

Ronald Coase on Economics and Economic Method

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Ronald Coase was awarded the 1991 Nobel Prize for two of the most cited papers in the history of economics: "The Nature of the Firm" (1937a) and "The Problem of Social Cost" (1960).¹ Yet, he believes that his "point of view has not in general commanded assent, nor has [his] argument, for the most part, been understood." According to Coase, "most economists have a very different way of looking at economic problems and do not share my conception of the nature of our subject" (Coase, 1988d, p. 1), and his work is peppered with numerous commentaries that reveal a substantial degree of discomfort with how economists do economics.

The purpose of this article is to explore Coase's views of economics and economic method, and, along the way, to provide additional insight into the central themes of his contributions to economic analysis. These themes include: (i) the importance of institutions in particular, the firm, the market, and the law and their relative neglect within mainstream economic theory; (ii) the importance of transaction costs and the need to incorporate transaction cost considerations into economic theory; (iii) criticism of "blackboard economics" - the mindless abstraction that, in Coase's view, characterises so much of economic theory and analysis; (iv) the need for economists to make detailed studies of the workings of the economy for purposes of theory construction and policy analysis; (v) the importance of realism in theory construction; and (vi) the efficacy of the market and the pricing mechanism as methods of coordination and economists's failure to give appropriate attention to these mechanisms. In the end, we will see a view of Coase that is in many ways at odds with the usual caricature, including the tendency to closely identify Coase with the standard Chicago view.

The discussion herein will proceed as follows. Section I explores Coase's conception of the nature and definition of economics, including his views on economic imperialism. Section II examines various methodological issues that emerge from Coase's discussions of theory construction and policy analysis, including issues of explanation and prediction, induction and deduction, and the use of mathematical analysis in economics. Section III probes Coase's discussions of economic institutions and their treatment within mainstream economic analysis. Finally, Section IV concludes the paper.

I. The Nature and Definition of Economics

To understand Coase's views on economics and economic method, it is necessary to start with his definition of economics. For Coase (1977a, p. 487), economics is the study of "the social institutions which bind the economic system together: firms, markets for goods and services, labour markets, capital markets, the banking system, international trade, and so on." This definition is in fact very similar to Alfred Marshall's (1961, p. 131) definition of economics as "a study of man's actions in the ordinary business of life," and whose "list of the chief questions to which the economist addresses himself" includes: "What are the causes which, especially in the modern world, affect the consumption and production, the distribution and exchange of wealth; the organization of industry and trade; the money market; wholesale and retail dealing; foreign trade, and the relations between employers and employed?" (Marshall, 1920, p. 33).² There are at least two important points (the import of which will become clear below) to take from Coase's definition of economics. The first is that it is

consciously pointed toward the task of studying the institutions that make up the economic system. The second is that it defines economics by its subject matter, that is, economists "study the economic system" (Coase, 1977a, p. 486).

Coase's definition of economics may be usefully contrasted with the neoclassical definition, owing to Lionel Robbins (1984, p. 16), of economics as "the science which studies human behavior as a relationship between ends and scarce means which have alternative uses." This view makes economics the science of human choice - an approach to the study of human behavior. That is, the now-standard definition of economics is one which conceives of economics as an *approach* rather than a *subject matter*. Coase believes that a great deal of harm has been done by the adoption of the modern definition because, in the process, the approach has been divorced from the subject matter. For Coase, the economic system revolves around consumers, producers, markets and government. Yet, in his view, the treatment of each of these within economics is either incomplete, misguided, or wrong. The reason for this, he says, is our "lack of knowledge ... of economics. We have a primitive analytical system to handle the firm, the market, the process of contracting and property rights—all vital elements in the working of our economic system" (Coase, 1978, p. 244, emphasis added). The root cause of these shortcomings, according to Coase, is the failure of economists to seriously analyse the decision-makers, institutions, and processes that are the subjects of economic analysis as he defines it. We have "consumers without humanity, firms without organization, and even exchange without markets" (Coase, 1988d, p. 3), and are, as a result, "appallingly ignorant about many aspects of the working of the economic system ..." (Coase, 1974a, p. 171).

The modern definition of economics extends the scope of economic inquiry to all areas in which human choices are made, including such traditionally noneconomic areas as law, politics and sociology. Coase's name has been prominently identified with this so called economic imperialism, both through law and economics, of which he is generally considered to be a founding father,⁷ and through his association with the Chicago school, which has been at the forefront of this movement. However, Coase's view of the usefulness of economic imperialism, and of its long-term prospects for success, is decidedly pessimistic.

Coase (1977a, p. 482) argues that the boundaries between disciplines are determined by a competitive process - that is, by which group of scholars gives the best answers to a given set of questions. Thus, whether economics will, in the long run, encompass what is now called political science (to take one example) will depend on whether economists can provide better theories and analyses of the political process than can political scientists. Coase (1982, pp. 484-485) suggests that a discipline may be defined by commonalities of technique, approach, or subject matter, but he is convinced that, in the long run, the lines separating disciplines will be determined by subject matter. That is, in this competitive process, the group of scholars with superior knowledge of the details of behavior, institutional framework, etc. with respect to a particular subject will constitute the discipline. Thus, economics will be the study of the economic system, political science of the political system, and so on. One of the major impediments that Coase sees to the long-run success of economic imperialism is that it, at its center, involves the exportation of an *approach*: "I take it to be the view of Becker and Posner that the decisive advantage which economists possess in handling social problems is their theory of, or approach to, human behavior, the treatment of man as a rational, utility-maximizer" (Coase, 1977a, p. 488). While a new technique or approach may permit a group of scholars to successfully enter, and perhaps even dominate, other fields, Coase believes that this will generally be a short-run phenomenon, with subject matter usually winning out in the end.

An additional reason for Coase's pessimism lies in his belief that the approach that economists are exporting, rational utility maximisation, is inadequate as a theory of human behavior both within and outside of economics. Economic theory portrays the consumer as a

bundle of given preferences making rational decisions toward the end of maximizing utility. Coase's dissatisfaction with utility theory comes through quite clearly in statements such as the following: "Up to the present it [i.e., utility theory] has been largely sterile. To say that people maximize utility tells us nothing about the purposes for which they engage in economic activity and leaves us without any insight as to why people do what they do" (Coase, 1977a, p. 488).⁴ This dim view of utility theory is suggestive of two problems that Coase associates with this theoretical construct. First, he believes that this theory does not tell us "why people do what they do." That is, it does not tell us why, for example, individuals demand less of a good when price rises or enlighten us as to the process of preference formation and change. Secondly, Coase argues that rational utility maximization is an overly narrow conception of human behavior. He finds Adam Smith's view of human nature more congenial than the modern one, even though it does not give us a highly operational approach:

Adam Smith would not have thought it sensible to treat man as a rational utility-maximizer. He thinks of man as he is—dominated, it is true, by self-love but not without some concern for others, able to reason but not necessarily in such a way as to reach the right conclusion, seeing the outcomes of his actions but through a veil of self-delusion (Coase, 1976, pp. 545-546).

For Coase, the hypotheses of self-interested behavior and rational utility maximization are inadequate explanations for much of what we observe in the sphere of human behavior, and he attributes this to economists's failure to make serious investigations into the process of individual decision making.⁵

And even if rational utility maximization is the best that economists can do in terms of explaining economic behavior, it is incorrect, Coase maintains, to move from here to the assertion that, since the agents of the economic system are also those of the legal, political, or social system generally, the economic model of human behavior can be fruitfully applied to all areas in which choices are made. "In these different fields," he says, "the purposes which men seek to achieve will not be the same, the degree of consistency in behaviour need not be the same, and, in particular, the institutional framework within which the choices are made are quite different" (Coase, 1977a, p. 488). Coase maintains that to understand these purposes, institutional frameworks (e.g., how legal and political systems actually operate), and the specific interrelationships of these systems will require specialized knowledge that will not likely be present in, or acquired by, those working in other disciplines.⁶

It is wrong, then, to lump Coase within the company of those such as Becker, Stigler, and Posner who have established the extension of economics into other disciplines as an important component of the Chicago approach.⁷ In fact, Posner (1993b, pp. 207-208) is highly critical of Coase on this score, suggesting both that Coase's definition of economics is too narrow, and that his views on economic imperialism are largely off the mark and decidedly non-Chicagoan. It remains to explain how one can reconcile Coase's dim view of economic imperialism with his association with law and economics. This discussion will be delayed until a later section of this essay.⁸

II. Methodological Issues in Theory Construction and Policy Analysis

An off-recurring theme in Coase's work is that economic theory must be firmly grounded in reality, and this in two senses: the assumptions should be realistic and the theories and analysis should be pointed toward an understanding of the economic system as it actually operates. This emphasis on realism helps us to understand why Coase is so often critical of modern economics much of which he believes is devoid of realism both in its assumptions and in its relation to the operation of the economic system.

A. Explanation and Prediction

Coase's emphasis on the importance of realistic assumptions and theories puts him squarely and consciously at odds with Friedman's (1953) view that, as Coase puts it, "the worth of a theory is to be judged solely by the extent and accuracy of its predictions." Such a view, he says, "seems to me to be wrong" (Coase, 1982, p. 6).⁹ While Coase does not deny the usefulness of having theories which are amenable to predictive exercises, he maintains that the greater purpose of theory is that it "serves as a base for thinking" and "helps us to understand what is going on by enabling us to organize our thoughts" (Coase, 1982, p. 6). Predictive power alone does not necessarily imply insight into or understanding of the working of the economic system, and given a choice between "a theory which predicts well but gives us little insight into how the system works and one which gives us insight but predicts badly," says Coase (1982, p. 6), "I would choose the latter."

To elucidate the difference between the two approaches, Coase invokes Friedman's example of the density of leaves around a tree:

Consider the density of leaves around a tree. I suggest that the hypothesis that the leaves are positioned as if each leaf deliberately sought to maximize the amount of sunlight it receives, given the position of its neighbors, as if it knew the physical laws determining the amount of sunlight that would be received in various positions and could move rapidly or instantaneously from any one position to any other desired and unoccupied position. ... Despite the apparent falsity of the "assumptions" of the hypothesis, it has great plausibility because of the conformity of its implications with observation (Coase, 1982, p. 7, quoting Friedman, 1953, pp. 19-20).

Against this, Coase (1982, p. 7) claims that even if the above theory predicts well, it provides a "very poor mechanism for thinking about this subject", in that "[o]ur problem is to explain how leaves come to be distributed on a tree given that a leaf does not have a brain."¹⁰ For Coase, "as if" reasoning (in the instrumentalist sense), while perhaps useful for generating predictions, does not take us as far as we need to go. Rather, "realism in our assumptions is needed if our theories are ever to help us understand why the system works in the way it does. Realism in assumptions forces us to analyze the world that exists, not some imaginary world that does not" (Coase, 1982, p. 7).

Coase (1982, pp. 7-8) does not, however, go so far as to claim that all of the assumptions of economics must be completely realistic. He recognizes that there are certain factors on which we may not be able to get an adequate handle, some that may excessively complicate the analysis without adding much in the way of insight, and still others that are completely irrelevant to the matter at hand and which thus may be usefully assumed away. The problem, according to Coase, is that economists have taken this too far; while assumptions are a necessary component of theory construction, this is often used to justify abstraction from many of the important components of the economic system, so that, by the time the theory is developed, there is little remaining correspondence to what goes on within the economic system.

Coase's emphasis on the importance of realism has led Posner (1993a, p. 76; 1993b, p. 206) to incorrectly accuse Coase of being against abstraction, a claim that Coase refutes quite strongly: "This is wrong. ... I do not dislike abstraction. But the right degree of abstraction depends on the problem that is being analysed. What I object to is mindless abstraction or the kind of abstraction which does not help us to understand the working of the economic system. My aim is to bring into existence an economic theory which is solidly based" (Coase, 1993a, p. 97). For Coase, the proving ground of a theory is not, then, prediction, but whether it gives us a better understanding of how the economic system works.

A further issue that makes Coase hesitant about using prediction as a tool of theoretical validity is the degree of confidence that one can place in the use of quantitative methods. Three

sources of difficulty can be identified from Coase's discussions. First, he believes that economists generally engage in statistical investigations with the aid of a theory, rather than deriving their theories from statistical investigation. The result is "the tendency of economists to get the result that their theory tells them to expect," a belief reflected in Coase's now-famous assertion that "if you torture the data enough, nature will always confess" (Coase, 1982, p. 16).¹¹ If the results do not fit the theory, they are left aside as anomalies or matters for future investigation. Thus, we see different theories purporting to describe the same phenomena, and all accompanied by glowing statistical results.

Secondly, Coase is concerned with the difficulties that can follow upon the rote application of quantitative tools: "it so often happens," he says, "that a statistical technique, if handled in a mechanical way, does give results whose meaning is quite different from what it appears to be on the surface [so] that results achieved by the use of a complicated statistical technique should always be viewed with caution" (Coase, 1938, p. 153). The import of this problem is reflected in the third difficulty that Coase identifies - the tendency to reduce the breadth of questions addressed or factors encompassed in the theory to those that can be easily quantified. Commenting on Stigler's (1965, pp. 16-17) assertion that the growth of quantitative analysis portends a great future for economists in public policy analysis, Coase argues that

this development is not without its costs. It absorbs resources which might otherwise be devoted to the development of our theory and to empirical studies of the economic system of a nonquantitative character. Aspects of the economic system which are difficult to measure tend to be neglected. It diverts attention from the economic system itself to technical problems of measurement (Coase, 1974, pp. 180-181).

The result is a tendency to neglect or assume away those elements of the economic system that are not (easily) measurable. This, in Coase's mind, serves to limit both the relevance of the theory and the usefulness of the quantitative results. To the extent that non-measurable elements impact on the subject under investigation or interact with other variables to influence the impact of these variables upon the subject, the quantitative results are, at best, suspect. What is necessary, he says, is to develop theories that include these factors and to apply them in our quantitative work to the greatest extent possible. However, to the extent that the quantitative analysis omits some of these variables, our enthusiasm for the results must be correspondingly tempered. Moreover, such difficulties illustrate the need to go beyond prediction as a measure of theoretical validity, focusing instead on the correspondence between the theory and the working of the economic system.

While Posner (1993a, p. 79) has taken Coase's remarks on this score to mean that Coase objects "in principle to ... econometric studies," Coase (1993a, p. 97) explicitly denies this. Coase sees quantitative results as persuasive mechanisms, as advertising or promotional efforts in the competition between theories. This, for Coase, is not an unambiguous bad, so long as it is recognized that such results can be attended by certain difficulties and that they are only part of what should go into the evaluation of the worth of a theory. "I do not mean to suggest," he says, "that we should avoid quantitative work. But it is well to remember that there is no such thing as a free statistic" (Coase, 1974a, p. 181).

B. Induction and Deduction

Coase's calls for greater realism translate into placing a greater emphasis on inductive analysis. His views on this subject emerge quite clearly in his discussions of the history of economics, and, in particular, of Alfred Marshall.¹² Those who know Coase well speak of his deep admiration for Marshall, and a reading of Coase's essay on Marshall's methodological position is akin to reading Coase on Coase.¹³ In Marshall, Coase finds great stress laid on the *interdependence* of induction and deduction, as exemplified in the following excerpt of a letter

from Marshall to John Neville Keynes (commenting on a draft of Keynes's *The Scope and Method of Political Economy*):

I think the right order is *first* to emphasize the mutual dependence of induction & deduction, & *afterwards* to show in what kinds of inquiry the economist has to spend the greater part of his time in collecting arranging & narrating facts, & in what kinds he is chiefly occupied in reasoning about them & trying to evolve general processes of analysis & general theories which shall show the Many in the One & The One in the Many (quoted in Coase, 1975, p. 26, emphasis in original).¹⁴

While Marshall stressed the interdependence of induction and deduction, Coase (1975, p. 28) is of the mind that Marshall "always emphasises induction, the collection and assembly of facts," and gives lesser emphasis to deductive theorizing. Coase is greatly impressed by Marshall's habit of making extensive collections of economic facts, and he maintains that Marshall's emphasis on induction stemmed from the fact that "his aim was to understand the working of the real economic system, a system whose operation we could observe in the factories, in the streets and in the houses of ordinary people. ... And for Marshall it was very important that one should get it right since it was this real system that one had to explain" (Coase, 1975, p. 28). Here, Coase is drawing a rather tight link between understanding the structure and workings of the economic system and the use of the inductive method.

Coase very much carried this perspective into his own work. His historical analyses of the B.B.C. and British postal monopolies, of the allocation of frequencies and payola practices in the U.S. broadcasting industry, and of the development of the British lighthouse system are all based upon extensive analyses of government records pertaining to these issues. His discussions of social cost are built upon a wide-ranging analysis of legal cases and statutes and their implications for the allocation of costs in externality situations. In making these analyses, Coase was consciously attempting to build a base upon which one can think about these issues (or policies pertaining thereto).¹⁵ His forays into accounting and the use of accounting records in economic analysis provided important insights into firm and industry behavior, including shedding doubt upon the concept of the representative firm (Coase, Edwards, and Fowler, 1939) and revealing the difficulty for the firm of determining the profit-maximizing level of output, given the structure of the accounting records of firms (Coase, 1937b).

However, the usefulness and importance of the deductive method is not lost on Coase. Drawing again on his discussion of Marshall, Coase notes that while Marshall claimed to have "little respect for pure theory," he had equally little respect "for that crude collection and interpretation of facts without the aid of high analysis which sometimes claims to be a part of economic history" (Coase, 1975, p. 29, quoting a letter from Marshall to W.A.S. Hewins, October 12, 1899). For Marshall, economics is, as he puts it, "an organic whole" within which the role of deductive theorizing is not to "forge a few long chains of reasoning" from spartan *a priori* assumptions, but rather "to forge rightly many short chains and single connecting links." While Marshall cautions against long chains of *a priori* deductive reasoning because they may move us far from reality, he is equally concerned about the loose use of facts, suggesting that, along with facts, the economist "needs to make careful use of analysis and deduction, because only by their aid can he select the right facts, group them rightly, and make them serviceable for suggestions in thought and guidance in practice" (Coase, 1975, pp. 29-30, quoting Marshall, 1961, p. 773).

While Coase has been critical of economists for not making greater use of the inductive method, he is well aware of the importance of combining it with deduction, provided that, in doing so, economists deal with real rather than imaginary worlds (as reflected in his remarks about assumptions and abstraction, discussed above). The benefits from this union are perhaps best reflected in Coase's analysis in "The Nature of the Firm," the insights underlying which were culled from his year spent visiting various industrial concerns in the U.S. These insights

led Coase to recognize the important role played by transaction costs in determining the organizational structure of the firm. This inductive result is paralleled on the deductive side by the idea (deduced, but drawn from the inductive insight) that the firm will organize additional transactions internally as long as the costs of internal organization are less than those of market organisation. However, Coase does not believe that the further fleshing out of the determinants of the organisation and extent of firms will be found simply through deductive theorising. As he said in his Nobel lecture, "What we need is more empirical work. ... 'An inspired theoretician might do as well without such empirical work, but my own feeling is that the inspiration is most likely to come though the stimulus provided by the patterns, puzzles, and anomalies revealed by the systematic gathering of data ...'" (Coase, 1993, pp. 718-719, quoting Coase, 1972, p. 71).

C. Mathematical Analysis

One of the defining features of economics, at least since the 1950s, has been the steady march toward the use of sophisticated mathematical techniques. Yet, Coase won the Nobel Prize for work which contains absolutely no mathematical analysis; in fact, mathematical formalism is totally absent from his work, and, apart from his work on producer expectations and accounting in the 1930s, it also contains no quantitative analysis.¹⁶ Coase's personal aversion to mathematics has been life-long, and, looking back on his school days, he has said that he "did not like mathematics" (Coase, 1988b, p. 5) and as a result gave up his pursuit of a chemistry degree and switched to the study of commerce. He has resisted the temptation to formalise his most significant works (to which Oliver Williamson (1989, p. 229) attributes some of their lack of influence), and where others have formalised them, either for extension or contradiction, his comments and defenses have been made with intuitive arguments (what Posner (1993b, p. 205) has called "the beautiful simple prose of the accomplished English essayist") rather than mathematical analysis. But beyond the absence of these techniques in his own work, Coase's writings reveal a strong suspicion about the uses to which these techniques have been put in economics generally. Coase's qualms about quantitative analysis have been described above. We now turn to his perspective on the way in which mathematics is employed within mainstream economics.

Coase's views on the use of mathematics in economics are, in fact, parallel to those of Marshall, who, though a skilled mathematician, was not an unabashed fan of the mathematical turn that economics was taking. As Pigou tells us, Marshall thought that "excessive reliance on this instrument might lead us astray in the pursuit of intellectual toys, imaginary problems not conforming to the conditions of real life; and, further, might distort our sense of proportion by causing us to neglect factors that could not easily be worked up in the mathematical machine" (Coase, 1975, p. 30, quoting Pigou, 1925, p. 84). This perspective is exemplified in Marshall's letter to his pupil A.L. Bowley, in which he said that mathematics should be used "as a shorthand language rather than an engine of inquiry," and that the end product should be burned if one could not translate it into English and apply it to "examples that are important in real life" (quoted in Coase, 1975, p. 30). Coase's perspective on Marshall here essentially echoes that of Pigou, and harkens back to Marshall's views on inductive and deductive reasoning:

He thought that we lacked the data to support anything but relatively simple constructions. He feared that the factors that could not easily be dealt with in mathematical form would be neglected. But above all, he thought that we would be tempted to engage in what he termed "mathematical diversions" Marshall thought it would tend to divert our attention from the real world in which poverty causes degradation and to the study of which he thought we should devote our whole energies (Coase, 1975, p. 31).

As Coase points out, however, Marshall was not against the use of mathematics by economists; the issue, rather, was one of making the appropriate use of this tool. Mathematics, said Marshall, was very helpful in forging long chains of reasoning and for allowing economists to grasp "the mutual interaction of economic changes," something that is extremely difficult to do without the use of mathematics (Coase, 1975, p. 30, quoting Marshall, 1961, p. 781).

Coase's central criticism of the use of mathematics in modern economics is that Marshall's fears have been fulfilled that the assumptions that economists have made in the process of developing their mathematical models have tended to rob economics of its power to explain economic reality. Factors that are not easily incorporated into mathematical analysis are assumed away, ignored, or not even recognized, regardless of their import for the subject under consideration. Assumed components of the analysis are bent to fit the mathematics, often without regard for what is left unexplained or misinterpreted in so doing.¹⁷ The employment of mathematical methods has, up to the present, led economists into a situation where the world under consideration is one that exists only in their dreams (or on the blackboard) and does little to enlighten us as to the workings of the actual economic system. Coase points to numerous illustrations of this within modern economics, but reserves his most vociferously-expressed scorn for William Baumol's (1972) elegant mathematical defense of the realistically inapplicable Pigouvian tax, which led Coase to opine that "In my youth it was said that what was too silly to be said may be sung. In modern economics it may be put into mathematics" (Coase, 1988d, p. 185).¹⁸ And while it may be that, as Williamson has said, Coase's failure to formalize his transaction cost theory of the firm has slowed its influence, Coase is quite concerned about the pitfalls of rushing headlong into such an endeavor: "It will not have escaped the notice of some readers," he says, "that this analytical scheme can be put into mathematical form." However, "This should give us hope but only if this analytical power is used to enlighten us about the real rather than an imaginary world" (Coase, 1988c, p. 47).

In spite of these remarks, it would be wrong to conclude, as does Posner (1993b, pp. 204-205), that Coase is hostile to using mathematics as a component of economic analysis. In fact, Coase has confronted this issue directly:

My remarks have sometimes been interpreted as implying that I am hostile to the mathematization of economic theory. This is untrue. Indeed, once we begin to uncover the real factors affecting the performance of the economic system, the complicated interrelations between them will clearly necessitate a mathematical treatment, as in the natural sciences, and economists like myself, who write in prose, will take their bow. May this period soon come (Coase, 1992, p. 719).

The point, for Coase, is not that economists should not use mathematics; rather, it is that mathematics has a place within a bigger picture—a place wherein the observed facts about the economic system are translated into mathematical form to facilitate further work, the derivation of implications, etc., and the complexity that we have come to understand within the economic system is worked up in mathematical form. However, Coase seems convinced that economists have put the cart before the horse. Rather than engage in the messy, detailed sorts of studies that are necessary for an understanding of the system and translating these studies in to mathematics, economists have tended to make *a priori* assumptions, set forth equations, derive results, and call it a job well done. Mathematics, in Coase's mind, has become the "engine of inquiry." Referring to the negative effects that Marshall believed would flow from making mathematics the engine of inquiry, Coase (1975, p. 31) maintains that "it would be hard to deny that the extensive use of mathematics has encouraged the tendencies that he thought its probable consequence. Marshall's thought was that [it] would lead us astray from what he considered to be 'constructive work'. I very much doubt that what has happened in recent years would have led him to change his mind."

D. Coase and Methodological Realism

As Coase has given us no major treatise on his methodology or on methodology generally, there is some risk in attempting to attach Coase to a precise methodological position or school. Nonetheless, it is this author's belief that there are important commonalities between Coase and the realist traditions.¹⁹

Realism asserts the ontological existence of natural and social phenomena, and is concerned with inquiry into and elaboration of the nature of these phenomena and their constitutive elements (Lawson, 1994, p. 257). Similarly, Coase's approach reflects the belief that the entities of the economic system exist objectively and that the task of the economist is to discover, understand, and explain the operation of these entities and this system. In contrast to the instrumentalist conception of theory as a predictive mechanism, within this realist perspective "it is the representational role of theories" that is crucial (Maki, 1990, p. 316). For Coase, as for the realists, explanation entails providing an account of those structures, mechanisms, powers, and tendencies that constitute, govern, and facilitate the economic system and the workings thereof (Lawson, 1994, p. 264), and thus of "the causes of [economic] actions, events, and processes" (Lloyd, 1986, p. 148, emphasis in original).²⁰ And while it may be said with some justice that Coase's approach embodies a heavy dose of commonsense realism (the idea that everyday observation and experience can give access to the real entities of the economic system and that these can be represented realistically), it is equally true that Coase recognizes the necessity of scientific theorizing for coming to grips with the workings of the economic system. Moreover, the realists assert that the methods of social inquiry adopted should not be based solely on their success in other fields of inquiry, but should be tailored and adapted to the nature of the social material under consideration (Lawson, 1994, p. 259).²¹ Reflecting this, Coase believes that the set of tools necessary for an inquiry that illuminates the workings of this system is catholic. For Coase, there is room for (and fruitful insight to be provided by) the analysis of business records, legal cases, and government documents, the inductive process, abstraction, deduction, mathematical and quantitative techniques, and so forth. Coase, like Marshall of whom he was so fond, "welcomed all methods providing that they assisted in constructive work," and "[h]e thought that we should start with the real economic system, that it was our high calling to try to explain how it worked and that we should be interested in techniques of analysis only to the extent that this helped us to achieve the main goal" (Coase, 1975, p. 31).

Another aspect of the realist position that ties Coase to this perspective is his treatment of what Maki (1992, 1994) calls "realisticness" and "unrealisticness." As Maki has pointed out, realism does not entail the belief that theory can proceed without assumptions, or that all assumptions must, or even can, be completely realistic. Since all theories will contain unrealistic assumptions, the issue is not one of realistic versus unrealistic assumptions, in the abstract, but rather "over the functions of specific kinds of realisticness and unrealisticness and the lack thereof in the context of concrete theories" (Maki, 1994, p. 253), and, specifically, over "the *substance* of these theories and assumptions, namely, *what they exclude* as supposedly irrelevant or inessential and *what they include* as allegedly relevant or essential and what they say about the included items" (Maki, 1994, p. 248, emphasis in original). The issue, then becomes one of "assessing theories on the basis of how close they come to capturing the essential aspects of the economy for given explanatory purposes."

Viewed from this perspective, Coase's many comments, made in various contexts, about realistic assumptions can be seen in a quite coherent and concrete light. Coase is not arguing simply for greater realism in assumptions and in theory construction (in the abstract sense); rather, he clearly recognizes that there are certain situations that justify greater or lesser departures from reality. What he does object to is the inclusion of factors which are treated in a way that bears little correspondence to their existence and operation in reality (e.g., the view of

individual agents as rational utility maximisers), and the exclusion of what he sees as certain fundamental components that are necessary for understanding the workings of the economic system (e.g., institutions and transaction costs) and for evaluating economic policy (e.g., the costs of government). It is to these latter phenomena that we now turn.

III. The Place of Institutions in Economic Analysis

According to Coase (1977b, p. 321), one of the major virtues of Adam Smith's analysis in *The Wealth of Nations* (1776) is his discussion of how the pricing mechanism can and does serve as a method of economic coordination. Yet, economists have seized upon this "great intellectual achievement" with such ferocity that they now conceive of economics as solely concerned with the study of the pricing system. Consequently, matters which lie outside of this umbrella, such as the investigation of agents, institutions, and those aspects of the market mechanism beyond or underlying the pricing system have become "no part of their business" (Coase, 1992, p. 714). In confining their analysis to the study of price and output determination, Coase argues, economists have left unexplained vast areas of economic activity including many of the factors and forces that underlie this price- and output-determination process. So, what is missing?

Coase's definition of economics is indicative of his interest in the development of an economic theory that seriously deals with the institutions that structure economic activity and performance. For Coase, institutions - such as the firm, the market, the law, and government generally - are foundational elements of the economic system, and function as active, often endogenous "players" within that system. Despite their importance, these institutions have been substantially neglected within mainstream economic theory, and Coase finds this to be one of the major shortcomings of the neoclassical approach.²²

Coase sees the lack of attention paid to institutions as a lost legacy from Adam Smith's analysis in *The Wealth of Nations*:

Economists are prone to think of Adam Smith as simply advocating the use of a pricing system, but throughout the *Wealth of Nations* one finds Adam Smith discussing the appropriate institutional framework for the working of a pricing system. Whether one agrees with his views on apprenticeship laws, land tenure, joint-stock companies, the administration of justice, or the educational system, what distinguishes Adam Smith's approach is that *he obviously thinks that this is a proper and important part of the work of an economist*. It is, I believe, only recently that economists in any number have come to realize that the choice of institutional framework is a subject which deserves to be studied systematically (Coase, 1977b, p. 320, emphasis added).

Since Smith, he says, "the association with law and institutions generally has become weaker," as economists have moved to the study of an increasingly decentralised systems.²³ Coase finds the lack of attention to institutions within modern economics both odd and unsatisfactory, in that "it is as if one studied the circulation of blood without having a body" (Coase, 1984, p. 230). The importance of the institutional structure of the economic system, and of incorporating this structure into economic theory, is a theme that recurs throughout Coase's work, and the most important manifestations of this will be explored here.

A. The Firm

One of the two major contributions for which Coase was recognized by the Royal Swedish Academy was his development of a theory that attempts to explain the origin, structure, and extent of the firm. What moved Coase to this undertaking was his belief that economics lacked such a theory, and that, in particular, the idea that the price mechanism coordinates economic activity could not explain why there exists a factor of production, management, whose function is to coordinate and allocate other factors of production.

Coase finds an explanation for the existence and extent of the firm in the costs of using the pricing mechanism. These costs, now known as transaction costs, include the costs of discovering trading partners, negotiating contracts, monitoring performance, and so on. Coase suggests that internal organisation may allow firms to organize a given transaction at lower cost than would obtain if that transaction were organized through the market. Thus, for Coase (1937a, p. 389), the defining mark of the firm is "the supercession of the pricing mechanism" and the extent of the firm is determined by the relative costs of pricing and internal organisation: "a firm will tend to expand until the costs of organising an extra transaction within the firm become equal to the costs of carrying out the same transaction by means of an exchange on the open market or the costs of organising in another firm" (Coase, 1937a, p. 395).

Coase's analysis of the firm was largely ignored for more than forty years, as economists continued to portray the firm as a production function, an entity that purchased inputs and sold output, with little regard for exactly how this occurs or what goes on in between—for, that is, the institutional structure of production. In an address given at the National Bureau of Economic Research in the early 1970s, Coase (1972) criticized modern economists for their failure to engage in the types of indepth investigations that would lead to a well-developed theory of the firm, and he has repeated this theme in more recent discussions. However, Coase is by no means convinced that his transaction cost analysis (or the elaborations by subsequent commentators) have brought us to the point where we have a solid understanding or theory of the firm and its operations. In his Nobel lecture, Coase (1992, p. 718) says that "the interrelationships which govern the mix of market and hierarchy ... are extremely complex, and in our present state of ignorance it will not be easy to discover what these factors are. What we need is more empirical work." While Coase is convinced, based on his own studies, that transaction costs have an important role to play here, he acknowledges that other factors may be important as well. However, to answer these questions, economists must devote more substantial efforts to the examination of firm operations, including business records and accounting and contracting practices.

B. The Market

Coase's approach to the analysis of markets, and his perspective on economists' treatment thereof, in many respects parallels his discussion of the firm. The analysis of markets, he says, has focused almost exclusively on price and output determination, to the near total neglect of the analysis of the market institution itself. Coase finds one explanation for this in the failure of economists to incorporate transaction costs into their analysis: markets exist at least in part to reduce transaction costs in the exchange process, but mainstream theory does not recognize the existence of these costs, and thus does not require an indepth analysis of actual markets, since two-party frictionless exchange works just as well in such a world, and can, according to the usual disclaimer, be generalized to n parties. While this approach reveals that exchange leads to gains from trade, it is relatively silent on the determination of and explanation for what and how much is actually traded and why some markets work differently than others (Coase, 1988d, pp. 7-8).²⁴

In order to be able to probe the workings of the market, says Coase, economists must re-orient the focus of their analysis. As he stated in his Nobel lecture,

It makes little sense for economists to discuss the process of exchange without specifying the institutional setting within which trading takes place, since this affects the incentives to produce and the costs of transacting. ... The time has surely gone in which economists could analyze in great detail two individuals exchanging nuts for berries on the edge of the forest and then feel that their analysis of the process of exchange was complete, illuminating though this may be in certain respects. The

process of contracting needs to be studied in a real-world setting (Coase, 1992, p. 718).

While Coase maintains that the exploration of markets will reveal the importance of transaction costs in determining market outcomes, he believes that this will also serve to enhance our understanding of the respective roles of and possibilities for firms, markets, and government as coordination mechanisms and thus of the institutional structure of production.

Perhaps Coase's most well-known analysis of the implications of economists's neglect to explore the workings of markets is in the realm of supposed market failure, as seen in his analysis in "The Problem of Social Cost" (1960). Coase believes that economists have given too little scope to the efficacy of markets in situations of supposed market failure, and that, in some instances, market performance may dominate the alternatives. Furthermore, because market failure is often assumed rather than demonstrated, the reasons for this failure, and hence the relative merits of various policy options, are often left unexamined. But "The Problem of Social Cost" also opens the door for the idea that markets can be used for resolving problems of harmful effects; that is, if transaction costs are low relative to the gains from exchange, a market process can be used to resolve these problems. In "The Federal Communications Commission" (1959), the precursor to "The Problem of Social Cost," Coase shows how the assignment of rights in broadcast frequencies and the establishment of a market therein can lead to a situation in which these frequencies are allocated to their highest-valued uses. However, by assuming that certain conditions give rise to market failure and by failing to study the possibilities and limitations of markets in specific contexts, economists have set up a framework within which the policy recommendations generated may fail to give rise to efficient solutions.

Another example of the implications of economists's failure to probe the workings of markets that is cited by Coase (1977b, p. 318) is the tendency to define competition as a condition of high elasticity of demand. As Coase correctly points out, a simple examination of the elasticity of demand cannot reveal with any degree of certainty the extent to which a market is competitive because it fails to take account of the rationale for the observed business practices. In Coase's opinion, competition should be viewed as a process, or a rivalry, a perspective which requires that one look closely at market organization and business practices in order to discern their inherent logic and effects. While the elasticity of demand conception of competition suggests that anti-competitive forces are at work as demand elasticity decreases, Coase believes that an examination of the business practices underlying such a situation will often reveal that they are not competition-restricting, but rather efficiency-enhancing. The failure to understand this, he says, has the tendency to generate legal and policy decisions that impede the efficient operation of markets.²⁵

C. The Law

Coase's discussions of the market, and of the firm as well, place a great deal of emphasis on the role played by the law within the economic system. The import of the law for the functioning of markets, and thus for economic analysis, becomes clear when one recognises, with Coase (1988a, p. 656), that what are traded on the market are not physical goods, but rather "bundles of rights, rights to perform certain actions." What is traded, and how much, depends "on what rights and duties individuals and organizations are deemed to possess - and these are established by the legal system." The result, he says, is that "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" (Coase, 1992, pp. 717-718).

Coase finds the seeds of this idea in Smith's analysis in *The Wealth of Nations* (1776) and the *Lectures on Jurisprudence* (1982) and, in particular, in his emphasis on the establishment of a system of justice, "by which he [Smith] means a legal system which defines

everyone's rights". Coase maintains that Smith advocated a system of justice not just to preserve internal order *per se* (and thus as a complement to his advocacy of defense to maintain order against external threats), but also to promote the working of a pricing system. Coase (1992, p. 718) laments that economists have, until recently, paid scant attention to the role played by the law in structuring economic activity and performance.²⁶ Yet, "any economist interested in understanding the real economic world rather than those imaginary worlds the analysis of which fills the pages of economic journals, cannot ignore the influence of the legal system on the working of the economic system" (Coase, 1988a, p. 655).²⁷

Within Coase's work, the import of the law for economic activity is exemplified in the context of the firm and externalities. For the firm, it is the existence of a law setting forth the employer-employee relationship that serves in part to differentiate firm from market (Coase, 1937a, pp. 403-404). While transactions in the market take place between legal equals, necessitating a bargaining agreement for the movement of resources, within the firm, the employer is the legal superior with the authority to allocate resources by fiat. Moreover, the law of contracts will play an important role in determining the possibilities of exchange, and thus the functioning and extent of firms and markets. In the context of externalities, Coase's analysis in "The Problem of Social Cost" demonstrated that the legal rule of liability will determine the level and allocation of costs (e.g., pollution damage, abatement, or compensation) associated with an externality-generating activity, and thus, to a degree, economic performance (prices, output levels, etc.). Because different liability rules will have different implications for the value of output in society, it is important to understand their relative effects in determining the appropriate institutional structure of production.

This emphasis on the importance of law for economic performance, and thus of incorporating mechanisms for dealing with effects of law and legal change into economic theory and analysis, raises the issue of Coase's attitude toward modern law and economics. It has been noted above that Coase holds a rather dim view of economic imperialism generally, a view that would seem to be at odds with his close association with Chicago law and economics. This seeming oddity is not, however, the result of some intellectual schizophrenia, as Coase is, in fact, decidedly ambivalent (at best) about modern law and economics. Coase says that the development of the economic analysis of law "is not one with which I've been much concerned,"²⁸ and that "I have no interest in lawyers or legal education Never have had" (Kitch, 1983, p. 192). In referring to "The Problem of Social Cost" - one of the most cited articles in the legal literature - Coase says that "I will not say much about its influence on legal scholarship, which has been immense, but will mainly consider its influence on economics, which has not been immense" (Coase, 1992, p. 717). Indeed, Coase says almost nothing about law and economics as commonly conceived in his Nobel lecture, in spite of the fact that many would consider it his greatest legacy. And reminiscing about "The Problem of Social Cost," he says that "Richard Posner ... picked up what I said about the judges and ran with it. I have never attempted to follow him. For one thing, he runs much faster than I do. He also runs in a somewhat different direction" (Coase, 1993b, p. 251).²⁹ It is statements such as these that have led Posner (1993b, p. 204) to describe as "puzzling" Coase's "lack of interest in this movement that he has done so much to nurture."

Coase's ambivalence about modern law and economics can be said to spring from two sources. The first is his suspicion of attempts to apply the rational maximization framework outside of economics. His (1977a) references to Posner provide support for the assertion that these suspicions extend to law and economics. The second source of Coase's ambivalence rests in his definition of economics as the study of the economic system. His vision of law and economics follows directly: economists should study the effects of law and legal change upon the economic system. Most of modern law and economics embodies, instead, the application of microtheoretic analysis to the law; that is, it studies legal theory and the legal system. Thus,

since Coase is primarily interested in the study of the economic system, it is not surprising that he is so ambivalent about modern law and economics. On the other hand, this also helps to explain Coase's fondness for the New Institutional economics (NIE). The NIE focus on, *inter alia*, the role of property rights within the economic system and the effects of contract law on the possibilities and limitations of exchange reflects Coase's vision of what law and economics should be. Moreover, Coase's discussions of the *Journal of Law and Economics*, of which he served as editor for two decades, find him looking back fondly to the early years of the *Journal*, when numerous articles probed the effects of law on economic activity. "This," says Coase, "was law and economics as I conceived it," and "[t]he main aim of my editorship of the *Journal* was to encourage economists to undertake such investigations" (Coase, 1993b, pp. 252-253).³⁰

D. Government

Coase's critique of the treatment of Government in economic theory and analysis has much in common with his discussions of the firm, the market, and the law. The government, argues Coase, is seen as a savior from all manner of ills, with the ability to generate socially optimal outcomes through the imposition of the appropriate tax, subsidy, regulation, or allocative structure whenever markets fail to perform according to the dictates of optimality theory. Coase believes that many of the failings of economics on this score are attributable to its Pigouvian heritage, and, in particular, to the failure to make detailed studies of (i) the workings of government (including, and especially, the costs associated with government) and (ii) the effects that government policies will have upon the workings of the actual economic system. In Coase's view, these problems have been exacerbated by the increasing reliance, over the past half-century, on the use of highly abstract theoretical models that ignore many important aspects of economic reality.³¹

When economists look at a situation of supposed market failure, says Coase, they compare what they observe with the ideal optimum conditions of economic theory. This, says Coase (1964, p. 194), is "a thoroughly bad approach." He labels it "blackboard economics," an "economics wherein factors of production are moved around, taxes are imposed, subsidies are granted, prices go up and down - a social optimum is achieved and the relationships which it implies are described - but it all happens on the blackboard." "Economic policy conclusions so derived," he says, "commonly have little relevance for economic policy in practice" (Coase, 1970, pp. 41-42) because economists are deriving these conclusions from the study of an abstract market situation. This process has directed their attention "away from the main question, which is how alternative arrangements will actually work in practice" (Coase, 1964, p. 195). The problem, he says, is that, when comparing policy alternatives, "[n]one is likely to be optimal since it is quite certain that, whatever may be the detailed characteristics of the ideal world, we have not yet discovered how to get to it from where we are" (Coase, 1964, pp. 194-195).

Coase therefore calls for a change of approach. "Economic policy involves a choice among alternative social institutions" which are all to a greater or lesser degree imperfect, and economists must focus on the idea that the goal of economic policy is to choose those institutional structures that maximize the value of output in society (Coase, 1964, p. 195; 1988d, p. 28). Indeed, this idea reflects the central theme of Coase's analysis in "The Problem of Social Cost," which is not the advocacy of a specific policy for dealing with problems of harmful effects, but rather the setting forth of an approach. While economists have been spending their time musing about crops and cattle in the zero transaction cost world of the Coase theorem, Coase was advocating something very different: "Satisfactory views on policy can only come from a patient study of how, in practice, the market, firms, and governments handle the problem of harmful effects" (Coase, 1960, p. 18).³² While the usual treatment of

policy issues such as problems of harmful effects "proceeds in terms of a comparison between a state of *laissez faire* and some kind of ideal world," Coase maintains that

the whole discussion is largely irrelevant for questions of economic policy since whatever we may have in mind as an ideal world, it is clear that we have not yet discovered how to get to it from where we are. A better approach would seem to be to start our analysis with a situation approximating that which actually exists, to examine the effects of a proposed policy change and to attempt to decide whether the new situation would be, in total, better or worse than the original one. In this way, conclusions for policy would have some relevance to the actual situation (Coase, 1960, p. 43).

Doing this requires both that economists study the operation of the market in specific contexts and how and with what effect the government would carry out the tasks assigned to it (Coase, 1974a, p. 183). As Coase said in his discussion of the lighthouse,

I think we should try to develop generalisations which would give us guidance as to how various activities should best be organised and financed. But such generalisations are not likely to be helpful unless they are derived from studies of how such activities are actually carried out within different institutional frameworks. Such studies would enable us to discover which factors are important and which are not in determining the outcome and would lead to generalisations which have a solid base. They are also likely to serve another purpose, by showing us the richness of the social alternatives between which we can choose (Coase, 1974b, p. 375).³³

Three examples of the failure of economists to come to grips with these issues figure prominently within Coase's work: the lighthouse, externalities, and marginal cost pricing. We will deal with the first two of these briefly here.³⁴

From Mill to Sidgwick, Pigou, and Samuelson, the lighthouse has become perhaps the quintessential example of market failure, presenting, as it is claimed, a classic public good situation. Not being content to accept this story, Coase (1974b) conducted an extensive examination of the history and circumstances of lighthouse provision in Great Britain.³⁵ In doing so, he discovered that private entrepreneurs were indeed able to successfully supply lighthouses, and that they did so because the government was not supplying them in quantities sufficient to satisfy the demand.³⁶ Furthermore, not only were the lighthouse owners able to secure payments for the use of lighthouse services, there was even a published document that listed all of the lighthouses that would be passed on various voyages and the toll that would be charged for each. The value of these lighthouses was reflected in the high prices that the government had to pay when the lighthouse system was nationalised in the mid-nineteenth century. "Thus," says Coase, "we find examples of men who were not only, in Samuelson's words, 'odd enough to try to make a fortune running a lighthouse business,' but who actually succeeded in doing so" (Coase, 1974b, p. 268).

Coase's research revealed that economists have been misguided in their continued assertions that lighthouses cannot be provided by the private sector. This may lead one to wonder how the theory ever got to this point in the first place. Coase finds the explanation straightforward: "no economist, to my knowledge, has ever made a comprehensive study of lighthouse finance and administration. The lighthouse is simply plucked out of the air to serve as an illustration" (Coase, 1974b, p. 375). Coase does not suggest that his study implies that lighthouse provision is best left to the private sector; this, he maintains, requires a great deal of further study. The point is that the answer to this question will not be found by assuming non-rivalry and non-excludability, from which government provision logically follows, but by carefully studying the various alternatives and their effects in determining the appropriate method of lighthouse provision and finance.

Coase's discussion of the treatment of externalities further illuminates the problems that he sees with blackboard economics. The Pigouvian externality literature purports to show that, in the presence of externalities, an appropriately specified tax, subsidy, or regulation will lead to (and is necessary for) the attainment of a social optimum. However, this theory is attended by several difficulties. First, the Pigouvian world assumes zero transaction costs, but, as Coase (1960) has demonstrated, taxes, subsidies, and regulations are not necessary for the attainment of an efficient outcome in a world of zero transaction costs.³⁷ Secondly, the theory fails to consider all of the costs (and especially the costs of government) associated with these Pigouvian remedies - costs that may make the cure worse than the original disease (Coase, 1960, p. 43). Thirdly, it gives little thought to the difficulty (and likely impossibility) of calculating the tax or subsidy rates that will generate the socially optimal level of output. Baumol (1972, p. 307), having laid out a mathematical defense of Pigouvian remedies against the Coasean challenge, acknowledges this last point, but nonetheless maintains that "taken on its own grounds, the conclusions of the Pigouvian tradition are, in fact, impeccable." Coase's response? "Apparently what Baumol meant ... was that its logic was impeccable and that, if its taxation proposals were carried out, which they cannot be, the allocation of resources would be optimal. This I have never denied. My point was simply that such tax proposals are the stuff that dreams are made-of" (Coase, 1988d; p.185). Coase believes that an adequate understanding of the appropriate course of action for dealing with externalities can only come about through the examination of how, in practice, firms, markets, and government would handle problems of harmful effects.³⁸

IV. Conclusion

Coase views modern economics as wedded to what he calls "blackboard economics," an approach that has its roots in the unwillingness of economists to make the actual economic system the starting point for their analysis, and an understanding of the workings of this system the goal of the analysis. This has led to the construction of theories that bear little correspondence to economic reality and policy analysis that lends little insight into the effects and desirability of alternative policy possibilities. Coase (1995, p. 2) has said that "[m]y aim has always been to understand the working of the economic system, to get to the truth ...," and while he admits that his own contributions to economic theory and analysis must await the test of time (Coase, 1992, p. 719), he is convinced that the method that he is advocating is a necessary component of the attempt to get at this truth.

The foregoing analysis is also suggestive of some important divergences between Coase and the so-called Chicago view. Coase's pessimistic views about the insights provided by economic imperialism, his repudiation of Friedman's methodological position, and his comparative institutional approach to the economic role of government all serve to distance him from his Chicago colleagues. Coase's claim that we remain largely ignorant about the workings of the economic system also speaks to this point, given the enormous scope of the Chicago paradigm. Moreover, it is the New Institutional Economics, not the Chicago school, that has seized upon Coase's work on transaction costs and institutions. And in spite of his difficulties with certain aspects of the New Institutionalism, it is this, rather than the Chicago view, that Coase (1984, p. 231) has labelled "economics as it ought to be."

It is somewhat ironic that one so critical of much of modern economic analysis has received the profession's highest honor, although one can find a parallel in Gunnar Myrdal. Certainly some of this can be said to reflect a reception and use of his work which was no part of his intention. But it is also the case that most economists are unfamiliar with Coase's critiques and with the alternative approach that he is advocating, and are content, instead, to conveniently lump him into the Chicago mold. But his method led Coase to the insights that make up his fundamental contributions to economic analysis, and it is this method that Coase

would have the profession adopt if it wishes to develop theories and policy analyses that are relevant to the economic system.

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Notes

¹ Coase has in fact published more than 70 books and articles on a wide variety of topics, including the firm, social cost, monopoly theory, accounting, producer expectations, the history of economic thought, and institutional studies of public utilities, the British Broadcasting Corporation, and the Federal Communications Commission.

² The similarity of the definitions proffered by Coase and Marshall may not be an accident, given Coase's high regard for Marshall's work. This point is discussed further below.

³ In 1991, Coase was honored as one of the four founders of law and economics by the American Law and Economics Association. The others so honored were Guido Calabresi, Henry Manne, and Richard Posner.

⁴ Elsewhere, Coase (1988d, p. 4) says that "[t]here is no reason to suppose that most human beings are engaged in maximising anything unless it is unhappiness, and even this with incomplete success."

⁵ Coase believes that a more accurate depiction of human behavior can be found in sociobiology, where human nature is seen as the outcome of a long-term evolutionary process in which genetic influences play an important role (Coase, 1978, p. 244-245; see also 1994, pp. 189-190). In fact, he suggests that the sociobiological view has much in common with Smith's perspective. However, Coase does nothing to develop these ideas, and it is unclear how familiar he is with the merits of sociobiological versus other (e.g., psychological) findings.

⁶ Coase adds that another difficulty that economists will face is that, in moving into these other disciplines, they will commonly have to leave behind their "great advantage" vis-à-vis the other social sciences the "measuring rod of money," which has given economics a precision and amenability to empirical work that is sometimes missing in these other disciplines (Coase, 1977a, p. 489). Coase's wit is also in evidence here: "The reason for the movement of economists into neighboring fields is certainly not that we have solved the problems of the economic system; it would perhaps be more plausible to argue that economists are looking for fields in which they can have some success" (Coase, 1977a, p. 484).

⁷ Coase's more recent commentaries on Posner (regarding law and economics) and Stigler (regarding public choice) serve only to reinforce this view. See, respectively, Coase (1993b and 1994, pp. 199-207).

⁸ It may also be asked how Coase can have such an affinity for the New Institutional Economics when it, too, works off the assumption of rational maximisation (or at least bounded rationality). In fact, Coase, (1984, 1993a) has criticized the New Institutionalists for holding to such a view, and says that "I have said that in modern institutional economics we should start with real institutions. Let us also start with man as he is. ... Some of my colleagues quote a statement of Bentham's to the effect that madmen also calculate. This is correct and, I believe, a very important statement. But I would stop there. I do not think that we should draw the conclusion that madmen are also rational" (Coase, 1984, p. 231).

⁹ Coase was first exposed to Friedman's views on this subject prior to the publication of Friedman's famous essay, and he is quite clear in asserting that he did not agree with Friedman from the first, and that the passage of time only reinforced this disagreement (Coase, 1982, pp. 15-16).

¹⁰ This point is not unlike Coase's criticism of utility theory, above, in that while the assumption of rational utility maximisation does indeed generate the law of demand, which we see illustrated continually in the economic system, this does not mean that the rational utility maximisation approach provides a sufficient basis for understanding or reasoning about individual decision-making.

¹¹ Coase first made this remark at a talk given at the University of Virginia in the early 1960s.

¹² The importance of the inductive approach in the work of Adam Smith, Alfred Marshall, and Coase's mentor, Arnold Plant, factors prominently in his esteem for their work. See, for example, the essays reprinted in Coase (1994).

¹³ Coase has confirmed to the author that Marshall's perspective, as reflected in Coase (1975), corresponds to his own views, and that it was this correspondence which led him to write the essay. In fact, a reading of Appendices C and D of Marshall's *Principles* (1920) reveals a high degree of correspondence between the views of Coase and Marshall on economic method. In addition to their common views on induction and deduction and on the use of mathematics in economics (to be discussed below), they share the view that economic analysis can be enhanced by insights from other disciplines, a pessimism about the application of the economic approach outside the economic sphere, a dissatisfaction with the hypothesis of rational utility maximization, and an emphasis on the importance of the institutional framework in economic activity and analysis. Coase's interest in Marshall gave rise to plans to write a biography, a project with Coase eventually dropped, and was subsequently completed by Peter Groenewegen.

¹⁴ This point is made with even greater force in a passage from a 1902 letter to Edgeworth, where Marshall says that "the work of an economist is to 'disentangle the interwoven effects of complex causes'; and ... for this, general reasoning is essential, but a wide and thorough study of facts is equally essential, and ... a combination of the two sides of the world is alone economics proper" (Pigou, 1925, p. 437; see also Coase, 1975, p. 29).

¹⁵ See, for example, Coase (1950, p. ix; 1988d, p. 1).

¹⁶ See Coase and Fowler (1935) on producer expectations, and Coase, Edwards, and Fowler (1938, 1939) on the use of accounting records in economics. With the exception of a retrospective commentary on his work in accounting (Coase, 1990), Coase did not pursue this work after the 1930s. However, the insights generated by Coase and Fowler's study of producer expectations, undertaken with the hog cycle as a case study, contained the seeds of what later grew up to be the rational expectations hypothesis of modern macroeconomics. See Muth (1961) and Pashigian (1987).

¹⁷ This parallels and relates to one of Coase's qualms about quantitative work, in that the mathematical models are often derived with an eye toward empirical testing and thus the quantification of potential variables.

¹⁸ By inapplicable, Coase means that it is unlikely that government would be able to determine the tax rate that is equal to marginal damage and that thus would generate a social optimum. See below.

¹⁹ It should be noted at this point that there are multiple realist approaches, as evidenced, within economics, by the varying outlooks of Uskali Maki (e.g., 1990, 1992, 1994) and Tony Lawson (1994). However, there are certain fundamental commonalities among the different realist approaches, and it is at this general level that the discussion herein will proceed.

²⁰ One must be careful not to push this correspondence too far, in that by "the real world" Coase means the actual economy (in contrast to the hypothetical and limited world of blackboard economics, discussed below), whereas Maki, for example, is making a much stronger ontological argument.

²¹ See also Lloyd (1986).

²² One may wonder, at this point, what Coase knows about the "old" institutionalism which has made substantial efforts to incorporate institutional considerations into a body of economic analysis. While Coase (1964, p. 196 and 1984, p. 230, respectively) has been both complimentary and critical of the "old" institutionalists, there are, in fact, important complementarities in their views on a variety of fronts. This topic is too broad to explore within this essay, but see Medema (1996).

²³ Statement made at the Plenary Session of the American Law and Economics Association, May 24, 1991. The proceedings of this session are available on videotape from the American Law and Economics Association.

²⁴ For example, why then do firms exist? Or, why are some contracts made in spot markets while others are more long-term in nature? Or, why are some contracts more fully specified than others?

²⁵ Coase taught antitrust at Chicago with this type of focus, and what made an impression upon both he and his students was the lack of explanation for the presumed anti-competitive practices evidenced in the cases and the economic analysis contained therein. See Kitch (1983) for discussion.

²⁶ This, of course, ignores the important work in this area done by scholars such as John R. Commons (1924) within the institutionalist tradition.

²⁷ Coase (Kitch, 1983, pp. 216, 218) notes that Marshall wanted to encourage the study of law, and argued for its inclusion in the economics tripos at Cambridge, and Coase found his own extensive study of the law while a student at LSE to be most beneficial to him. See Kitch (1983, pp. 193, 212).

²⁸ Statement made at the Plenary Session of the American Law and Economics Association, May 24, 1991.

²⁹ Looking back at his remarks about the judges in "The Problem of Social Cost," Coase says "I pointed out that the judges in their opinions often seemed to show a better understanding of the economic problem than did many economists. ... I did this not to praise the judges but to shame economists" (Coase, 1993b, p. 251). That is, Coase did not and does not see himself as setting forth what has come to be known as the efficiency hypothesis of the common law.

³⁰ A perusal of the *Journal* issues over the years does indeed reveal a substantial shift in the focus of the articles away from the approach that Coase is advocating. Curiously (but perhaps not, given the above discussion),

Coase's survey of the development of law and economics at Chicago, which begins in the 1930s, says virtually nothing about the post-1970 period, when law and economics, as we know it today, began to come of age. It may be asked at this point how one reconciles this attitude with the fact that Coase has been on the Law faculty at Chicago for more than 30 years (the last ten emeritus). Coase has hinted at the difficulties he faced working in a law school, in that he did not see the work he was doing as contributing to legal education. On the other hand, he says, economics departments were not interested in such work. See Kitch (1983, pp. 192-193).

³¹ It may be said with some justice that Coase is guilty (to some extent) of hammering away at a straw man in his discussions of Pigou himself. However, this is a matter which lies beyond the scope of this paper. See, for example, Coase (1960; 1988d, Chapters 1, 6), Goldberg (1981), DeSerpa (1993), and Medema (1994, Chapter 4). This does not, however, detract from the force of the critique that Coase levels against modern analysis.

³² Coase continues as follows: "But it would be unfortunate if this investigation were undertaken with the aid of a faulty economic analysis. The aim of this article is to indicate what the economic approach to the problem should be" (Coase, 1960, p. 18).

³³ This discussion is indicative of Coase's pragmatic approach to the economic role of government, and as such serves to distinguish him from the more ideological approach that characterises the Chicago school. For further discussion of this, see Medema (1994, Chapter 5), Posner (1993b, p. 202), and Medema and Samuels (1994).

³⁴ Coase's views on marginal cost pricing policies are presented in Coase (e.g., 1946, 1966), and it was in this context (Coase, 1966) that he first made reference to blackboard economics. A discussion of marginal cost pricing is omitted here for the sake of brevity. In the introduction to a recent collection of his essays, Coase (1988d, p. 1) maintains that his work on marginal cost pricing, the lighthouse, and externalities are all reflective of his basic approach to issues of economic policy.

³⁵ See Coase (1974b) and the references cited therein. Coase's analysis was largely confirmed in a subsequent study by Van Zandt (1993).

³⁶ By 1820, 34 out of the 46 lighthouses in England and Wales had been constructed privately, and 22 of those were still operated by private individuals or organisations (Coase, 1974b, pp. 366-367).

³⁷ This, of course, raises the whole issue of the Coase theorem and its validity, which goes far beyond the scope of this paper. Its validity, in fact, depends on the way in which the theorem is stated and the underlying assumptions employed. See, for example, Cooter (1987) and the extensive discussion in Medema (1994, Chapter 4). We will note here only that, for Coase, the import of the theorem (which was first named and defined by Stigler (1966)) is that it invalidates the conclusion that taxes, subsidies, or regulations are necessary for an efficient resolution of externality problems in the zero transaction cost world of neoclassical economic theory. However, Coase does not believe that the world of zero transaction costs is the world of economic reality. See, for example, Coase (1960, pp. 15-16; 1970, pp. 36, 38-39; 1981, p. 187; 1988d, Chapters 1, 6).

³⁸ For Coase, the goal should then be to choose the policy option which will maximize the value of output in society. The difficulties with such an approach can be seen in Samuels (1989), Veljanovski (1981), and Medema (1994, Chapters 4, 5).

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