

TRANSACTION COSTS, RESOURCE ALLOCATION AND LIABILITY RULES—A COMMENT*

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IN his article on "The Problem of Social Cost" Professor Coase argued that (assuming no transaction costs) the same allocation of resources will come about regardless of which of two joint cost causers is initially charged with the cost, in other words regardless of liability rules.¹ Various writers—including me—accepted that conclusion for the short run, but had doubts about its validity in the long run situation. The argument was that even if transactions brought about the same short run allocation, liability rules would affect the relative wealth of the two joint cost causing activities, and in the long run this would affect the relative number of firms and hence the relative output of the activities.²

Further thought has convinced me that if one assumes no transaction costs—including no costs of excluding from the benefits the free loaders, that is, those who would gain from a bargain but who are unwilling to pay to bring it about—and if one assumes, as one must, rationality and no legal impediments to bargaining, Coase's analysis must hold for the long run as well as the short run. The reason is simply that (on the given assumptions) the same type of transactions which cured the short run misallocation would also occur to cure the long run ones. For example, if we assume that the cost of factory smoke which destroys neighboring farmers' wheat can be avoided more cheaply by a smoke control device than by growing a smoke resistant wheat, then, even if the loss is left on the farmers they will, under the assumptions made, pay the factory to install the smoke control device. This would, in the short run, result in more factories relative to farmers and lower relative farm output than if the liability rule had been reversed. But if, as a result of this liability rule, farm output is too low relative to factory output those who lose from this "misallocation" would have every reason

* I am particularly indebted to Professor R. H. Coase of Chicago, and Professor Ward Bowman, of Yale, with each of whom I have discussed parts of this comment.

¹ Coase, *The Problem of Social Cost*, 3 *J. Law & Econ.* 1 (1960).

² See, for example, Calabresi, *The Decision for Accidents: An Approach to Nonfault Allocation of Costs*, 78 *Harv. L. Rev.* 713, 730 n.28, 731 n.30 (1965) and Calabresi, *Fault, Accidents and the Wonderful World of Blum and Kalven*, 75 *Yale L.J.* 216, 231-232 and accompanying footnotes (1965).

to bribe farmers to produce more and factories to produce less. This process would continue until no bargain could improve the allocation of resources.

The interesting thing about this analysis, however, is that there is no reason whatsoever to limit it to joint cost causers. Thus, if one assumes rationality, no transaction costs, and no legal impediments to bargaining, *all* misallocations of resources would be fully cured in the market by bargains.³ Far from being surprising, this statement is tautological, at least if one accepts any of the various classic definitions of misallocation. These ultimately come down to a statement akin to the following: A misallocation exists when there is available a possible reallocation in which all those who would lose from the reallocation could be fully compensated by those who would gain, and, at the end of this compensation process, there would still be some who would be better off than before.

This and other similar definitions of resource misallocation merely mean that there is a misallocation when a situation can be improved by bargains. If people are rational, bargains are costless, and there are no legal impediments to bargains, transactions will *ex hypothesi* occur to the point where bargains can no longer improve the situation; to the point, in short, of optimal resource allocation.⁴ We can, therefore, state as an axiom the proposition that all externalities can be internalized and all misallocations, even those created by legal structures, can be remedied by the market, except to the extent that transactions cost money or the structure itself creates some impediments to bargaining.⁵

It may be that this welfare economics analogue to Say's law has always been quite obvious to economists, although if it has its relevance has too frequently been ignored. In any event, lawyers who use economics have in

³ See note 5 *infra*.

⁴ Any given individual qua individual might well be richer or poorer as a result of the liability rules in force at the beginning of the bargaining process. But this difference in distribution of wealth would *ex hypothesi* not be one which would affect total social product.

⁵ By transaction costs, I have in mind costs like those of getting large numbers of people together to bargain, and costs of excluding free loaders. But one may properly ask the question: in what way are these qualitatively different from the cost of establishing a bargain between two parties, i.e., the cost of walking over and dickering? And if they are not, then how are they different from common selling costs, which we all assume the market normally handles optimally? Perhaps the difference is a qualitative one which escapes me. If it is not, it may be that as to normal selling costs, or costs of one-for-one dickering we readily accept the probably justifiable empirical conclusion that no substitute for the market can achieve a similar result as cheaply. But see e.g., Calabresi, *The Decision for Accidents*, 78 Harv. L. Rev. 713, 725-729 (1965), and Calabresi, *Fault, Accidents and the Wonderful World of Blum and Kalven*, 75 Yale L.J. 216, 223-231 (1965) (suggesting that liability rules may occasionally be crucial even in these cases). With the kinds of costs which Coase seems to call transaction costs, that conclusion, though possibly often still valid, cannot be accepted without more data. See Coase, *supra* note 1.

virtually every case been hopelessly confused on the subject.⁶ For this reason, if no other, it is worthwhile elaborating on the practical implications of the proposition.

The primary implication is that problems of misallocation of resources and externalities are not theoretical but empirical ones. The resource allocation aim is to approximate, both closely and cheaply, the result the market would bring about if bargaining actually were costless.⁷ The question then becomes: Is this accomplished most accurately and most cheaply by structural rules (like anti-trust laws), by liability rules, by taxation and governmental spending, by letting the market have free play or by some combination of these? This question depends in large part on the relative *cost* of reaching the correct result by each of these means (an empirical problem which probably could be resolved, at least approximately, in most instances), and the relative *chances* of reaching a widely *wrong* result depending on the method used (also an empirical problem but one as to which it is hard to get other than "guess" type data). The resolution of these two problems and their interplay is *the* problem of accomplishing optimal resource allocations.

Two points are implied in the foregoing discussion. The first is that since transactions do cost money, and since substitutes for transactions, be they taxation, liability rules, or structural rules, are also not costless, the "optimal" result is not necessarily the same as if transactions were costless. Whatever device is used, the question must be asked: Are its costs worth the benefits in better resource allocations it brings about or have we instead approached a false optimum by a series of games which are not worth the candles used? This does not mean, though, that the actual optimum is necessarily the one an unaided market would reach. Further market improvements may well be prohibitive at a stage where laws and their enforcement are still a relatively cheap way of getting nearer the goal.⁸

The second point is that both the unreachable goal of "that point which would be reached if transactions were costless," and the gains which reaching nearer the goal would bring are not usually subject to precise definition or

⁶One notable recent exception is Professor Frank I. Michaelman. See Michaelman, Property, Utility and Fairness: Comments on the Ethical Foundations of "Just Compensation" Law, 80 Harv. L. Rev. 1165, 1172-1176 (1967).

⁷Professor Harold Demsetz in a very provocative article has recently suggested that the institution of private property and its protection by the law can be explained in these terms. Demsetz, Toward a Theory of Property Rights, 57 Am. Econ. Ass'n. Pap. & Proc. 347 (1967). Surprisingly, he does not suggest that one of the examples which he gives of externalities not internalized by private property, that of factory smoke pollution, might also be handled by a change in property rights, that is, by making the factory owner liable for the smoke, *id.* at 357. This might resolve the problem if transaction costs were significantly lower if the factory owner were initially liable than if homeowners bore the loss, a not unlikely hypothesis.

⁸See Demsetz, *supra* note 7.

quantification. They are, in fact, largely defined by guesses. As a result, the question of whether a given law is worth its costs (in terms of better resource allocation) is rarely susceptible to empirical proof. This does not mean, of course, that the best we can do is adopt a *laissez faire* policy and let the market do the best it can. It is precisely the province of good government to make guesses as to what laws are likely to be worth their costs. Hopefully it will use what empirical information is available and seek to develop empirical information which is not currently available (how much information is worth *its* costs is also a question, however). But there is no reason to assume that in the absence of conclusive information no government action is better than some action. This is especially so if the guesses made take into account two factors. The first is: Action in an uncertain case is more likely to be justified if the market can correct an error resulting from the proposed action more cheaply than it could an error resulting from inaction. The second is: Action in an uncertain case is more likely to be justified if goals *other* than resource allocation (like proper income distribution) are served by the action. In effect the first factor says, in uncertainty increase the chances of correcting an error, while the second says, the achievement of other goals is accomplished very cheaply where the most that can be said about the resource allocation effect of a move is that we cannot be *sure* that it will be favorable.⁹

The relevance of the foregoing analysis may be seen in various areas of government intervention. I shall briefly mention three because they have brought forth different governmental responses: (1) the monopoly area, (2) highways or parks, (3) automobile accidents.

(1) Why should we have laws which attempt to control monopolies? Assuming no transaction costs, those who lose from the relative underproduction of monopolies could bribe monopolists to produce more. We know, however, that such market action is usually unrealistic—that is, it would be too expensive relative to the benefits it would bring. The problem of excluding free loaders, would—absent any other problems—suffice to make it so. We believe that a series of structural rules, a series of laws in this

⁹ Some may argue that other goals, like income redistribution, are best achieved not through *ad hoc* decisions but rather as part of a general policy implemented through devices (like some forms of progressive taxation) chosen with the goal specifically in mind. Even if this position is accepted, it is possible that a general policy in favor of a particular distribution of income could be arrived at and its implementation be intentionally left to particular cases where no provably adverse resource allocation effects would come about. This would be especially attractive to those who accept the view that most forms of progressive taxation misallocate resources.

The mention of other goals may suggest that their benefits can be established with substantial certainty. That obviously is not so, but the process of deciding whether to accomplish these goals does not, in our society, seem to depend on the ability of social scientists to prove their desirability with substantial certainty.

case, are cheaper than market correction would be, and more important, we believe they are cheap enough to be worth having. This last belief involves certain guesses about what a "costless" market would do, and what the gains of approaching that goal by legislation are. Even if we assume that these guesses are in large terms fairly supported by empirical information, we certainly reach a point where the putative gains of further more stringent legislation or of more stringent enforcement are hard to justify in terms of the costs of such programs. In such a situation how far we go cannot help but be affected, and properly so, by what other goals—like dilution of power, or income redistribution—we think a further step will accomplish. Far from being irrelevant, these factors may be made an integral part of the law, if not the economics, of antitrust.¹⁰

(2) The question of why we have public highways is not totally dissimilar. One can view the decision to have public highways as the product of certain assumptions about what people would do if there were no transaction costs. These assumptions are largely guess work—perhaps even more guess work than in the monopoly case. As in the monopoly situation, government intervention is believed to bring us nearer, and more cheaply, to what a costless market would establish than would the real market. The reason may be that exclusion of free loaders seems substantially more expensive than compulsion of payment by all putative gainers, including would-be free loaders. The result is taxation, in part, of those who supposedly gain from the presence of a better highway system. I say in part, because here again the guesses made are inevitably affected by other goals. "Free" parks can be analyzed in the same way. The validity of the assumptions, the availability of empirical information and the effect of other goals may be quite different. But the basic analysis remains the same.

(3) The case of automobile accidents is somewhat more complex. It presents in fairly typical fashion the problem of multiple cost causers. As such it raises quite clearly the issue of short and long run misallocations, and the issue of which governmental interventions are, if incorrect, more subject to market corrections.

Assume that the cheapest short run way of minimizing the sum of accident costs and of the costs of avoiding accidents involving pedestrians and cars is to have rubber bumpers rather than to have pedestrians wear fluorescent clothes. In a world of costless transactions rubber bumpers would become established in the market regardless of liability rules, regardless of whether

¹⁰ Obviously there are also many cases where these other goals are pursued without regard to possible adverse resource allocation effects. My object in this comment is not to criticize or even to discuss such situations. Mine is a minimalist position and suggests only that taking such other goals into account is justified where doing so gives rise to no provable adverse resource allocation effects.

cars or pedestrians bore the loss initially. Since transactions cost money, the short run effect would in fact be quite different, depending on who was held liable. Making the car owner liable would establish the proper number of rubber bumpers. This would be the desired short run resource allocation, unless, of course, the cost of establishing car owner liability were too great relative to the gains it brought about.¹¹ But making the car owner liable also has long run effects affecting the relative number of cars and pedestrians. Our assumption as to the best short run liability bearer does not carry with it any guarantee that the car owners are the best long run bearers. It might be that in a world of no transaction costs rubber bumpers would be established, but more cars relative to pedestrians would be desired than would come about if liability were placed on car owners.

Depending on how sure we are of our long and short run guesses, this problem can be handled by using different devices. For example, the short run allocation could be accomplished by a car-owner liability rule, while the long run hypothetical misallocation could be corrected by a subsidy to car makers raised from taxes on pedestrians. But the sureness necessary to justify this subsidy, in the absence of nonresource allocation goals which might support it, seems very hard to come by.

The automobile accident situation also raises the point that different devices for accomplishing seemingly "optimal" resource allocation vary in desirability depending on their relative costs and on the relative likelihood of error in our guess work. Returning to the rubber bumper example, if we are perfectly sure that rubber bumpers are always the cheapest way of minimizing the sum of car-pedestrian accident costs and the costs of avoiding such accidents, it seems likely that the cheapest way of getting rubber bumpers is by a law that requires them, rather than by liability rules. It is quite a different thing if the "cheapest way" is more complex and involves some rubber bumpers, and some more careful driving by owners without rubber bumpers.

This in turn suggests another factor in the decision. Suppose we are not sure whether rubber bumpers or wearing fluorescent clothing is the "cheapest way" of handling the car-pedestrian accident problem. In this case it may become necessary to consider the following question: Is an erroneous placing of liability on car owners or an erroneous placing of liability on pedestrians more likely to be corrected in the market? Whether car owners (or car makers) can bribe pedestrians more cheaply than pedestrians can bribe car owners or makers, becomes the relevant issue. Similarly, it becomes crucial to

¹¹ This caveat has a long history in torts law and is in large part the basis of Holmes' famous justification of the fault system. See Holmes, *The Common Law*, 94-96 (1881). Needless to say, the caveat is perfectly valid even if it fails, as I believe it does, to justify the fault-liability system today.

decide whether an error brought about by a "liability rule" is more subject to market correction than an error resulting from a law requiring a particular type of rubber bumper.

Clearly this sketchy description of the automobile accident problem (like those of monopoly and highways) can only indicate the range and complexity of the issues involved in deciding whom to hold liable, and what safety devices to require. A full analysis of the resource allocation issue in auto accidents has, to my knowledge, not yet been attempted. A fully adequate decision would clearly require immense amounts of empirical data. But here (as in the monopoly and highway cases) the lawyer cannot wait for near certainty. He must propose solutions which seem to be the best on the basis of data and impressions currently available. And here too he will be aided in making practical proposals by the fact that goals other than optimal resource allocations may give clear indications of the desirable course in situations where resource allocations policy gives only a hint. One such goal may well be the often mentioned goal of "adequate" loss spreading (which is, in fact, closely analogous to the income distribution policy).

The conclusion is that Coase's analysis, read as a kind of Say's law of welfare economics, gives us an admirable tool for suggesting what kind of empirical data would be useful in making resource allocation decisions, and for indicating what kinds of guesses are likely to be justifiably made in the absence of convincing data. Some may take Coase's analysis to suggest that little or no government intervention is usually the best rule. My own conclusions are quite different. His analysis, combined with common intuitions or guesses as to the relative costs of transactions, taxation, structural rules and liability rules, can go far to explain various types of heretofore inadequately justified governmental actions. This is especially so if one considers the relevance of goals other than resource allocations to those situations where inadequate data makes resource allocations an unsatisfactory guide. Perhaps more precise data will some day prove some of these interventions to be improper from the standpoint of resource allocation. Then we shall have to choose, as we often do, between the bigger pie and other aims. Coase's analysis certainly suggests situations where this has been done. Its principal importance lies, however, in helping to delineate those areas of uncertainty where more facts would help us make better resource allocation judgments, and where, at least in the absence of more facts, the lawyer must be guided by guess work as to what the facts are and by goals other than resource allocations in suggesting workable solutions for problems which cannot wait till all the facts are in.

