medema, 'Beyond the Dark Clouds: Pigou and Coase on Social Cost' (1998) 30 *History of*

costs of an investment in order to decide whether, given her anticipated revenues, the investment will be profitable. We have seen in our previously discussed steel example that those costs will include the costs of obtaining the factors of production owned by others. But though the factory may inflict harms on neighbours such as the smoke harm, the investor does not have to pay to do this, and so the smoke harm is 'external' to her private cost calculation. Pigou's argument is that this does not mean the harm is not a cost, but rather that it is not a private but a social cost, though Pigou again was not responsible for this term, using instead 'thrown upon people not directly concerned, through, say, uncompensated damage'.[65]

There is, Pigou claims, an immediate economic problem with this in that those suffering the smoke harm receive no payment even though the investor obtains from them the ability to emit smoke, just as she obtains land from the former landowner, but in that case has to pay for it, and so 'uncompensated damage' arises. What is more, as in these circumstances the private cost is lower than the social cost and the divergence is external to the investor's calculations, there will be a tendency to generate more of the harm than would be efficient were the harm causing the divergence costed. Overall, the failure to cost an essential factor of production means that the 'generally beneficent' market mechanism is not working.[66] This precise argument for the externality is best understood as an argument for intervention as a specific form of regulation. The point is not to create a legal framework for the operation of the market but to change the outcomes that operation would produce because we are presented with, though again Pigou did not coin what has become a most influential term, a 'market failure'.[67]

All that need be added is that the argument works, as it were, in the other way. The externalities we have discussed are negative in that they involve the infliction of 'uncompensated damage'. There are also many instances when a benefit may be rendered without payment. The important policy implication of this is that it is possible to argue that, because of the absence of payment, a smaller amount of these beneficial goods may be provided by the market than would be optimal 'because the marginal social net product falls short of the marginal private net product',[68] and so the state should intervene to pay for these 'positive externalities'. Though the terminology yet again is not Pigou's, this is the argument for the provision of 'public goods'. The first example Pigou gives of such a good in *The Economics of Welfare* is the provision of lighthouses,[69] already then commonly used in economics as an example of it being impossible privately to levy optimal charges. Treating lighthouses as public goods was the occasion for perhaps Coase's most perfectly realised article, 'The Lighthouse in Economics',[70] in which, apart from being shown to itself be very woolly, the argument that the market cannot adequately provide lighthouses was met, and this is the Coase touch, with the demonstration that arguably the first adequate lighthouse system was

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Political Economy 601. See further N Aslanbeigui and G Oakes, *Arthur Cecil Pigou* (2016) ch 4.

65 Pigou, *The Economics of Welfare*, above n 9, 134.

66 Ibid, 172.

67 Ibid, 127, 143, 172, 192.

68 Ibid, 183.

69 Coase is highly critical of the way Pigou handles the smoke harm in this connection (above n 2, 34-35; 142-43).

70 (1974) 17 *Journal of Law and Economics* 357, reprinted in *The Firm, the Market and the Law*, above n 2, 187.

created by private investment. There was a thriving private market in British lighthouse services prior to 1842, which was ended only by the state buying out the private lighthouses at an enormous price which reflected their being going concerns! For reasons of space, I shall not discuss public goods at all as the three points I wish to make about Pigouvian intervention sufficiently emerge from consideration of negative externalities.

B *Deregulation*

Coase's criticism of Pigou is set out in secs VIII and IX of TPoSC. I do not propose to go through that criticism but, drawing on what has been said so far, to distinguish three ways in which this criticism has been interpreted over the history of the reception of TPoSC.

The first way is based on the Coase Theorem. This term was, as I have said, coined not by Coase himself but by his fellow Chicago Nobel Laureate and friend George Stigler, who was as dismissive of regulation as any Twentieth Century economist of the first rank. He was even prepared to say in 1972, flippantly but nevertheless sincerely, that 'almost all regulation is bad'.[71] But even Stigler, in editions of his economics textbook prior to the appearance of TPoSC, had adopted a Pigouvian attitude towards harms (and public goods) because the existence of externalities constituted a 'true disharmony between private and public interest' which had to be corrected by intervention.[72] However, the edition which appeared after TPoSC very strikingly claimed that 'the Coase theorem … asserts that under perfect competition private and social costs will be equal'.[73] Stigler acknowledged that he was one of a generation of 'older economists' who found the Theorem 'remarkable' because they had 'believed the opposite for a generation'.[74] The story of Coase's successful defence of FCC before critical Chicago economists, including Director and Friedman as well as Stigler, who had all initially rejected Coase's argument on Pigouvian grounds, is entertaining.[75] This episode is significant because it played its part in Coase being invited to write TPoSC, in joining the Chicago Law School, and in succeeding Director at the *Journal of Law and Economics*. Looking back on all this, Stigler acknowledged that the Theorem was a 'heresy'[76] which strikes one 'as incredible on first hearing'.[77]

Stigler's prose style and theoretical approach undoubtedly were of a polemical cast, and his coining of the Coase Theorem has been powerfully criticised as

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[71] G J Stigler, 'Regulation: The Confusion of Means and Ends' in *The Citizen and the State* (1975) 167.

[72] G J Stigler, *The Theory of Price* (2nd edition, 1952) 105. See also G Stigler, *The Theory of Competitive Price* (1st edition, 1942) 106-107.

[73] G J Stigler, *The Theory of Price* (3rd edition, 1966) 111, 113. In fairness to Stigler, it must be said that he immediately acknowledges that the large numbers aspect of the smoke harm makes one think it is a case for intervention, just as we have seen Coase did in TPoSC.

[74] Ibid, 113.

[75] The most engaging account is E W Kitch (ed) 'The Fire of Truth: A Remembrance of Law and Economics at Chicago 1932-70' (1983) 26 *Journal of Law and Economics* 163, 218-22. Stigler tells us, ibid, 221, that 'at the beginning … we took a vote and there were twenty votes for Pigou and one for Ronald, and if Ronald had not been allowed to vote it would have been even more one-sided'.

[76] G J Stigler, *Memoirs of an Unregulated Economist* (1988) 76.

[77] G J Stigler, 'The Law and Economics of Public Policy: A Plea to the Scholars' (1972) 1 *Journal of Legal Studies* 12.

'ideological'.[78] But it seems to me that, certainly at the time, what Stigler did was understandable and in this sense justifiable. When an externality is identified, we are, as we have seen, presented with a market failure. It is not denied that the (private) market works; but it is claimed that, contrary to the welfare claim of general competition, even when it works perfectly well, the market does not produce optimum welfare. The Coase Theorem shows, however, that, given general competition, a position Pigou accepts is normal when he accepts that 'the working of self-interest is generally beneficent' and that intervention should be piecemeal, externalities cannot arise. In my opinion, the reaching of this opinion involved a change of mind comparable to Stigler's, this completely deflates the concept of the externality, giving real strength to Coase's claim that its having 'come to play a central role in welfare economics [has had] results which have been wholly unfortunate'.[79]

Before pursuing this criticism of the externality further, let us finally dispose of the Coase Theorem. The correct response *now* to Stigler's formulation of the Theorem is, not to find it remarkable, but to find it banal because it is merely an application to the concept of social cost of an argument about Pareto optimality that is tautologically true. Like Coase, Stigler does not mean that there are no harms under general competition, but that generally competitive exchange will automatically establish the efficient level of those harms, so private and social costs will be equal and, indeed, the category of social costs will disappear because all externalities are internalised. Once this is understood, then what unfortunately has been the most influential development in regulatory policy which has been justified in part by reference to the Theorem, the neo-liberal practice of deregulation, can be seen to have no such justification. It is only if one assumes that general competition can in some vague way (the vagueness is unavoidable and essential) empirically obtain that the Theorem can justify deregulation. But though we have seen that this is the last thing one can assume, it is what Stigler did in some way assume, and it was in this spirit that Coase initially approached the problem of broadcasting in FCC.

But in the course of the argument of FCC and even more that of TPoSC, Coase's wish to expand the Pareto domain came to be framed in a way which it is unhelpful to regard as deregulatory in any literal sense. As an early example of Coase's insistence that 'A call for sensible regulation is not a call for no regulation', his auction proposal was what would now be called reregulatory rather than deregulatory. Auctions would require the Commission, as the 'government agency appointed to act as custodian of frequencies,'[80] to play an essential role in 'the creation of … rights in the use of … frequencies'.[81] This proposal was backed up by, as we have seen, specific research on frequency allocation and a very substantial body of work on broadcasting in general.

After the fashion of the argument in FCC, a very active field of analysis of the 'property rights' necessary for the creation of governance structures, which can include public sector institutions but typically are private alternatives to such institutions, has been developed. New institutional or transaction costs economics have made significant contributions, as has the sub-discipline of law and economics and

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78 D McCloskey, 'The So-called Coase Theorem' (1998) 24 *Eastern Economic Journal* 367.
79 Coase, above n 22, 26.
80 FCC, above n 7, 21.
81 Ibid, 25-26.

legal scholars more generally. Harold Demsetz is a representative figure. Work in this field is of very mixed quality, and whilst the distinction between property rules and liability rules due to Calabresi and Melamed may be the most valuable contribution made by law and economics other than Coase's own contribution to the conceptualisation of transactions costs, much purported institutional analysis of property rights is the purest deregulatory nonsense. This is nowhere more clear than in the application of property rights analysis to environmental issues. An appreciation of government failure in this area led JH Dales in the late 1960s to propose market-based, property rights alternatives to environmental intervention. Dales' own approach is careful and cautious in a way of which Coase would have approved. But, in contrast, there have been 'market environmentalist' proposals which defy belief as they illustrate just how far abstract notions of deregulation based on direct application of the Coase Theorem to the empirical world can be taken.[82]

C *Blackboard Economics and Government Failure*

What, then, is the function of the Coase Theorem in Coase's reasoning once it is acknowledged that Coase himself did not subscribe to the Theorem? Coase has told us that the Theorem is 'a stepping stone on the way' to the analysis of the empirical economy, in particular because 'it undermines the Pigouvian system'.[83] Under general competition, externalities cannot arise. The reason 'uncompensated damage' can be inflicted therefore cannot emerge from the externality as Pigou establishes it, but that reason emerges naturally from TPoSC in the existence of transaction costs. The smoke harm turns on the investor not having to pay to cause the harm; ie she effectively has a right to pollute. Under general competition, the necessary rearrangement of rights to correct this will take place through exchange (though what the resultant level of pollution will be cannot and should not be specified *ex ante*). But, given positive transaction costs, the necessary exchanges may well not take place, and indeed we have seen that Coase thought this plausible in regard of the large numbers problem posed by the smoke harm. They will take place only when the affected parties are prepared to commit sufficient resources to reach an optimising result, which, as it is essential to recognise, involves meeting the cost of overcoming the transaction costs of doing so.[84]

The existence of transaction costs certainly means that empirical markets cannot yield a Pareto optimum. Does this mean that we should turn to Pigouvian intervention? Working with Pigou's blunt idea of externality, it appears it must. The market has failed and corrective intervention is necessary. But Coase's analysis, based on comparative analysis of alternative governance structures, gives rise to a further way of criticising Pigou. Pigou's argument for intervention contains a logical error. One can point to the existence of a negative externality and so of a market failure. But to say this necessitates intervention is wrong, for the intervention will optimise welfare only if the government can do a better job. But, of course, the government has its own transactions costs and unless one can demonstrate by comparative analysis of the alternative governance structures that the welfare improvement which will follow in theory can be achieved in practice, one has not demonstrated the wisdom of intervention.[85] This is profoundly true.

[82] A crass example is discussed in Campbell, above n 23, 503.
[83] Coase, above n 42, 11.
[84] Coase, above n 2, 15-16; 114-15.
[85] Ibid, 18; 117-18.

Coase's attitude towards Pigou becomes, it has to be said, scornful when subsequent to TPoSC he explicitly argued – the point is there but not nearly so clear in TPoSC itself – why Pigou made this logical mistake. It was that Pigou simply assumed that the government institutions necessary to successfully carry out interventions existed or could be created. Coase's criticism will be examined in detail in the next sub-section of this article. For the moment let us just acknowledge that, on this assumption of government capacity, intervention will always improve welfare, whereas, of course, this need not be the case. Coase called policy made on the basis of this assumption 'blackboard economics': the policy will work on the blackboard; unfortunately it may well be that it cannot be put into practice.[86] Proper choice of economic policy requires, *inter alia*, a concept of 'government failure' to balance the concept of market failure which after Pigou has become so important.[87] And when making a choice between governance structures, it is wise to be modest about what one can possibly achieve, eschewing the optimism that a failure to consider the costs of intervention, which is conceived against some background idea of theoretically perfect outcomes,[88] will lead: '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'.[89]

One can point to numerous arguments by Coase where one thinks he took an unduly conservative view, but these are questions of judgement and the criticism that he was biased against government action is in my opinion wrong. I have argued that even-handedness in choosing governance structures was at the heart of Coase's thinking, and I believe his writings display this quality. It was the extent of government failure that he believed himself to have encountered in the course of his own teaching,[90] research and in his editing of *The Journal of Law and Economics* that led him to take the position he did.[91]

In part because I believe that neo-liberalism, including Coase, misunderstands the non-market nature of the large corporation, I remain a socialist committed to an extensive welfare state. But I have found the views of the later Coase on the scope and therefore the size of the public sector to be extremely wise and I believe they must be taken onboard by left-wing thought if the welfare state is to approximate to its optimum size, which currently requires dramatic restriction of its scope. Though I do not seek to defend it here, it is my opinion, based on more than twenty five years of study of the theory and practice of regulation in Coase's sense which has identified

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86 E W Williams Jr and R H Coase, 'The Regulated Industries: Discussion' (1964) 54 *American Economic Review (Papers and Proceedings)* 192, 195.

87 Ibid.

88 Coase, above n 22, 28, 30.

89 Williams and Coase, above n 86, 195.

90 Little has been written about Coase's teaching, but it would seem that, in addition to taking over the *Journal of Law and Economics*, he successfully continued Director's extremely influential critical teaching of antitrust at Chicago. The tenor of what Coase did is conveyed by a story told by William Landes in Kitch (ed) above n 75, 193: 'Ronald said he had gotten tired of antitrust because when the prices went up the judges said it was monopoly, when the prices went down, they said it was predatory pricing, and when they stayed the same, they said it was tacit collusion'.

91 R H Coase, 'Economists and Public Policy' in *Essays on Economics and Economists*, above n 37, 47, 61-62.

numerous instances of serious government failure that stem, and could only stem, from a very marked or even complete absence of proper inquiry into whether intervention was practically possible, that Coase's conservative stance has great weight.

Coase's criticism of Pigou has, of course, come in for considerable criticism itself, and in the current debate a very telling point has been made against Coase.[92] In another article which also will appear shortly before this one,[93] I seek to contribute to this debate and I shall be brief here. Pigou did not, in fact, commit the logical fallacy Coase alleged. What Pigou in fact explicitly stated at points throughout both *Wealth and Welfare*[94] and *The Economics of Welfare* (and elsewhere) was that the identification of an externality raised only a '*prima facie*' case for intervention, and this case could 'become more than a *prima facie*' case only after consideration of 'the qualifications … which governmental agencies may be expected to possess for intervening advantageously'.[95] Rather than assume the perfection of those agencies, Pigou allowed that they might not have the requisite capacity to bring about a welfare improvement, indeed he was critical of the 'disadvantages', certainly 'in former times', 'of regular governmental agencies',[96] and allowed that the action of such agencies '*might* make things worse'.[97]

It is unarguable that this seriously undermines Coase's criticism of Pigou in TPoSC, and other points to similar effect could be made. They are all discussed in my article, and I will repeat only the conclusion of that article here. Coase concluded TPoSC by telling us that his demonstration of 'basic defects in the current approach to problems of welfare economics' meant that 'a change of approach' was needed,[98] but he never thought he had managed to bring this about and, rather bizarrely, the preponderant tone of his estimation of the reception of TPoSC over the sixty years that remained to him after the article was published was one of disappointment. A typical comment, one of very many, which Coase thought fit to put on the first page of his first collection of essays, is: 'My point of view has not in general commanded assent, nor has my argument, for the most part been understood'.[99]

This is, of course, in part a point about high theory directed at the way economists have clung to the Coase Theorem. But like, I think, Coase, I do not see this as the most important issue. What is needed is that even those who accept the importance of the appreciation of positive transaction costs in policy formulation must actually do the work of institutional analysis, and in later work he rather went beyond the conclusion of TPoSC and insisted that 'a change [of theoretical] approach is not enough. Without some knowledge of what would be achieved with alternative

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92 R E Backhouse and S G Medema, 'Economists and the Analysis of Government Failure: Fallacies in the Chicago and Virginia Interpretations of Cambridge Welfare Economics' (2012) 36 *Cambridge Journal of Economics* 981. See also S G Medema, *The Hesitant Hand* (2009) 59-72 and S G Medema, 'Pigou's "*Prima Facie* Case": Welfare Economics in Theory and Practice' in R E Backhouse and T Nishizawa (eds) *No Wealth but Life: Welfare Economics and the Welfare State in Britain 1880-1945* (2010) 42. See further the 'Addendum' in Aslanbeigui and Oakes, above n 64, 165-71, which should be read in conjunction with ch 4 on Pigou's views on policy analysis.

93 D Campbell, 'The Sense in Coase's Critique of Pigou' (forthcoming 2017) 13 *The Journal of Law, Economics and Policy*.

94 Eg Pigou, *Wealth and Welfare*, above n 9, 247.

95 Pigou, *The Economics of Welfare*, above n 9, 332.

96 Ibid, 333-34.

97 Ibid, xv (emphasis in original).

98 Coase, above n 2, 42; 153.

99 Coase, above n 22, 1.

institutional arrangements, it is impossible to choose sensibly between them'.[100] Such knowledge can only come from detailed empirical study of the sort at which Coase himself could excel: 'If our discussions are to have any value, our theories must have an empirical basis'.[101] The point is that it is not enough to make a theoretical case for empirical evaluation of the capacity of government. One must actually do the empirical work as an essential, integral component of policy formulation. In the course of doing the work, the blackboard economics that underpin so many welfare proposals will tend to be eliminated and the proposal refined if not abandoned. But just saying that the difficulties of economic policy formulation and its legal implementation will be taken into account, and then ignoring these difficulties in order to resume on effectively the original lines, is just not good enough. Again, I will not defend it here, but my studies of intervention proposals have overwhelmingly shown a merely casual and indeed gestural acknowledgement of the difficulties involved which, once acknowledged, are then put aside as the intervention proceeds essentially on the original lines. I have elsewhere called this the '*ceteris paribus* case for intervention'.[102]

Writing in 1988, Coase acknowledged that he had not dealt with the *prima facie* case argument in TPoSC and tried to correct this.[103] Even after reading (I believe) his every published word on this issue, it is unclear to me whether Coase was properly aware of the *prima facie* case argument when he wrote TPoSC, and it seems most likely he was not. His acknowledgement of fault does not eliminate the fault. But his renewed criticism of Pigou in order to show that what Pigou had said was 'essentially correct' is as devastating as any criticism of scholarly work that I have ever read. In order to illustrate his claim that Pigou's 'manner of working' was one of merely gestural institutional analysis, Coase said the following of Pigou's belief that the innovation of semi-autonomous 'Commissions' could overcome the 'disadvantages', which we have seen Pigou acknowledged, of 'regular governmental agencies':

> Pigou's belief … was first expressed in *Wealth and Welfare* in 1912 and repeated in all [five] editions of *The Economics of Welfare* without change. Pigou never seems to have thought it necessary to inquire whether his optimistic opinion about these commissions was justified by events in the subsequent forty years (the 1952 reprint [of the fourth edition] is the last edition to contain new material). In all editions the Interstate Commerce Commission is referred to as the Interstate Railway Commission, and this body, created in 1887, is always described as "recently developed", which does not suggest any real interest in the subject.[104]

Phew!

Coase did not want any economic policy making to proceed without detailed analysis of institutional possibility. One has to ask whether economic policy making has the capacity to do this, for it normally lacks anything like the necessary legal and social theoretical competence. It typically remains based on abstract economics and

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[100] Ibid, 30.
[101] R H Coase, 'The Conduct of Economics: The Example of Fisher Body and General Motors' (2006) 15 *Journal of Economics and Management Strategy* 255, 277.
[102] D Campbell, 'Of Coase and Corn: A (Sort of) Defence of Private Nuisance' (2000) 63 *Modern Law Review* 197, 204.
[103] Coase, above n 22, 20-23.
[104] Ibid, 22.

any acknowledgement of the difficulty of implementation is typically *ceteris paribus* rhetoric. Coase told us he feared that 'if I am right, current economic analysis is incapable of handling many of the problems to which it purports to give answers'.[105] It is best to take him literally.

D *The Ubiquity of the Externality*

Amazingly, what has so far been discussed is not the most telling of Coase's criticisms of the externality. Though the point was first given clear expression by Dahlman in 1979,[106] when revisiting his criticism of Pigou in 1988 Coase himself said that externalities are 'ubiquitous'.[107] The trouble we have taken over general competitive equilibrium, the transactions cost and the externality now allows us to see that the externality's implication for economic policy is in a sense the reverse of that claimed by Pigou, even taking the *prima facie* argument into account. Coase was extremely conscious, not merely that intervention might not achieve the intended goal, but that it might have unintended adverse consequences.[108] He therefore drew a conclusion opposite to Pigou: 'The ubiquitous nature of "externalities" suggests to me that there is a *prima facie* case against intervention'.[109] I would not put it this way. The ubiquity of externalities leads one to conclude that the demonstration of their existence is extremely banal and carries no policy implication whatsoever. Looked at from the other direction, the criticism that the Coase Theorem is purely theoretical means that there are *no* empirical exchanges which display the properties of general competition and therefore *all* empirical exchanges generate externalities. Demonstrating this tautological truism surely cannot raise even a *prima facie* case for intervention.

Three very important points follow from this conclusion, the first of which is a point about pure economic theory of the sort I have been trying to avoid but which a failure to make now would I fear leave the readership of this *Journal* puzzled. That an exchange has effects which are unknown to or ignored by the parties to the exchange is not an unusual state of affairs. It is the normal state of affairs. If readers will think about the shoes they are wearing, they will realise they know almost nothing about them, not even things it is readily conceivable they might want to know. What grade of leather was used? How well-trained was the cobbler or well-designed the machine that cut the leather? Was the cow humanely reared and killed; the leather dyed using chemicals which polluted; the stitching done by third world, poverty stricken, children? Ignorance, much more than knowledge, is central to the operation of the market, and the economic problem, as Hayek has done most to show, is how coordination is possible given this prevailing ignorance.

How can it be that ignorance is overcome in any specific case when an externality is identified and intervention called for? The second point which must be made about the externality is that its identification can only be done by the state. The divergence between the private and the social calculations of costs emerges because the state does the second calculation. One might point to deficiencies in the working of markets that lead one to criticise its outcomes in its own terms, such as those issues which the law of contract tries to address when it denies that particular agreements are in fact voluntary. But this is not what Pigou tried to do when he argued that the market could be working perfectly well and still produce externalities. He was then, despite

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[105] Ibid, 15.
[106] C J Dahlman, 'The Problem of Externality' (1979) 22 *Journal of Law and Economics* 141, 152.
[107] Coase, above n 22, 26.
[108] Coase, above n 2, 42-43; 153.
[109] Coase, above n 22, 26.

the way he put the point making it all seem (because he himself saw it this way) a matter of economic choices about costs, criticising the results of those choices from an external political or value standpoint, a standpoint which, when it has an influence on policy, has to be the standpoint of the state.[110]

And how is this standpoint taken up? It must, of course, be a political process of deciding upon collective action. Coase was quick to see that his own belief in 'a *prima facie* case against intervention' was 'strengthened if the government is not like Pigou's ideal but more like [his "regular public agencies"] – ignorant, subject to pressure, and corrupt'.[111] But this is not the main point, for even if the government was in all other respects capable, its capacity must be reduced if it is operating with a theory of intervention that is completely defective, and we have seen that Coase concluded TPoSC by summing up his claim that the theory of the externality has such 'basic defects' that a 'new approach' was called for. Piecemeal intervention since Pigou has been guided by an approach so defective it provides no guide whatsoever to the occasions for intervention.

That so defective an approach has led to a generalisation of intervention which cuts across Pigou's own piecemeal approach and so has played its part in creating a public sector of a size and scope which would have amazed him is not, perhaps, surprising. A number of the criticisms of this which have given such impetus to the neo-liberal revolution have been touched upon. Perhaps one thing may be added in conclusion. Coase has shown that the welfare economics of intervention have 'basic defects'. In the course of doing so he has said many things which make him, much to the confusion of many of his critics, a profound critic of mainstream economics. I dare not detain readers longer by going into the further thought-provoking things about this that Coase said in TPoSC and elsewhere. But he has indicated that the main problem with Pigouvian welfare economics is its complete lack of self-understanding. Occasions for intervention are identified, but there is no understanding of how. It cannot be because of the existence of externalities. It is not that proper analysis of economic interventions shows them to 'political', for it is essential to realise that all intervention is political. It is that the current practice of intervention is political in the bad sense because what Pigou conceived of as matters of positive economics are matters of political value judgment, but, disastrously, matters of political value judgement which pass as matters of positive economics. Coase himself does not fully draw this conclusion, but it is the most important conclusion to be drawn from TPoSC.

VII Conclusion

When Stigler coined the Coase Theorem by telling us 'that under perfect competition private and social costs will be equal', he inevitably gave rise to the impression that he and Coase, indeed the market economics which he and Coase maintained, had little or no concern for the environmental and other harms which welfare economics had treated as externalities. This was not Coase's (nor Stigler's) position. Coase did not deny the existence of these harms. Rather he sought to show that the prevention of such harms had costs as well as benefits; that the balancing of

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110 Dahlman, above n 106, 156.
111 Coase, above n 22, 26.

such costs and benefits was akin to the balancing which in a market economy is ordinarily carried out by economic exchange; that the Pigouvian welfare economics which underlies the economic policy of distinguishing such harms as externalities which can be dealt with only by government intervention had 'basic defects'; that the use of the defective concept of the externality in policy formulation has had 'results which have been wholly unfortunate'; that deciding whether to do nothing about a harm or to attempt to handle it by the operation of economic exchange (perhaps involving the creation of the property rights and other institutions necessary for a market) or by intervention was a matter of even-handed weighing of alternative governance structures; that policy formulation influenced by the concept of the externality had typically not been even-handed but had taken a 'blackboard economics' approach which placed far too much confidence in government institutions; and that a reining back of a welfare state that had in part because of this gone well beyond its optimal scope was now necessary. I believe this is so very powerful a set of arguments that, remarkably enough, its treatment even at the length it has received here is entirely justified.