R. H. COASE AND THE NEOCLASSICAL MODEL OF THE ECONOMIC SYSTEM

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It is clear from articles I have written for the *New Palgrave Dictionary of Law and Economics* and other publications that I have high regard for Coase and his works. Some would say I have published parts of his works more times than has he. True or not, my role in explaining, defending, and extending Ronald's writings has left me with little to say that is different from what I have already written, so my theme today is not a product of conscious deliberation. Instead it came to me in a dream during which I wrestled with the problem of what I might say today. Into this dream strode George Stigler, who immediately began to berate me for having left this great university for UCLA in 1971. He aimed repeated barrages of vocal darts at me, but, after evading my defenses a few times, he settled down, behaved more civilly, and quietly said

> "I see you are returning to Chicago to cozy up to Ronald. Hasn't he spent all that Nobel award money yet?"

I told him I had no need for funding, whereupon he observed that no good economist would ever make such a claim. Then he went on to make a request.

> "Will you do me a favor for old time's sake? When you speak at the conference I want you to defend my neoclassical buddies from Ronald's complaints about their work. The work is better than Ronald thinks. I know whereof I speak. Ronald, you know, has certified me as a top notch historian of economic thought."

I said no to his request. A celebration hardly seems the time for critical evaluation. George frowned, and he asserted that I had forgotten advice he once gave me. He repeated the advice.

> “The most meaningful way to honor a scholar is to take his or her work seriously.”

I had not forgotten this advice. I lost friends and valuable connections on the occasions on which I applied it. But there is no arguing with George, especially with Ronald’s certification in his pocket, so I finally acquiesced to his request and agreed to accept the risk of losing yet one more friend.

George smiled and began to recede from my dream. His image became less clear and even seemed to morph into one more like Richard Epstein’s. He flung a few quick words at me over his shoulder as he disappeared, but spoke too rapidly for me to be sure of what he said. I think he gave one more bit of advice:

> “Keep the introduction short and get to the substance.”

And so I shall.

I

My focus in this article is on Coase’s criticisms of the neoclassical model of perfect competition. These are emphasized in two of his best known works, ‘The Nature of the Firm’ (1937) and ‘The Problem of Social Cost’ (1960). To a lesser extent, I also compare Coase’s criticism of this model to Pigou’s. I begin with this comparison partly to justify the centrality of the perfectly competitive model.

Pigou argued that the neoclassical model could not support the conclusions it deduced about the efficiency of resource allocation in a perfectly competitive economy. This is an issue of logic, but failed to reveal a flaw in the neoclassical deduction. Instead, he offered a battery of constructed examples involving differences between private and social cost. What I mean by this is illustrated by a rejoinder to one of Pigou’s examples written in 1924 by Frank H. Knight. Pigou wrote about two roads connecting the same terminal points, one narrow and subject to congestion and the other broad and mostly free from congestion. The narrow road, being more direct, was faster than the broad

road even though it was more prone to congestion. Pigou then demonstrated that the narrow road would be overused and the broad road underused because drivers entering the narrow road would not take account of the congestion cost they impose on fellow drivers. Knight observed that Pigou's result followed simply from the fact that Pigou's two roads were open access public roads. If they had been privately owned, entry prices would have adjusted traffic flows so as to prevent overuse of the narrow road.

The point I am making differs only slightly from Knight's. Pigou had ignored an assumption that underlies the neoclassical model of perfect competition; this calls for private ownership of all scarce resources. Problems of this sort are embedded in most if not all of the examples set forth by Pigou. Therefore, his argument is generally insufficient to support his claim that resources can be allocated inefficiently even within the context of the neoclassical model. Examples of differences between private and social cost must conform with the model's assumptions if they are to demonstrate its logical inadequacies.

Coase recognized this deficiency in Pigou's argument and proceeded to remedy it by making a "real world" adjustment to the competitive model. He identified the source of potential social cost problems with positive cost of using the price system, a fact of life that is not incorporated in the perfect competition model. Ronald fully recognizes that this adjustment is inconsistent with that model. He is highly critical of the model for its neglect of positive transaction cost and not because of logical error. In this way Ronald supplied a source of possible differences between private and social cost. He correctly refrains from applying this source in the unrealistic zero transaction cost case with which he begins his social cost article. It may be noted that Knight's complaint about Pigou's error in ignoring a requirement of the competitive model also applies to Coase's complaint about transaction cost, since the competitive model assumes that prices are freely known to all who would use them. The difference between Pigou and Coase in this respect is that Coase recognizes the necessity for departing from the assumptions of the competitive model. Pigou does not, but all that would be required to make Pigou's argument like Coase's is for Pigou to claim that in the real world not all resources are owned in the private functional fashion depicted in the neoclassical model. For both men, the perfect competition model is the target. This is also true of Coase's discussion of the theory of the firm, to which I now turn.

II

Ronald's complaint about neoclassical theory's treatment of the firm is simple enough -- it has no theory of the firm. It offers no explanation for why firms should exist in a model of the economic system that puts the entire burden of guiding owners of resources on the price system. The existence, importance, structure, and methods of firm are left unexplained. This complaint reflects Ronald's perception of the firm. His firm is defined by its internal organization and its reliance on conscious management of resource. It is a vertically integrated entity within which people engage cooperatively by way of managerial direction. This view now dominates work done on the firm by most economists, and it is no exaggeration to claim that it has guided Professor Oliver Williamson to his recent Nobel Award. In no small way, it has led to the emergence and growth of institutional economics.

That Ronald's view of the firm has proved important cannot be denied, but his claim that neoclassical economics offers no theory of the firm must be denied. It offers both a definition of the firm and a rationalization for the firm's existence, but these are mostly implicit. However, the theory does not offer insights about the firm's internal organization. Indeed, it is not at all concerned with a firm's structure or managerial method. Its concern is with the ***function*** of a firm. The function that defines its firms is that of producing goods and services for purchase by persons who, in the main, are not involved in the production of what they buy.

Old-style economics texts depicted the firms of neoclassical theory as occupants of one sector of a circular flow diagram in which households occupy a different sector. It treats these as distinct institutional arrangements between which interactions are guided by market-determined prices. Goods flow from firms to households and resources flow from households to firms, with payments moving in the reverse direction. Implicitly, the firm of neoclassical theory is defined by its function -- an institution specialized in production for use by others and especially for use by households. This function served, its internal organization is largely irrelevant to the neoclassical theory of a private, decentralized economic system. The rationale for firms to exist in this theory is implicit in this function. They exist because specialization is productive.

The theoretical task served by the neoclassical view of the firm is that of creating a grand coordination problem whose resolution is sought in the price system. Firms do not stand in contrast to or in competition with the market, as do Ronald's firms; the stand in contrast to self-sufficient production within households. If production does not take place in firms, it must take place within household.

Neoclassical theory's view serves the theory's task of emphasizing the basic coordination problem faced by a decentralized, private ownership economy, but it does not serve Ronald's inquiry into the internal organization the firm or into the methods it uses. Internal organization is best addressed by Ronald's firm, but, in turn Ronald's firm is less capable of revealing the coordination role of the price system.

Ronald's and neoclassical theory's firms offer different views of the role of transaction cost. Ronald's firms become less vertically integrated and less important in the economic system the smaller is the cost of using the price system. Neoclassical theory's firms become more important the smaller is the cost of using the price system; this is because low costs of transacting facilitate the substitution of specialized production destined for others for self-sufficient production for self within households. The smaller is the cost of using the price system the more effectively firms can bring their goods and services to households and the more effective households can be in supplying inputs to specialized firms.

III

Neoclassical theory also uses markets and prices, and Ronald is correct about the theory's treatment of the price system. It assumes that prices are freely available to all. Ronald views this as a major defect of the theory, one that impairs our understanding of important economic problems. His prime example of this is discussed in his path-breaking article "The Problem of Social Cost" (1960), the problem that we more clumsily discuss as the externality problem.

However, it does not follow that the assumption of freely available prices will undermine our understanding of all problems. Indeed, it improves understanding of the central

problem faced by neoclassical theory. The neoclassical task was to determine how price-provided information guides resource allocation; it was not to determine how conscious management of resources or how other sources of information guide resource allocation. It is necessary, if we are to examine the consequences of relying on a price system, to create a model that makes price information available to all. Consider the contrary assumption. Let the cost of transacting be so high that no owner of resources can become about opportunities for using his or her resources by way of price-delivered information. How can one deduce the consequences of relying on a price system to allocate resources if this were the case? Even if we take an intermediate case, in which transaction cost is positive but not completely prohibitively high. Price-delivered information is still partly blocked. If we wish to determine how resources are allocated when sole reliance is placed on a price system for guidance, we simply must assume that transaction cost is zero.

Were transaction cost positive, resource owners would need to seek information from sources other than prices; they might develop expectations about what prices might be or the might search the libraries of the world or the minds of associates. True enough, but the perfect competition model is interested in how private ownership of resources combined with price-provided information affect resource allocation, not in how expectations, libraries, and associates affect resource allocation. For this reason, the theory takes technology and wants and preferences as fixed and known to all, for these provide informational sources that are alternative endogenously determined prices. And for the same reason, it abstracts from central planning. The result of all this is to make impersonal market-determined prices the only endogenously determined source of information about opportunities for deploying privately owned resources. By stripping the model of other sources of information, the theory is able to reveal the pure impact of prices on resource allocation in the context of a complicated set of interdependencies.

The model's purpose in mind, we can see that it cannot be achieved if a more realistic positive cost of using the price system is introduced. The perfect competition model's purpose differs from that of Ronald's approach to to firms and markets. His goal has been to understand the workings of institutions, particularly of firms and laws. Both goals are important, but they are not served equally well by the same set of assumptions. It would be wrong for neoclassical economists, were they still with us, to

insist that Ronald use their model's firm and price system; but it would be equally wrong for Ronald to insist that neoclassical theory should focus on the institutions that so interest him. Both tasks are important but different. The danger in not recognizing the difference may be illustrated in the context of the debate between R. H. Coase and A. C. Pigou about the problem of social cost.

IV

Coase discusses the social cost problem in the context of a dispute between persons who seek control of the same resource. Two such persons, let us assume, take their dispute to court. The court awards ownership of the contested resource to one of them. Suppose the winning party cannot realize as much value from the resource as can the losing party. Ronald demonstrates that the losing party, because he or she can realize greater value from the resource, will be able to, and will, purchase ownership of the resource from the party chosen by the court. The demonstration surprised economists, although, in retrospect, it can be seen as wholly consistent with the neoclassical model. The difference is only in starting assumptions. Coase begins with a yet undefined ownership right and with the existence of a court whose task is to assign this right. Neoclassical economics has no need for a court because it begins with the existence of private ownership of all resources; it does not contemplate the existence of a resource for which ownership is yet to be determined. Given the difference in starting points, resources, guided by prices, are put to their most valuable uses in both theories.

However, Ronald's interest is not in this situation but in one in which the cost of using the price system is positive. This takes the problem outside the assumed framework of the neoclassical model, for which prices are freely known. Transaction cost now may be so high as to block the post-court transaction between the two parties. If so, the resource remains in control of the person who is unable to realize its highest value. Coase describes this outcome as an inefficiency of the economic system, one that is due to positive transaction cost. He writes:

> "In these conditions [of positive transaction cost] the initial delimitation of legal rights does have an effect on the *efficiency with which the economic system operates.* One arrangement of rights

> may bring about a greater value of production than any other. But unless this is the arrangement of rights established by the legal system, the costs of reaching the same result …through the market may be so great that [this arrangement of rights] may never be achieved… " (p. 16) [Emphasis added]

This may be just a slip in choice of words, something that would be unusual for Ronald. Yet, the claim that the economic system is, or may be, inefficient if the cost of using the price system is positive has convinced economists, and it has led them to accept Pigou's basic argument; after all, as Ronald tells us, we must deal with a world in which transaction cost is positive.

But a peculiarity of this setting is that it brings the legal system into the analysis. The low value realization of the resource described above reflects a decision of the court. In effect, Coase has treated the legal system and its courts as if they are parts of the economic system. They are not in the neoclassical model, which assumes that all resources are unambiguously privately owned and that all ownership rights are fully respected; there is no place in the model for the courtroom drama imagined by Coase.

Moreover, courts in real social systems are designed so as to insulate them from the influence of the marketplace. Indeed, if the court were transformed into a market institution, being allowed to survive only by revenues secured from claimants who pay for its services, control of disputed resources would go to persons who can put them to their highest value uses and the Honorable Richard Posner would be much wealthier than under the present legal system. The historic and proper domicile of the externality problem is the economic system. Pigou claims the economic system is inefficient; he does not base this claim on misjudgments of a court or another agency of the government. [1]

The *economic system* takes the court's decision as an exogenously imposed constraint, much as it takes a decision by the government to levy taxes an make public expenditures. An efficient economic system makes the most of scarce resources within

[1] Of course, a court's personnel may have their own preferences, and these may outweigh offers made by the competing claimants. It this is the case, these preferences must be put on the scale that measures value.

the constraints handed down to it by courts and legislatures. In Ronald's courtroom sketch, efficiency obtains if the market blocks a post court exchange of entitlement. After all, the conditions underlying Ronald's claim of an inefficient economic system are such that the increase in value expected from a change in ownership is less than the cost of executing the necessary exchange of entitlements. No claim that the economic system is inefficient is justified.

Indeed, neither Pigou nor Coase has supplied us with an explanation of how a problem of social cost can arise within the context of the neoclassical model of a competitive economic system. Their claim of inefficiency must ultimately rest on the old socialist argument that the use of a degree of coercion unavailable to private owners of resources can improve the solution to some resource allocation problems. To make this point clear, let us consider the oft used example of a neighboring laundry and steel mill. Soot from the use of soft coal by the mill descends on the laundry and raises the cost of laundering. A transaction that internalizes this effect may be blocked either because the cost of transacting is too high to make it worthwhile or because the parties recognize that the cost of substituting hard for soft call is too high to make it worthwhile. I see no difference between these cases and I see no economic inefficiency in the failure to strike an agreement. However, we might claim inefficiency in both cases if we believe that the State (or its courts) can undertake a transaction or secure hard coal more cheaply than can the market. And how could this be other than by recognizing that a degree of coercion not available to the market is available to the State. Of course, this may be true if we put a sufficiently low value on voluntary interactions and a sufficiently high value on reduction in airborne soot. [2]

[2] I have offered the view contained in this paragraph in earlier works (Demsetz, 2003, 2008, for example), but they have not yet elicited responses. . .

References

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