Coase, Demsetz, and the Unending Externality Debate

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Economists, trained in the study of markets, learn early of various problems grouped under the heading of "market failure"—situations that, at least potentially, could justify government intervention to solve them. Cartels and monopolies, for example, are thought by many to require government antitrust action; optimal production of public goods like national defense or national highways likewise are frequently said to necessitate government intervention in otherwise private markets.

Almost certainly, however, externalities (or "social costs") are perceived as the greatest market failure problems.[1] Harold Demsetz (2003: 283)[2] recently described the fundamental economic issue:

> The short-hand description for this [externality problem] is that private costs (or benefits), which do influence a resource owner, are not equivalent to the total of social costs (or benefits) associated with the way an owner uses his resources. An example . . . concerns

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[1] The term "externality" is used here with full recognition of economists' imprecision as to what constitutes an "externality" in the first place: "[R]igorous definitions of the concept itself are not readily available in the literature." Buchanan and Stubblebine (1962:371). Buchanan and Stubblebine specify a taxonomy by which an "externality" may be technological or pecuniary, marginal or inframarginal, Pareto-relevant or -irrelevant. For an enlightening discussion, see Haddock (2005), which notes that many phenomena labeled as "externalities" are really related to the production of public goods.

[2] A brief foreshadowing of some of the points made in Demsetz (2003) appears in Demsetz (2002).

> the use of soft coal by a steelmaker. The soft coal produces soot. The soot descends on a neighboring laundry, making it more difficult for the laundry to clean its customers' clothes, but this cost is not faced by the owner of the steel mill when he decides to use soft coal to fuel the steelmaking process.

Perceptions that externalities are ubiquitous have helped produce a generation of large-scale governmental interventions in the form of national environmental legislation and related regulation.

The externality issue has also occasioned rethinking of basic economic principles, particularly in the context of Ronald Coase's (1960) celebrated article, "The Problem of Social Cost." As is now well understood, Coase explained that externalities were themselves manifestations of a more fundamental issue in economics, the costs of transacting over rights to undertake actions that affect other people. Low transaction costs allow internalization of social costs, and so reduce the incidence of externalities; as those costs rise, so does the extent of externalities. Coase's analysis of the problem of social cost has been so powerful that economists, almost automatically, now think of social costs as a problem only when transaction costs are perceived to be relatively high. In the limit, if there were no transaction costs, there seemingly would be no social costs.

Yet, Coasean analysis of externalities has been the subject of much confusion, even disagreement. Demsetz (2003) in particular has pointed to aspects of the Coase approach that, as a matter of both economics and of government policy, he finds problematic. As a matter of economics, Demsetz says, Coase's focus on transaction costs is not helpful in resolving questions concerning externalities. Even in a hypothetical world of zero transaction costs, Demsetz writes, externalities would still exist. Moreover, Demsetz fears, focus on transaction costs as the reason for the persistence of externalities furnishes spurious reasons for undesirable government intervention in markets.

The recent Demsetz objections to Coase's approach concerning externalities are considered further in the next section. I then evaluate those objections. To a considerable extent, Demsetz ignores points that Coase has made, not in "The Problem of Social Cost," but elsewhere. At the same time, Demsetz adds new insights to the Coase Theorem, in particular emphasizing the weakness of arguments for government intervention to solve externality problems even in the presence of high transaction costs. At points, the present article may read like a literary *explication de texte*. But in fact, the Demsetz critique raises fundamental economic issues, some new and others worth revisiting.

Internalizing External Costs: Demsetz on Coase

The Coasean Model

"The Problem of Social Cost" sought principally to dispel what Coase saw as economists' unquestioning acceptance of A.C. Pigou's claim that the imposition of costs on one entity (person, firm) by another was reason for government intervention in the otherwise private ordering of economic affairs.[3] By this "Pigovian tradition,"[4] as Coase refers to it, intervention might take various forms, such as the imposition of liability on the party creating the costs, or taxes to align private with social cost, or zoning-like expulsion of the offending party to a place where no costs could be imposed on others. Contrary to Pigou, Coase (1960: 2) argued that these "suggested courses of action are inappropriate in that they lead to results which are not necessarily, or even usually, desirable."

The essence of what is now known as the "Coase Theorem" is familiar; only its essential points need emphasis here. Coase assumes that the rights to use a resource are (or will be) well defined and enforced. Coase typically refers to the definition of rights as the result of a judicial process.[5] But his analysis applies just as well to non-judicial definitions of rights.[6]

Once rights to use a resource are defined, the ultimate use of the resource need not depend on who owns the rights. Although "the delimitation of rights is an essential prelude to market transactions . . . the ultimate result (which maximizes the value of production) is independent of the legal decision" (Coase 1960: 27). Regardless of who owns the rights initially, subsequent negotiations between owners will move resources to the highest-valued use. Let the right to clean air belong to the laundry. If the value of emitting smoke exceeds the costs to the laundry, the steelmaker will pay to pollute. Alternatively,

[3] That refuting Pigou was Coase's objective is clear from Coase's definition of "The Problem to Be Examined," the title of the first section of his 1960 article, and the titles of the final two sections: "The Pigovian Tradition" and "A Change of Approach."

[4] Coase notes that the Pigovian model was an oral tradition, but one embraced by nearly all economists at the time.

[5] Coase's prototype case is *Sturges v. Bridgman,* 1 Ch. D. 852 (1879), which he discusses, not only in "The Problem of Social Cost," but in Coase (1959) and Coase (1988).

[6] For discussion of various private ways that property rights are defined, as a matter either of community contract or sheer might, see Anderson and McChesney (2003). It is important to distinguish, as Coase does, between initial *definition* of property rights and any subsequent *reallocation* of the rights. Initial definition of rights frequently (although not necessarily) is accomplished most efficiently through the use of government (courts, legislatures). Thereafter, however, any reallocation of rights to higher-valuing users will ordinarily be accomplished most efficiently through voluntary market transactions.

let the steel mill possess the right to pollute the air. Because the value of polluting is worth more to the mill than the costs to the laundry, pollution again will occur. Correspondingly, if the relative cost-benefit magnitudes are reversed—that is, if the cost of pollution to the laundry exceeds the benefits to the mill—there will be no pollution, regardless of which firm owns the right to the air.

However, this proposition assumes that there are zero (or trivial) transaction costs. Whether ownership is irrelevant for the ultimate use of resources is "dependent on the assumption of zero transaction costs . . . That is to say, with zero transaction costs, the value of production would be maximized" (Coase 1988: 158). But with important transaction costs, resource use may not be optimal. High transaction costs mean that the definition of rights may affect the use to which resources are put. Important transaction costs preclude negotiations between the steelmaker and the laundry. Judicial definition of rights to emit or not to emit smoke therefore determines whether the smoke will be emitted, regardless of the relative benefits and costs of pollution. Thus, in the Coasean model with positive transaction costs, judicial determination of rights may result in economic loss.

This Coasean approach to externalities has become economic orthodoxy. However, Harold Demsetz has recently challenged the Coase construct. Demsetz raises two objections. He writes that Coase's arguments concerning transaction costs, while not erroneous, are not sufficient to resolve issues concerning social cost. Moreover, Demsetz claims, inherent in the Coasean approach is the potential for mischief, in the form of unwarranted government intervention when social costs present themselves.

Demsetz on Coase: Transaction Costs

Demsetz rejects the centrality of transaction costs to the existence of externality problems. Regardless of whether transaction costs are high, low, or nonexistent, Demsetz writes (2003: 284), externalities will exist—that is, resource owners will not take into account the full social costs of their activities.

> [W]hat I have to say, because I deny the importance attached by Coase to transaction cost, allows us to reject the externality problem in cases in which transaction cost is positive as well as those in which it is zero. . . . The elements I stress differ from Coase's, but they also serve to restrict the set of economic activities described as exhibiting policy-relevant externalities.

Externalities will persist because phenomena other than transaction costs are relevant to solving the problem of social cost. The two firms could always merge. If a single firm owns both the steel mill and the laundry, there are by definition no external effects from smoke; all costs are internalized.

But a merger would result in a conglomerate firm operating both a steel mill and a laundry, producing what Demsetz terms "management costs," even as transaction costs are eliminated. Greater management costs may arise when a single facility is "devoted to different purposes," that is, there are costs in foregone specialization (Demsetz 2003: 284). Those who specialized in producing steel now must also operate a laundry, and vice versa. With unified ownership, the externality problem facing the mill and the laundry is solved, but only at the cost of lost specialization in producing only steel and only laundry. "It is increased reliance on specialization that is the source of costly interactions that bear the externality label," not transaction costs (Demsetz 2003: 284).

According to Demsetz (2003: 289), "It costs something to engage in transactions, but it also costs something to complicate managerial operations in a unified ownership structure . . . [I]f ownership were unified, there also would be greater management cost in controlling the more complicated interface between the steel mill's operations and the operations of many industries." Thus, Demsetz sees the externality problem as merely subsidiary to more fundamental issues involving ownership of rights: "optimal ownership rearrangement not only economizes on transaction cost, [but] it essentially undermines the very existence of the externality problem" (Demsetz 2003: 286). That, says Demsetz, is critical to one's thinking about externalities: "Coase showed that resources are not misallocated in neoclassical theory's competition model if transaction cost is zero. . . . Coase is correct, since zero transaction cost allows coordination between two independently owned firms to substitute perfectly for unified ownership. However, this seems to imply that external cost . . . does exist if transaction cost is positive" (Demsetz 2003: 290).

Ownership is a dynamic concept; rights to resources (once defined) can always be exchanged between firms, or combined in a single firm. "[S]ince there is no externality if ownership is unified," then there is no relevant (non-self-imposed) externality if separate ownership is the chosen ownership arrangement (Demsetz 2003: 287). Transaction costs are not an exogenous phenomenon. They exist because competitors (e.g., a steel mill and a laundry) for the same resource (e.g., air) choose to operate as different firms. Different firms performing separate functions bespeak gains from specialization. Unifying ownership of the two firms would by definition remove all transaction costs, but only at a cost of lost specialization.[7]

In short, even if transaction costs were zero, and firms could costlessly combine to solve externality problems, management costs would arise. Those costs could be prohibitive, leaving the possibility of positive externalities in a world of zero transaction costs. "There simply is no reason to proclaim a special role for transaction cost in the externality problem except for the fact that, if we insist on separate ownership, positive transaction cost creates the problem of choosing between two alternative assignments of ownership rights" (Demsetz 2003: 296). On the other hand, transaction costs could be positive, yet no externalities would arise as long as the costs of foregone specialization were relatively low. Therefore, for Demsetz transaction costs are not sufficient for relevant externalities to exist.

Demsetz on Coase: The Political Subtext of Externality Problems

For Demsetz, Coasean analysis is problematic also because it gives rise to two unwarranted implications. Both relate to the role of government in the presence of social costs.

First, Demsetz complains that if resources are misallocated when transaction costs are high, that is not a problem of the economic system. It is a judicial or political problem, stemming from courts or legislatures initially awarding property rights to a lower-valuing user when subsequent negotiations are too costly to reallocate those rights to higher-valued uses.[8] The point, "overlooked by Coase," is that the award of property rights is

> not germane to a judgment about the efficiency with which the *economic* system works. . . . [The assignment of rights] lies outside the price system in the legal system. . . . Coase has confused issues by bringing the legal system into his evaluation of Pigou's theory. . . . Why should we claim an externality-associated inefficiency in the operations of the economic system because legal policy has reduced the value of the mix of goods produced [Demsetz 2003: 294–95]?

Moreover, when rights are initially accorded to the wrong owner, economically speaking, the resulting inefficiency in turn furnishes an excuse for government subsequently to step into the marketplace.

[7] In addition to lost specialization, there is support in the financial-economic literature for the proposition that conglomeration may reflect managerial empire-building at shareholder expense, that is, represents a subset of agency cost more generally. See Montgomery (1994), Shleifer and Vishny (1989); see also Matsusaka (1993).

[8] This is not to say that courts or legislatures are required for rights to be defined (see Anderson and McChesney 2003). But both Coase and Demsetz refer principally to this form of property rights definition in their respective discussions.

When private cost does not equal social cost, the "result of this inequality" is the seeming fact that "the state can improve matters through taxes and subsidies that bring private cost into equality with social cost" (Demsetz 2003: 296). Again, though, the problem arises only because property rights are incorrectly defined in the first place. The problem really resides in the judicial-legislative system, not the economic system.

The Demsetz Critique of Coase

Criticism of a Nobel laureate by another eminent economist like Harold Demsetz is noteworthy, and invites study. As one undertakes that study, it is worth recalling that, for all its seeming simplicity, the Coase Theorem has been the subject of much debate and even criticism among economists and lawyers.[9] Coase (1988: 159) describes the criticisms as "for the most part, either invalid, unimportant or irrelevant," adding that "[e]ven those sympathetic to my point of view have often misunderstood my argument."[10] The lack of agreement as to what Coase is saying has indeed been remarkable. As one précis (De Meza 1998: 270) summarized, "Is [the Coase Theorem] profound, trivial, a tautology, false, revolutionary, wicked? Each of these has been claimed."

It is remarkable how students of Coase manage to find in "The Problem of Social Cost" thoughts or claims that just are not there, or seem unsure about what Coase was saying.[11] All this has led Coase (1988: 157) to abjure anything called the Coase Theorem, stating that his work advanced a proposition "which has been transformed into the Coase Theorem. . . . I did not originate the phrase, the 'Coase Theorem,' nor its precise formulation, both of which we owe to Stigler."

It is submitted here that the Demsetz criticism of Coase reflects yet another misinterpretation of at least part of what Coase was saying. The Demsetz criticism is based, in part, on issues that Coase himself recognized (and sometimes had already discussed earlier), but chose not to discuss in any detail in "The Problem of Social Cost." At the

[9] For citations to relevant articles, see Coase (1988), in which he addresses the various criticisms.

[10] Coase ascribes the misunderstanding to "the extraordinary hold which Pigou's approach has had on the minds of modern economists."

[11] For example, Robert Ellickson (1986) has done justly celebrated work on how social norms, rather than law, explain dispute resolution in some contexts. But from Ellickson's demonstration that people (particularly those in repeat-dealing situations) find ways cheaper than the law to solve their problems, it is difficult to tell whether Ellickson believes his findings support or contradict Coase.

same time, by discussing these issues more fully than did Coase, Demsetz adds to our understanding of "The Problem of Social Cost."

Transaction Costs

In considering the externality problem, it will be helpful to refer to a series of hypothetical situations, with assumed values describing the smoke example.

Hypothetical A

Loss from Smoke to Laundry: 11
Gain from Smoke Emission to Mill: 5
Social Gain from Smoke Abatement: 6
Transaction Costs for Abatement: 8
Value of Specialization to Laundry and Mill: 3

The laundry suffers greater loss (11) than the steel mill gains (5) from the mill's smoke emissions. There are net gains (6) from the mill's agreeing not to emit the smoke. But the transaction costs (8) of attaining this agreed-on solution exceed the gains available.

This seems the sort of setting Demsetz has in mind. In this situation, does "ownership rearrangement," that is, unified ownership of the mill and laundry, "essentially undermine the very existence of the externality problem"? Clearly, it does. With ownership unified, the losses from lost specialization (3) are less than the gains from solving the social cost problem (6). The fact that there are positive transaction costs in the mill and laundry negotiating their own solutions to the externality is irrelevant, because those costs (8) are higher than the lost specialization costs (3). The possibility of unified ownership of the mill makes transaction costs irrelevant, and itself solves any externality problem.

It does not follow, however, that the possibility of unified ownership solves the externality problem in all cases. The accounting might be different, as in the following set of costs.

Hypothetical B

Loss from Smoke to Laundry: 11
Gain from Smoke Emission to Mill: 5
Social Gain from Smoke Abatement: 6
Transaction Costs for Abatement: 8
[Value of Specialization to Laundry and Mill: 15]

By hypothesis, the facts related to the externality itself are unchanged. The respective losses and gains to the laundry and the mill still leave room for a social gain (6) from smoke abatement, but less than the transaction costs (8) of negotiating the abatement.

However, the cost of removing the externality by unifying ownership of the two firms also is prohibitive, as indicated by the brackets. The cost (15) exceeds the gains of internalizing the externality (6), meaning that the externality will remain, as long as any solution to the problem depends on private negotiations or rearrangement of ownership. Focus on ownership does not necessarily mean that one would "reject the externality problem in cases in which transaction cost is positive," as Demsetz claims. True, transactions costs from negotiation between two separate entities could be reduced to zero by unifying ownership. But unification would not be the choice made by value-maximizing firms.

In short, Demsetz is correct that transaction costs are not sufficient for externalities to exist. In Hypothetical A, there are positive transaction costs but no externality because the cost of lost specialization is relatively low. Nor are the transactions costs necessary to the continued existence of an externality, as long the costs of lost specialization are lower than transaction costs, and less than the gains available from combining the two firms. It is the combination of high transaction costs and high value of specialization that means the externality will persist.

But is what Demsetz is saying contrary to Coase's own position? Seemingly not. Coase also recognized the possibility of the kind of solution to the externality problem that Demsetz highlights. Alluding to "The Nature of the Firm," (Coase 1937), his earlier classic that identified the firm as a sometimes superior way of organizing economic transactions, Coase in "The Problem of Social Cost" points out that "an alternative form of economic organization" could solve externality problems. "[I]t would be hardly surprising if the emergence of a firm or the extension of the activities of an existing firm was not the solution adopted on many occasions to deal with the problem of harmful effects. . . . I do not need to examine in great detail the character of this solution since I have explained what is involved in my earlier article" (Coase 1960: 36). Coase apparently would agree, then, that transactions costs are not sufficient for an externality to persist. However, they might, at least sometimes, explain a persistent externality. But—and this was Coase's point—they would be problematic only in the event that rights were not defined so as to maximize social welfare (total value) to begin with.

Even as he mentioned the possibility that the emergence of a single firm might solve any relevant externality, Coase did not purport to provide a fully specified, multivariate model of the externality problem. He referred to his discussion of the social-cost problem when transaction costs are positive as "extremely inadequate" (Coase 1960: 37). Other margins than unified ownership exist, and could be fit into a schema like that in Hypotheticals A and B, to show other possible ways of resolving externalities. Coase, for example, mentions in passing (though Demsetz does not) ways of avoiding social cost through unilateral self-help. Suppose that the laundry could unilaterally, at a cost of 2, purchase fans to blow away the soot that sullies the clothes it is trying to clean. If that cost (2) is lower than the laundry's share of the total transaction costs (perhaps 7) of negotiating a solution with the mill and of foregone specialization (3) in the event of unified ownership, it presumably would be the solution adopted. Other possible solutions may also exist, such as the purchase of insurance.

The fact that only transaction costs are discussed systematically in "The Problem of Social Cost" is hardly reason to criticize that article, however. Coases's aim, as noted above, was to counter the model of thinking about externalities that had been entrenched since Pigou. As Pigou did not consider the possibility that unilateral self-help against externalities might be cheaper than taxation or regulation, Coase had no reason to take up that subject in any detail. But that hardly detracts from the accuracy of what he did have to say about Pigovian solutions to the problem of social cost.

Loss of Specialization in the Demsetz Model

Although Demsetz's interpretation of Coase may be unnecessarily narrow, thinking about externalities in terms of foregone specialization is useful. Two sorts of specialization are relevant. There is specialization in production, as in Adam Smith's pin factory. Specialization in production seems to be part of what concerns Demsetz, who refers to losses in specialization when a single facility is "devoted to different purposes," such as steel and laundry.

However, it is not necessary for firms themselves to combine, losing the advantages of specialization, in order to resolve social cost problems. Rather, investors can construct a more complex corporate structure, such as a holding company, in which the steel mill and the laundry are maintained and operated as separate subsidiary firms, each with its own board of directors but subject to direction from a single holding-company board, which in turn is elected by a single group of shareholders.[12] Or, a single firm might issue tracking stock for the steel and for the laundry divisions.

[12] Although Demsetz does not specify the organization of the firms he is talking about in

In other words, physical unification of firms (with concomitant loss of the gains from specialization in production) is not required to solve externality problems. The gains from specialization may be maintained by operating separate firms, with specialized management and production in each. But adjustment of those firms' activities causing externalities so as to increase overall (holding) firm value would come from the unified board of directors and unified group of investors.[13]

The holding-company structure alleviates any loss in the gains from specialization in production *between* firms. But what of lost specialization *within* a firm?

Firms, of course, are not economic actors; it is the investors and managers of the modern firm who undertake the tasks necessary for the firm to earn profits. In the modern corporation, those tasks—investing and managing—are typically separate. By the "separation of ownership from control," specialization allows those with capital to invest without having to manage, and those with management abilities to use them without having to invest. A single board now must learn about the costs to one firm (the laundry) inflicted by another firm (the mill), and decide what to do. This seemingly increases the amount of information required to operate a combined steel and laundry firm, as compared with the situation when ownership is not unified. Management costs seemingly have increased.

In fact, the possibility of specialization within firms suggests that there are no necessary increases in management costs when externalities are internalized via rearrangement of ownership into a unified firm. In the Coasean model, there are two firms with two separate boards. In a setting with zero transaction costs, each board will need to learn what the costs (to the laundry) or benefits (for the mill) from pollution are, so as to bargain knowledgeably. Under the same assumption of zero transaction costs, a unified holding company board also will have to learn what the costs and benefits are for its subsidiary corporations (the laundry and the mill), so as to make any desirable adjustments to the mill's smoke emissions. There is no necessary increase in management costs occasioned by the move to unified ownership, even when transaction costs are zero.

discussing foregone specialization, he seems to have in mind a "unitary firm," one in which the producer and owner are one.

[13] This point is similar to that concerning diversification of risk in stock markets. Diversification, of course, can reduce risk. But does that mean that there is value to be had by merging the two firms, thus combining their returns? Ordinarily, there is no gain in risk reduction to be had by merging the two firms because investors can diversify their portfolios to obtain the same gains in reducing risk (see, e.g., Brealey and Myers 1996: 165).

Similar reasoning shows that there is no necessary difference in costs when transaction costs are assumed to be positive. The analogue of positive transaction costs between two separate firms—the paradigmatic Coasean situation—is positive transaction costs within the single holding company. Adjusting the mill subsidiary's smoke emissions optimally in effect requires a rearrangement of the firm's internal pricing for smoke emitted. Smoke emissions would have to be priced according to the cost they impose on the laundry subsidiary. Transfer pricing within a single business entity is ordinarily a costly and tendentious issue, requiring negotiation among buying and selling firms or divisions. Just as courts in the Coasean model may err, choosing a non-value-maximizing configuration of ownership, so can Demsetzian firms with unified ownership err in transfer pricing and related resource allocations decisions within the firm.

In short, what Demsetz refers to as "management costs" are just internal transaction costs.[14] Negotiations between separate firms—the mill and the laundry—can be replaced by negotiations between the mill and laundry subsidiaries of a single holding-company firm. Whichever name is used, "transaction costs" or "management costs," the only question is which is cheaper, negotiations in the market or within the firm—the very point Coase made in "The Nature of the Firm" and repeated in "The Problem of Social Cost." The point illustrated with respect to Hypotheticals A and B remains: it all depends on the relative empirical magnitudes in the two situations.[15]

Cheung makes the point more generally. "Transaction cost" refers to any cost of interaction between economic actors, any cost that would not exist in a "Robinson Crusoe economy."

> This broad definition [of transaction costs] is necessary, because it is often impossible to separate one type of transaction cost from another. . . . I have suggested, with the full approval of Coase, that

[14] Likewise, what Demsetz calls "unified ownership" is a term that could just as well be applied to the Coasean bargaining solution. The two parties are negotiating over ownership of the right to pollute (the steel mill) or to be compensated for any pollution (the laundry). In effect, although Coase does not use the term, the negotiation creates "unified ownership" of a property right: the right to pollute.

[15] The analysis here could be extended to other sorts of costs, such as that of information. If the firm is now a holding company with the mill and laundry as subsidiaries, shareholders and management will still have to invest in learning the relative costs and benefits of smoke emissions by the mill. But there would seem no necessary increase in overall management costs. The sole difference would be that both the mill and the laundry were represented in the decision about smoke emissions by a group (shareholders and their management) bent on joint maximization rather than by separate managements bent on maximizing what was good for them individually. But two sets of information/valuation costs would be incurred, regardless.

> transaction cost should actually be called "institution cost." An economy of more than one individual would necessarily contain institutions. . . . These costs certainly cannot exist in a Robinson Crusoe economy. They arise only where there are institutions, or in a "society" in the plain sense of the term. But changing household terminology is nearly impossible, so "transaction costs" stays even though it is not strictly correct and may even be misleading [Cheung 1998: 515].

Elusiveness of the term "transaction costs" doubtless explains much of the alternative evaluations of the Coase Theorem as "profound, trivial, a tautology, false, revolutionary, [or] wicked." But defined as all costs arising from interactions among two or more economic actors, "transaction costs" per Coase include the "management costs" that Demsetz discusses (and which Coase himself had already discussed in "The Nature of the Firm").

Government and Externalities

There is potentially a third solution to the problem of social cost: government, if and when the cost of a government solution to the social cost problem is acceptably low. Suppose that the prior cost accounting were augmented to include the cost of a government solution, as follows.

Hypothetical C

Loss from Smoke to Laundry: 11
Gain from Smoke Emission to Mill: 5
Social Gain from Smoke Abatement: 6
Transaction Costs for Abatement: 8
[Value of Specialization to Laundry and Mill: 15]
Cost of Government Solution: 4

The private-ownership solution is not cost-effective (as again indicated by the brackets). However, there is a government solution available at a cost (4) that is lower than the private solution, lower than the private transaction costs between the mill and the laundry, and lower than the social gain (6) achievable by the hypothesized government solution. Coase (1960: 38) raises this possibility:

> An alternative solution is direct governmental regulation. Instead of instituting a legal system of rights which can be modified by transaction on the market, the government may impose regulations which state what people must or must not do and which have to be obeyed. . . . It is clear that the government has powers which might

> enable it to get some things done at a lower cost than could a private organization.

As noted previously, Demsetz finds objectionable the role of government in the Coase model, for two reasons.

Economic vs. Political Failures. The possible importance of government in the Coasean model begins when it defines initial rights suboptimally, in a world of positive transactions costs that make private contracting unfeasible. As noted earlier, in discussing suboptimal property rights, Coase typically refers to judicial definition of rights. Demsetz objects to claims of economic inefficiency when courts define rights suboptimally, claiming that this is a governmental (judicial, legislative) problem, not an economic one. Coase, he says, "has confused issues by bringing the legal system's problems into his evaluation of Pigou's theory" (Demsetz 2003: 294).

But, concerning this distinction between politics and economics, Coase would hardly disagree. As he put it,

> Judges have to decide on legal liability, but this should not confuse economists about the nature of the economic problem involved. . . . The reasoning employed by the courts in determining legal rights will often seem strange to an economist, because many of the factors on which the decision turns are, to an economist, irrelevant. Because of this, situations which are, from an economic point of view, identical will be treated quite differently by the courts. The economic problem in all cases of harmful effects is how to maximize the value of production [Coase 1960: 13].

It is difficult to see any difference in this respect between Coase and Demsetz.[16]

However, there is an important ambiguity in the externality literature that the Demsetz critique of Coase illuminates. What does "government intervention" mean? Coase was plainly concerned about intervention that actually weakened already well-established property rights, referring to "special regulations (whether embodied in a statute

[16] It is likewise unclear to what, empirically, Demsetz objects to when he writes of Coase's "bringing the legal system's problems into his evaluation of Pigou's theory." Coase (1960) states repeatedly that he believes the legal system usually discerns correctly the higher-valued use for a resource when its ownership is disputed. For example, "The courts have often recognized the economic implications of their decisions and are aware [as many economists are not] of the reciprocal nature of the problem" (p. 120); "It seems probable that in the interpretation of words and phrases like 'reasonable' or 'common or ordinary use' there is some recognition, perhaps unconscious and certainly not very explicit, of the economic aspects of the question at issue" (pp. 123–24); and "[Courts] often make, although not always in a very explicit fashion, a comparison between what would be gained and what lost by preventing actions which have harmful effects" (p. 133).

or brought about as a result of rulings of an administrative agency). Such regulations state what people must or must not do." But some aspects of "government" *define* initial property rights, often at lower cost than is possible in a private ordering of affairs (see, e.g., Libecap 1978 and McChesney 2003). Other parts of government, notably courts, *enforce* property rights (see Meiners and Yandle 1999: 956).

Coase refers only to judicial definition and enforcement of private property, necessary preludes to Coasean bargaining. The problems to which Demsetz refers, however, are situations in which courts do not define or enforce rights, but rather redistribute them.[17] But no reading of Coase can suggest that he believes courts should redistribute rights. Weakening of property rights can only eviscerate Coasean solutions to the problem of social cost (see Holderness 1985).

It is ironic, finally, that Demsetz omits discussion of perhaps the biggest distinction between his unified-ownership focus on externalities *versus* Coase's transaction-cost model. The Coase system requires that property rights be well defined, as a condition (a "prelude," as Coase called it) of negotiating an optimal allocation of resources. That definition is assumed to arise from a governmental (judicial or legislative) determination of who owns what, and is completely exogenous in the Coase model.

The advantage of Demsetz's approach, however, is that no exogenous governmental definition of initial rights is required to achieve the gains of unified ownership. Suppose ownership of rights is disputed: if the steel mill claims to own the right to pollute the laundry's air and the laundry believes the mill does not, they certainly can resolve their difficulties in court or in the legislature. But with ownership contested, neither side can be certain of success. The alternative is for one side to buy out the other. Even with property rights uncertain, contractual devices (such as a quit-claim deed or an easement) make possible nongovernmental solutions to externality problems. Avoiding the court or legislature guarantees that the sorts of governmental allocation worrying Demsetz will not occur. A unified-ownership solution makes definition of rights endogenous, and government-free, as opposed to the exogenous definition of rights by courts that Coase assumes as his point of departure in discussing social costs.

This point invites the question, why do disputing claimants to resources go to court, if self-solution of the problem is possible?

[17] Demsetz, (2003: 295) refers to a legal system that pursues a "wealth redistribution policy."

Possibly they differ in evaluating their chances of success, precluding private resolution of their dispute (Priest and Klein 1984; see also Hay and Spier 1998). But perhaps court resolution is less expensive than private negotiation.[18] As with every other situation discussed here, it all depends, empirically.

Government Intervention When Rights Are Defined Suboptimally. As noted, Demsetz also objects to Coase's mention of government as a possible solution to the problem of social cost, because changes in ownership structure can solve externality problems and also because government solutions through taxation or regulation are likely to be more costly than ownership rearrangements. The externality issue, he indicates, "lies at the core of many problems of concern to environmentalists," (Demsetz 2003: 283), and by now the political side of "environmentalism" is well understood (see, e.g., Anderson 2000).[19]

It is perhaps unusual to see the Coase Theorem criticized as furnishing a political agenda to those whose default option is government intervention without economic justification. Yet, Demsetz's concerns along those lines is understandable. Among academics at least, the problem of social cost is viewed as central in attacking an economic, free-market approach to law and regulation. Proponents of critical legal studies like Duncan Kennedy (1998: 465) anchor their criticism of law and economics scholarship on the externality issue: "The theory of the efficiency of perfectly competitive equilibrium required a response to the problem of externalities." Moreover, Kennedy continues, "There are political stakes in the problem of externalities," because intervention to reduce social cost entails redistribution that reduces the value of existing property (including contract) rights (Kennedy 1998: 467).

Although Coase hardly approaches externalities from the perspective of a "left-wing political/academic movement," to use Kennedy's (2003: 465) description of critical legal studies, one can sympathize with Demsetz's concerns. According to Coase (1960: 18), government regulation is not costless but may be desirable: "This would seem particularly likely when, as is normally the case with the smoke nuisance, a large number of people are involved and in which case

[18] The fact that judicial resolution is financed by taxpayers may make this choice artificially inexpensive, but this is not Demsetz's quarrel with government definition of property rights.

[19] According to Viscusi, Vernon, and Harriginton (1995: 676), "The same kinds of economic interests that influence the setting of economic regulations in a manner that does not maximize social efficiency also are at work in determining the structure of risk and environmental regulations."

therefore the costs of handling the problem through market or the firm may be high." Earlier he had accorded more space to this same point, stating that if "many people are harmed" by pollution, "the market may become too costly to operate":

> In these circumstances it may be preferable to impose special regulations (whether embodied in a statute or brought about as a result of rulings of an administrative agency). Such regulations state what people must or must not do. When this is done, the law directly determines the location of economic activities, methods of production, and so on. Thus the problem of smoke pollution may be dealt with by regulations which specify the kind of heating and power equipment which can be used in houses and factories or which confine manufacturing establishments to certain districts by zoning arrangements [Coase 1959: 29].

But this is just a restatement of the transaction cost issue illustrated in Hypothetical C. As with everything else, the issue is empirical and situation-specific; no categorical claims can be made.

Yet to Demsetz, passages such as this (and he quotes others) from Coase revitalize the Pigovian argument for government intervention. "Pigou, if he could have read and commented on this part of Coase's social cost paper, after conceding that Coase has a point in the zero transaction cost case, would have said that a difference between social and private costs exists if transaction cost is positive" (Demsetz 2003: 294)—and thus that the case for government intervention was established.

But the question is not what Pigou would say posthumously about the Coase Theorem, but what Coase himself said. Particularly as Coase (1959) was one of the very first to analyze positively—and criticize—government regulation, no one could confuse him with an unthinking interventionist. He is careful to note that often the best solution to a "problem" of social cost is to do nothing. "It will no doubt be commonly the case that the gain which would come from regulating the actions which give rise to the harmful effects will be less than the costs involved in governmental regulation" (Coase 1960: 18). But, as in Hypothetical C, the possibility remains that government intervention will prove beneficial because of high private transaction costs among externality victims.

Further, Coase refers to government solutions only in cases where the number of victims is large, situations in which "a large number of people is involved and when therefore the costs of handling the problem through the market or the firm may be high" (Coase 1960: 18). On the other hand, Demsetz's solution by ownership unification must by definition apply only when there are two (or few) perpetrators and victims of externalities. If the steel mill is polluting not just one laundry but hundreds of agricultural fields, the costs of ownership unification are measured not just in lost specialization. The costs of negotiating acquisition—Coase's transaction costs, Demsetz's unified-ownership costs—will be large. Thus, in the large-number case, the distinction blurs between Demsetzian lost specialization costs and Coasean transaction costs.

Certainly, no one can accuse Coase of blindly adopting government solutions to the problem of social cost. Government intervention, he wrote, can be "extremely costly," being subject to "political pressures and operating without any competitive check" (Coase 1960: 18). Coase suspects that the relative cost conditions in Hypothetical C will not often hold: "It is my belief that economists, and policymakers generally, have tended to overestimate the advantages which come from governmental regulation" (Coase 1960: 18). But he does not categorically rule out improvements from government intervention.

Demsetz is more categorical, in part because his model of government intervention is more dynamic. Once the externality problem is recognized in ownership (single vs. fragmented) terms, the possibility of government intervention actually undermines the possible solution of social-cost problems. Government intervention, such as land-use regulations or emission restrictions, weakens property rights. Potential intervention means that the steel mill and the laundry no longer have full property rights to exchange so as to attain the optimal level of smoke discharge. Each side always has the alternative of turning to government to get what it wants, without having to compensate the other side. Any private exchange may be modified or overridden by later government action. The relative benefits of unified ownership fall, and so the possibility of private solutions to externality problems fade.

Particularly important to Demsetz is the loss of incentives that separate private owners would have to reveal the true benefits and costs of resolving the externality situation. Coercion (or "control cost," to use Demsetz's term) replaces voluntary solutions. Beneficiaries of government intervention pay the losers nothing for their benefits, and so have every incentive to overstate the social costs they claim to be suffering. "Costs (or benefits) are, in part, unaccounted for in high control cost cases because the costs (or benefits) are *misrepresented* as part of strategic [political] maneuvering" (Demsetz 2003: 298).

Coase surely would not disagree with this point. Nonetheless, it is one not explored in "The Problem of Social Cost." One cannot view the possibility of government intervention unrelated to private solutions to externality problems. The very existence of government and the specter of its intervention as an alternative to private ordering alter the incentives to reach negotiated solutions. Making the role of government endogenous to problems of social cost, as Demsetz does, provides a richer model of solution to the problems.

The Demsetz critique reveals, finally, a telling asymmetry in the analysis of government solutions to externality problems. The standard call for government intervention rests on numbers like those portrayed in Hypothetical C where—but for the transaction costs of negotiating a private solution—there are gains from pollution abatement, and where the cost of a coerced government solution are less than the gains from abatement. But instead of Hypothetical C, suppose that the following set of figures applied.

Hypothetical D

Loss from Smoke to Laundry: 11
Gain from Smoke Emission to Mill: 5
Social Gain from Smoke Abatement: 6
Transaction Costs for Abatement: 8
Value of Specialization to Laundry and Mill: 7
Cost of Government Solution: 4

Both the Coasean transaction costs (8) and the Demsetz management costs (7) exceed the gains from smoke abatement (6). As in Hypothetical C, the cost of a government solution to the problem is lower than either set of private costs and fall short of the gains from a solution.

But, Demsetz would ask, of what does this government cost consist? It could be the cost of substituting for private markets, avoiding Coasean transaction costs. But it could be the cost of overcoming Demsetzian private management costs by forcibly unifying ownership of two firms into a single firm. And yet, most economists would scoff at the idea of supplanting firm management with government direction of firms to achieve the unified ownership that would internalize externalities. Demsetz concludes,

> Two firms exist only when this is the cheaper way to cope with the interaction between the two activities [steel and laundry]. Hence, what appears as a case of externalities is really a superior method of coping with the interaction. If we see no cause for the State to intervene in the case of [the] integrated firm, why do we see a cause for intervention if a better resolution of the problem is found by having a market separate the two activities? The implicit but important unstated (and un-defendable) assumption that must be recognized to rationalize the Coase view is that the State can do a

> better job of substituting for markets than it can do by substituting for management.[20]

If intervention to solve Demsetzian management-cost issues seems patently unjustified to most, why does intervention to solve Coasean transaction cost problems strike so many as justfied? They are dual aspects of a common problem in a real world, not a Robinson Crusoe world, in which interactions among economic actors have costs, but ones exceeded by their benefits.

Conclusion

In the ongoing debate over externalities, Harold Demsetz objects to Ronald Coase's failure to appreciate the importance of specialization in production as a reason, separate from transaction costs, that externalities might exist. But a rereading of Coase reveals his awareness of the possible importance of unified ownership in resolving the problem of social cost. Nonetheless, Demsetz's treatment of specialization and ownership goes further into those aspects of the problem, and thus is a useful addition to the social cost literature. In particular, it elicits further thinking about other margins along which solutions to the problem of social cost might lie. Demsetz's own model, though, seems to restate to firm-internal versions of the sorts of external transaction costs that Coase had identified in "The Problem of Social Cost."

Demsetz also criticizes the opening to a political agenda that, he says, Coase has provided. True, some interventionists have seized on Coase as a justification for interference with markets. But Coase himself was aware that government solutions were fraught with their own problems, and not necessarily desirable. It is equally true, however, that viewed from an ownership perspective, government intervention is even less desirable than it might otherwise seem. Intervention weakens the very property rights that facilitate privately negotiated resolutions to the problem of social cost. In making this more dynamic point, Demsetz broadens the more static Coasean model.

It should be remembered, finally, that in "The Problem of Social Cost" Coase did not provide (nor intend to provide) a fully specified system for analyzing externality problems. He pointed out, though, that in his 1937 article he had already addressed the possibility of a single firm solving problems arising from high transaction costs. Likewise, he noted that unilateral, technological fixes might be the

[20] Private correspondence from Harold Demsetz to the author.

cheapest way out of social-cost problems, although did not devote any great space to the possibilities there.

"The Problem of Social Cost" sought to reverse the Pigovian perspective on externalities, and succeeded in doing so. Properly understood, the Demsetz critique emphasizes Coase's main point, and fleshes out aspects of Coase only mentioned fleetingly in "The Problem of Social Cost." Thus, it adds new points to the ongoing debate over externalities and government.

References

Allen, D. W. (1991) "What Are Transaction Costs?" *Research in Law and Economics* 14: 1–18.

Anderson, T. L. (ed.) (2000) *Political Environmentalism: Going Behind the Green Curtain.* Stanford, Calif.: Hoover University Press.

Anderson, T. L., and McChesney, F. S. (2003) *Property Rights: Cooperation, Conflict, and Law.* Princeton, N.J.: Princeton University Press.

Brealey, R. A., and Myers, S. C. (1996) *Principles of Corporate Finance*. 5th ed. New York: McGraw-Hill.

Buchanan, J. M., and Stubblebine, W. C. (1962) "Externality." *Economica* 29 (3): 371–84.

Cheung, S. N. S. (1998) "The Transaction Costs Paradigm." *Economic Inquiry* 36 (4): 514–21.

Coase, R. H. (1937) "The Nature of the Firm." *Economica* 4 (n.s.) (November): 386– 405.

________ (1959) "The Federal Communications Commission." *Journal of Law and Economics* 2 (1): 1–40.

________ (1960) "The Problem of Social Cost." *Journal of Law and Economics* 3 (1): 1–44.

________ (1988) "Notes on the Problem of Social Cost." In R. H. Coase, *The Firm, The Market and the Law*. Chicago: University of Chicago Press.

Demsetz, H. (2002) "Toward a Theory of Property Rights II: The Competition between Private and Collective Ownership." *Journal of Legal Studies* 31 (2): S653–S752.

________ (2003) "Ownership and the Externality Problem." In T. L. Anderson and F. S. McChesney (eds.) *Property Rights: Cooperation, Conflict, and Law.* Princeton, N.J.: Princeton University Press.

De Meza, D. (1998) "Coase Theorem." In P. Newman (ed.) *The New Palgrave Dictionary of Economics and the Law,* Vol. 1. New York: Stockton Press.

Ellickson, R. C. (1986) "Of Coase and Cattle: Dispute Resolution Among Neighbors in Shasta County." *Stanford Law Review* 38 (February): 623–87.

Haddock, D. D. (2005) "Irrelevant Internalities, Irrelevant Externalities, and Irrelevant Anxieties." Manuscript, Northwestern University.

Hay, B. L., and Spier, K.E. (1998) "Settlement of Litigation." In P. Newman (ed.) *The New Palgrave Dictionary of Economics and the Law,* Vol. 3. New York: Stockton Press.

Hazlett, T., W. (1990) "The Rationality of U.S. Regulation of the Broadcast Spectrum." *Journal of Law and Economics* 33 (1): 133–75.

Holderness, C. G. (1985) "A Legal Foundation for Exchange." *Journal of Legal Studies* 14 (2): 321–44.

Kennedy, D. (1998) " Law and Economics from the Perspective of Critical Legal Studies" In P. Newman (ed.) *The New Palgrave Dictionary of Economics and the Law,* Vol. 2. New York: Stockton Press.

Libecap, G. D. (1978) "Economic Variables and the Development of the Law: The Case of Western Mineral Rights." *Journal of Economic History* 38 (2): 338–62.

Matsusaka, J. G. (1993) "Takeover Motives during the Conglomerate Merger Wave." *Rand Journal of Economics* 24 (3): 357–79.

McChesney, F. S. (2003) "Government as Definer of Property Rights: Tragedy Exiting the Commons?" In T. L. Anderson and F. S. McChesney (eds.) *Property Rights: Cooperation, Conflict, and Law.* Princeton, N.J.: Princeton University Press.

Meiners, R. L., and Yandle, B. (1999) "Common Law and the Conceit of Modern Environmental Policy." *George Mason Law Review* 7 (4): 923–72.

Montgomery, C. A. (1994) "Corporate Diversification." *Journal of Economic Perspectives* 8 (3):163–78.

Priest, G. L., and Klein, B. (1984) "The Selection of Disputes for Litigation." *Journal of Legal Studies* 13 (1): 1–55.

Shleifer, A., and Vishny, R. M. (1989) "Management Entrenchment: The Case of Manager-Specific Investments." *Journal of Financial Economics* 25 (1): 123–39.

Viscusi, W. K.; Vernon, J. M.; and Harriginton Jr., J. E. (1995) *Economics of Regulation and Antitrust*. 2nd ed. Cambridge, Mass.: MIT Press.