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Citation Information

Pierre Schlag, *The Problem of Transaction Costs*, 62 S. CAL. L. REV. 1661 (1989), available at <https://scholar.law.colorado.edu/faculty-articles/934>.

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Pierre Schlag, The Problem of Transaction Costs, 62 S. Cal. L. Rev. 1661, 1700 (1989)

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THE PROBLEM OF TRANSACTION COSTS

PIERRE SCHLAG*

Another consequence of the assumption of zero transaction costs, not usually noticed, is that, when there are no costs of making transactions it costs nothing to speed them up, so that eternity can be experienced in a split second.

It would not seem worthwhile to spend much time investigating the properties of such a world. What my argument does suggest is the need to introduce positive transaction costs explicitly into economic analysis so that we can study the world that exists. This has not been the effect of my article.

Ronald Coase, *The Firm, The Market and The Law* 15 (1988).

[T]he limits of formalization can, more simply, be understood as due to the fact that there is no “form as such” or “content as such,” that each element—from sensory motor acts through operations to theories—is always simultaneously form to the content it subsumes and content for some higher form.

Jean Piaget,
Structuralism 35 (1973).

In his seminal article, *The Problem of Social Cost*, Ronald Coase attacked the Pigouvian analysis of externalities and introduced the legal world to costless pricing markets.¹ Since the publication of that article, Coase’s insights have congealed into something known as the “Coase Theorem” and the term “transaction cost” has become one of the master concepts in the analyses and prescriptions of the Chicago school of law and economics.²

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

2. The Coase Theorem is never announced as such in Coase’s article. An approximation of the theorem can be found *id.* at 8. For an earlier version of this approximation, see Coase, *The*

Recently, some legal academics have wondered what that term "transaction cost" actually means and whether it can be delimited in a manner that is at once operationally effective and normatively justifiable.³ This wonder is hardly disinterested. On the contrary—because the concept of transaction costs plays such a significant role in the normative prescriptions and the positive analyses offered by Chicago law and economics, the possibility (or impossibility) of giving the concept definite form and content becomes critical to the Chicago "market-based" approach.⁴

Much of the "market-based" approach to law and economics offered by the Chicago school is very familiar to legal academics—so familiar that it could easily be confused with the whole of welfare economics itself. The market-based approach holds that efficiency can be maximized by creating actual markets, by minimizing transaction costs and by mimicking zero transaction cost, perfectly competitive, markets.⁵ In turn, these imperatives have been crystallized into a discrete number of analytical formulae that serve to guide or explain the appropriate legal responses:

Federal Communications Commission, 2 J.L. & ECON. 1, 27-28 (1959). Coase attributes the formalization of his insights into the "Coase Theorem" to George Stigler. R. COASE, *THE FIRM, THE MARKET, AND THE LAW* 14 (1988). For a discussion of the various interpretations of the Coase Theorem prevalent in economics, see Veljanovski, *The Coase Theorems and the Economic Theory of Markets and Law*, 35 KYKLOS 53 (1982). For thoughtful accounts of the role of the Coase Theorem in contemporary legal and economic thought, see Gjerdingen, *The Politics of the Coase Theorem and Its Relationship to Modern Legal Thought*, 35 BUFFALO L. REV. 871 (1986); Schwab, *Coase Defends Coase: Why Lawyers Listen and Economists Do Not* (Book Review) 87 MICH. L. REV. 1171 (1989).

3. See, e.g., Kennedy, *Cost-Benefit Analysis of Entitlement Problem: A Critique*, 33 STAN. L. REV. 387, 398-400 (1981); Peller, *The Politics of Reconstruction* (Book Review), 98 HARV. L. REV. 863, 872-73 (1985); Schlag, *An Appreciative Comment on Coase's The Problem of Social Cost: A View from the Left*, 1986 WIS. L. REV. 919.

The definition of the term "transaction costs" has also troubled economists. Definitions range from the exhaustive but tautological: "[T]ransaction costs are anything which might prevent the achievement of a Pareto optimum solution," to grudgingly narrow lists: costs of search, negotiation, and contract enforcement. Swan, *The Coase Theorem and 'Sequential' Pareto Optimality*, 51 ECON. REC. 268, 270 (1975) (emphasis deleted); compare *id.* with Coase, *supra* note 1, at 15. For further definitions, see *infra* text accompanying notes 25-35.

4. If the concept of transaction cost is not relatively determinate, then it becomes possible to manipulate transaction cost analysis to achieve and rationalize a wide variety of different, and conceivably incompatible, results. Alternatively, if the term "transaction cost" is defined in a manner that makes it relatively determinate but unappealing in terms of efficiency or other normative goals, then prescriptions and analyses that depend upon the concept of transaction costs will suffer from illegitimacy. Thus, if it is impossible to define transaction cost in a way which is both relatively determinate and normatively appealing, then the law and economics prescriptions and analyses that rely upon the concept of transaction costs become subject to claims of uselessness, illegitimacy, or both.

5. Veljanovski, *supra* note 2, at 68.

1. Assign entitlements to the party who most values them.⁶
2. If it is not clear who most values the entitlement, grant the entitlement to the party who can most cheaply initiate an exchange.⁷
3. Where transaction costs are low, grant absolute entitlements.⁸
4. Where transaction costs are high, structure the legal regime to approximate the outcomes that the parties would have reached in a zero transaction cost world.⁹
5. Where transaction costs are high, restructure legal entitlements so as to reduce transaction costs.¹⁰

As a group, these formulae reflect two powerful yet divergent drives of the market-based approach. Thus, while the market-based theorists have a stated preference for actual markets and actual market registered transactions,¹¹ they also have an uncannily keen drive to economize, eliminate, and circumvent transaction costs, and to prescribe the results a market would have produced (had a market been possible).¹² The important point to note is that the two drives conflict and yield entirely different and mutually exclusive prescriptions for constructing legal rules. Of course, this conflict is not a problem if the two drives can be seen to apply to different problems or different contexts. That, of course, is precisely the way market-based theory presents the matter. As far as market theory is concerned, these two drives do not contradict each other because they are to be realized in two entirely different contexts. The key concept that serves to distinguish the two contexts is none other than the concept of transaction costs. Apparently, in the decision about whether to create or maintain actual markets, or supplant pricing mechanisms altogether, the market-based theorist poses a predicate inquiry: Are transaction costs high or not? If they are not, the market-based theorist

6. Coase, *supra* note 1, at 18; R. POSNER, *ECONOMIC ANALYSIS OF LAW* 37-40, 46, 49, 56, 60, 84-85, 117-18, 119-21 & *passim* (3d ed. 1986); Kronman, *Wealth Maximization as a Normative Principle*, 9 J. LEGAL STUD. 227, 240-41 (1980).

7. Coase, *supra* note 1, at 18; Calabresi, *Transaction Costs, Resource Allocation, and Liability Rules — A Comment*, 11 J.L. & ECON. 67, 72 (1968).

8. R. POSNER, *THE ECONOMICS OF JUSTICE* 70 (1981); R. POSNER, *supra* note 6, *passim*.

9. R. POSNER, *supra* note 6, at 38, 46-47, 68-69, 81, 82-83, 90, 93-94, 104, 113-14, 122-23 & *passim*; Easterbrook & Fischel, *Close Corporations and Agency Costs*, 38 STAN. L. REV. 271, 298 (1986).

10. R. POSNER, *supra* note 6, at 36-37, 58, 59, 61, 64, 71, 80-81, 86, 99, 102, 118 & *passim*; Diver, *Regulating the Regulators* (Book Review) 132 U. PA. L. REV. 1243, 1249-50 (1984).

11. R. POSNER, *supra* note 6, at 13.

12. R. POSNER, *supra* note 6, *passim*. At times the latter drive is so keen that it seems as if the market-based theorists know better than the market itself what outcomes it should have produced. While the rhetoric of the market-based approach is steeped in the image of the free market and voluntary exchange, nonetheless, the market-based utopia is animated by a deeply paternalistic streak. See Note, *Judge Richard Posner's Wealth Maximization Principle: Another Form of Utilitarianism?*, 10 CARDOZO L. REV. 815 (1989) (authored by R. Grant); Schlag, *supra* note 3, at 949 n.117.

will favor creating or maintaining an actual market. If the transaction costs are high and do preclude exchange, the market-based theorist will favor supplanting pricing markets.¹³

Now, if the predicate determination about the presence of high or low transaction costs is unreliable or erroneous, the efficiency implications of applying any of the five formulae above become uncertain at best, random at worst. Given that the concept of transaction cost plays such a significant role in the prescriptions and explanations of the market-based approach, the possibility (or impossibility) of giving the concept a definite meaning becomes critical.

Indeed, the claim that the market-based formulae *can* yield efficient legal regimes is predicated on the assumption that the concept of transaction costs is *at once theoretically intelligible and operationally applicable*. To be *theoretically intelligible* the category of transaction costs must be distinguishable, at least in theory, from other kinds of cost categories—such as, for instance, the category of production factor costs. To be *operationally applicable*, the term “transaction cost” must be capable of relatively noncontroversial application to real economic transactions. In other words, there must be some degree of commensurability between the conceptual structure of market-based transaction cost analysis and the already constituted structure of the field of actual economic relations.

In this Article, I will be concerned with showing that these conditions do not hold: the concept of transaction costs does not have the sort of theoretical intelligibility and operational applicability necessary to make the market-based transaction cost approach plausible.¹⁴ In turn, because the market-based approach depends so heavily upon this category of transaction cost, there is no reason to think that the results reached on the basis of market-based transaction cost analysis are efficient or otherwise desirable. The point here is not that the concept of

13. Posner describes succinctly the performative role of the concept of transaction costs in a discussion of eminent domain:

What is fundamental is the distinction between low transaction cost settings and high-transaction cost settings. In the former, the law should require the parties to transact in the market; it can do this by making the present owner's property right absolute (or nearly so), so that anyone who thinks the property is worth more has to negotiate with the owner. But in settings of high transaction cost people must be allowed to use the courts to shift resources to a more valuable use, because the market is by definition unable to perform this function in those settings.

R. POSNER, *supra* note 6, at 49-50.

14. In a previous article, I argued that the market-based transaction cost approach was the result of a misunderstanding and misappropriation of Coase's seminal insights. Schlag, *supra* note 3. For a deconstructive reading of Posner's brand of law and economics, see Schlag, *Cannibal Moves: An Essay on the Metamorphoses of the Legal Distinction*, 40 STAN. L. REV. 929, 967-70 (1988).

transaction cost is meaningless or useless. Rather, the contention is that the concept is wholly inadequate to perform *the specific intellectual function required of it* by market-based transaction cost analysis. Thus, the argument here is very much aimed at specific uses of the term transaction costs—namely, those uses instanced in the market-based approach.¹⁵

I will make four main points:

1. The market-based approach depends upon the ability to identify transaction costs in a given setting. Transaction costs, however, stand in a *reciprocal relation* to the specification of that setting. It follows, then, that the identification and magnitude of transaction costs depends upon how the setting has been specified. It also follows that a failure to take into account this reciprocal relation will lead to skewed results.
2. Whether it is welfare enhancing to implement legal rules to economize, eliminate, or circumvent high transaction costs depends upon whether the effects of the legal rules can remain confined to these objectives or whether instead the legal rules will have overinclusive effects. Because the market-based approach fails to consider indivisibilities seriously, overinclusive effects are to be expected.
3. An intellectually passable effort to perform transaction cost analysis requires a great deal of information about preferences, directly implicated product markets, and peripheral markets. This information is unlikely to be available.
4. Using the zero transaction cost, perfectly competitive market as a benchmark for the construction of legal rules produces such an idealized state of affairs that significant problems emerge in moving from the ideal to the reality.

For some readers, these four arguments will yield a haunting sense of *deja vu*. There is a reason for that: the four arguments are *structurally* the same arguments that Coase pressed against Pigou in the seminal article, *The Problem of Social Cost*. My claim, then, is not just that market-based transaction cost analysis fails, but that it fails in *the same way* and for *the same reasons* that Coase thought Pigou's treatment of externalities failed. In what follows, I intend to turn Coase's criticism of the Pigouvian tradition against the market-based approach. My goal is to show that the market-based approach, which claims intellectual heritage in Coase's seminal work, has, nonetheless, managed the uncanny feat of

15. By implication, what follows does not have any intended bearing on nonmarket-based transaction cost economics. Thus, for instance, I do not see the critique here as necessarily including within its ambit the new institutional economics championed by Oliver Williamson. See Williamson, *Reflections on the New Institutional Economics*, 141 *ZEITSCHRIFT FÜR DIE GESAMTE STAATSWISSENSCHAFT* 187 (1985).

replicating and reinstating precisely the same sort of cognitive mistakes that Coase warned against. This being so, it seems at once natural and ironic to start with Coase's arguments against Pigou (Section I). Following that will be a discussion of the current market-based approach along with a discussion of the meaning of the term "transaction costs" (Section II). Next, the Article advances the Coasean arguments against the market-based approach (Sections III - VII).

I. COASE'S ATTACKS ON PIGOU

Most of *The Problem of Social Cost* is devoted to persuading economists to abandon the Pigouvian approach to the externalities problem and to view the situation in terms of opportunity costs. Coase understands Pigou as having argued that where an activity produces an undesirable externality, the law should be structured to internalize the externality. In other words, the law should be structured so that the private product and social product of an activity coincide.¹⁶ Coase's arguments against Pigou attempt to show that this approach is wrong as well as impossible. Coase's attack can be seen as consisting of four main arguments. The first argument is based upon Coase's *reciprocal view of causation*. The second argument is an application of *the feedback loop*. The third argument is an argument from *lack of information*. And the fourth argument is an attack on *idealized frames of reference*.

A. THE RECIPROCAL VIEW OF CAUSATION

Coase's *reciprocal view of causation* supplants the naive common sense (as well as common law) view of causation. From an economic perspective, it makes no sense to view the problem of conflicting resource use as "caused" by one activity as opposed to the other. On the contrary, in conflicting resource use cases, the conflict must be seen, at least for purposes of analysis, as resulting from the combination of both activities. This reciprocal view of causation is correct, from an economic perspective, insofar as either activity could have at some point taken steps to avoid the conflict.

Viewed from this Coasean perspective, the initial Pigouvian move of attempting to identify whether (and if so how much) one of the conflicting activities imposed a cost upon the other is at once impossible and unhelpful. It is impossible because the reciprocity of causation does not allow attribution of the cost to one of the two conflicting activities.

16. Coase, *supra* note 1, at 32-41.

What's more, the question is unhelpful—even noxious—because it sets the stage for an erroneous and irrelevant line of inquiry.¹⁷ Indeed, the question, “Who caused what?” does not have any demonstrable economic correspondence to the real economic issue: “Which legal regime minimizes the total costs arising from the unfortunate encounters?”

B. THE FEEDBACK LOOP

The absence of a demonstrable correspondence between the two questions is explained by Coase's *feedback loop argument*. The *feedback loop* implies that even if one could somehow attribute the cost to one of the two conflicting activities, it would still remain unclear whether it would be desirable to adopt a legal regime that succeeds in internalizing that cost. The reason is simply that while it may be desirable to internalize the externality, that conclusion does not automatically authorize the further conclusion that a legal regime that internalizes the externality (for instance, a liability rule) is also desirable. On the contrary, the two questions are fundamentally different, and the two conclusions have fundamentally different operative scopes and effects.

Coase's feedback loop argument holds that the adoption of a new legal rule affects not only the activity as that activity is described in the new rule but also the rate of production of associated and conflicting activities. In that sense, the rule is *overinclusive* with respect to its intended effect.¹⁸ Suppose, to borrow a hypothetical from Coase (and Pigou), that we have steam locomotives emitting sparks continuously as they cross a forest. The predictable result is periodic forest fires. Suppose, following the Pigouvian injunction to internalize externalities, that we consider moving from a no-liability to a liability regime. The Coasean feedback loop implies that such a change (even where it succeeds in internalizing the externality) may well not be efficient. The feedback loop implies that a change from no railroad liability to railroad liability can, *in the presence of significant transaction costs*, affect not only the rate of spark production but also the rate of locomotive use as well as the rate of production of conflicting activities (such as forest growth on marginal land adjoining the railroad tracks). In turn, this means that the rate of production or rents from the two conflicting activities will have

17. *Id.* at 2, 40.

18. For the sake of clarity, this argument does not rest on the claim in the jurisprudence of form that rules (as distinguished from standards) are overinclusive. For a discussion of that claim, see Kennedy, *Form and Substance in Private Law Adjudication*, 89 HARV. L. REV. 1685 (1976). My use of the term “rule” in the text encompasses both rules and standards, so that the claim in this article is that both rules and standards will be overinclusive with respect to their intended effect.

changed. Therefore, a rule that may have appeared desirable against the fixed background may well seem very undesirable when all the effects of the legal rule on this (no longer) fixed background are taken into account.

Broadly stated, then, the Pigouvian mistake exemplified here lies in a chronic underestimation of the effects of a choice of legal regime. According to Coase, the Pigouvian tradition focuses on divergences between the private product of an activity and the social product of that same activity. The problem with the Pigouvian approach is that it assumes that the legal measures it prescribes affect only the differential between the private and social product of the targeted activity or the targeted conduct. But as Coase says:

The comparison of private and social products is neither here nor there. A simple example will demonstrate this. Imagine a town in which there are traffic lights. A motorist approaches an intersection and stops because the light is red. There are no cars approaching the intersection on the other street. If the motorist ignored the red signal, no accident would occur and the total product would increase because the motorist would arrive earlier at his destination. Why does he not do this? The reason is that if he ignored the light, he would be fined. The private product from crossing the street is less than the social product. Should we conclude from this that the total product would be greater if there were no fines for failing to obey traffic signals?¹⁹

Obviously not. For purposes of Coase's example, we are to take note that even if it would augment the social product in this particular circumstance to revoke legal penalties for running red lights, this revocation would hardly augment the total social product generally.

Now, it may be tempting to think that Coase has mischaracterized the Pigouvian position here—that, indeed, no serious Pigouvian would recommend such an obviously silly and overinclusive solution as revoking all traffic penalties for running red lights. This answer, however, is in part nonresponsive. Coase's argument is *not just* that the Pigouvian approach is *insufficiently restrictive* and that it therefore *authorizes* undesirably overinclusive solutions. His argument is also that, in its neglect of the feedback loop, the conceptual structure of the Pigouvian approach will *necessarily* produce overinclusive effects some of the time. There is an important difference in the reach of Coase's two arguments here. Indeed, while a Pigouvian could conceivably respond to the first argument by claiming that good judgment or good sense are necessary in the

19. Coase, *supra* note 1, at 34.

application of any conceptual structure (including the Pigouvian one), only a highly developed sense of humor would permit that sort of response to the second argument. That is because the second argument undeniably impeaches *the very conceptual structure* of the Pigouvian approach and, thus, no amount of good judgment or good sense in application could conceivably arrive in time to help.

What then is the structure of this second argument? Why does the Pigouvian approach *necessarily* yield overinclusive results some of the time? What is it that produces the feedback loop? The answer—one that is implicit in Coase's argument—is that the Pigouvian approach overlooks both the presence and the character of *indivisibilities* in law as well as in the economic realm. Put simply, the Pigouvian approach blithely assumes that because a categorial division is possible *in thought*, the same division can be unproblematically mapped onto *the law*. At the same time, the Pigouvian approach also blithely assumes that once a categorial division is effected *in the law*, that division can map unproblematically onto *the economic realm*. These highly optimistic assumptions about the ease with which one can move from *thought* to *law* and from *law* to *the economic realm* are, as Coase demonstrates, seriously mistaken. Indeed, there is no reason to believe that thought can *invariably* dissolve indivisibilities within the law, nor that law can *invariably* dissolve indivisibilities within the economic realm. Similarly, there is no reason to believe that the pattern of divisibilities and indivisibilities within one field (e.g., law) should correspond with—rather than cross cut—the pattern in another field (e.g., the economic realm). In short, there is *a priori* no reason to believe that the pattern of divisibilities and indivisibilities within one field can map unproblematically onto another.²⁰

20. Lest it seem that I am reifying "indivisibilities," "law," or "the economic realm" by embedding the first in sharply distinct visions of the latter two, let me say three things right now.

First, contrary to the impressions created by the text, indivisibilities are rarely all or nothing phenomena; more often they are phenomena of the more or less kind. To say, for instance, that an "indivisibility" in the economic realm is of the more or less kind means that the choice of legal regime can affect the degree to which the effects of the indivisibility can be overcome. This last point suggests that it is inappropriate to attribute indivisibilities to "the law" or to "the economic realm." Rather, indivisibilities emerge as a result of synergistic interaction between particular legal regimes, particular economic relations, and particular ways of thinking about the latter two.

Second, contrary to the impressions conveyed by the text, I do not believe in a hard and fast distinction between the economic realm, the realm of law, or even the realm of thought. All three are far more interpenetrated than we customarily think. See, Coase, *supra* note 1, at 44 (suggesting that economists would do well to think of factors of production as *rights* rather than *physical entities*). I do think, however, that within the culture of legal thought the distinction between the realm

These points are evident in Coase's treatment of the train through the forest hypothetical. Thus, in Coase's train hypothetical, the Pigouvian approach imagines that the only effect of imposing a liability rule on the railroad will be to curtail train service by a certain desired amount. While focusing on the externality-internalizing aspect of the liability rule, the Pigouvian approach neglects an *indivisible* effect implicit in the structure of a liability rule. Specifically, the Pigouvian approach forgets that one of the effects of the liability rule will be to compensate the adjoining lot owners for fire damage. Having forgotten that side of the problem, not surprisingly, the Pigouvian approach also forgets to trace out the implications of that side of the problem. Coase remembers, however, and he shows that because the adjoining lot owners no longer have to bear the costs of fire damage, they will increase production. As a result, railroad liability turns out to be unexpectedly high and the hypothetical ends on a bad note for Pigou with the undesirable result that no railroad service is provided. The Pigouvian approach fails here because its externality-internalizing solution cannot be mapped straightforwardly onto the law without a consideration of the indivisibilities embedded in the law.²¹

of economics and the realm of law is *experienced* as a meaningful and sensible distinction (even if the distinction turns out to be ultimately incoherent or unintelligible upon critical scrutiny).

Third, to bring these two observations out of the footnotes and into the text would greatly complicate the analysis. The reason is that there are *cognitive indivisibilities*. For instance, legal thinkers tend to believe in a distinction between the economic realm and the legal realm—and they are not about to give up that distinction and the indivisibilities it creates lightly. Not wanting to take on *cognitive indivisibilities* in this article, I decided to leave all this for the footnotes.

21. For legal thinkers, it is extremely difficult—perhaps because it is so humbling—to believe that there are significant indivisibilities in the law which remain impervious to the dissolving power of thought. The typical attitude among legal thinkers is one of professional optimism: care and precision in drafting will allow the tailoring of legal rules to accomplish precisely what is desired—no more, no less.

However, it is not so. Consider what should seem like an easy case for the professional optimists. Consider the case of Coase's midnight motorist. See *supra* text accompanying note 19. Surely, in that case, it ought to be possible to fashion a one-time rule whose only effect would be to absolve the midnight motorist from liability. Now it is true that one can imagine drafting such a one-time rule. One can even imagine that the rule should itself provide that its only effect will be to exempt the midnight motorist from liability. One can imagine all these things. But what is more difficult to imagine, however, is that absolving the midnight motorist of liability should *in practice* be the only effect of the rule. Indeed, the legal adoption of the midnight motorist exception immediately raises the prospect of an exception for those *who reasonably believed* that it was midnight when they ran the light or for those who can argue that they ran the light in conditions demonstrably safer than midnight, or for those who can argue that the midnight/eleven o'clock distinction is jurisprudentially unsound. In general, any proposition in the form: "The only effect of this law is to . . ." is self-refuting, informed by a misunderstanding of law and language. Banner, *Please Don't Read the Title*, 50 OHIO ST. L.J. 243 (1989). Schlag, *supra* note 14.

One Pigouvian response would be to claim that Coase has simply chosen a very poor legal vehicle (i.e., a liability rule) to internalize the externality. A Pigouvian might argue that a much better vehicle for internalizing the externality would be a tax on the damage caused. The advantage of this legal vehicle for the Pigouvian is that, in contrast to a liability rule, the tax vehicle does *divide* the externality-internalizing function from the compensation function. The Pigouvian might thus seize on the tax vehicle because as a matter of law it seems to affect only the externality-emitting enterprise. Yet as Coase shows, even this is not true.²² The problem is that the Pigouvian has failed to consider yet another lurking *indivisibility*: by intervening in a conflicting use situation and by penalizing and thus reducing the frequency of the "harm producing" activity, the tax will likely be increasing the frequency of the "victim activity" thereby increasing the amount of damage sustained. Indeed, if the tax is applied to already constituted economic relations of conflict, competition or complementarity, then the effects of the tax will be manifest beyond the targeted activity. This time, the Pigouvian analysis fails because it neglects an *indivisibility* in the economic realm: the relation of conflicting uses. Indeed, if two uses stand in a relation of conflict, then an attempt to apply legal pressure on only one side will, nonetheless, likely have effects on the economic performance of the other (and back again on the first).

In sum, the pattern of divisibilities and indivisibilities available to thought are not necessarily reproducible within the law, and the pattern of divisibilities and indivisibilities available within the law are not necessarily reproducible within the economic realm. And if, following the Pigouvian approach, one neglects the resistance created by the indivisibilities of the law or the economic realm, one will likely have a vexing encounter with Coase's feedback loop. Lawyers can create whatever distinctions they want, but an indivisible production process does not become ipso facto divisible simply because the law makes a distinction and attempts to enforce it.

C. LACK OF INFORMATION

To some extent, Coase does recognize that the Pigouvian approach can be rehabilitated. He notes that a system of taxes designed to bring private product in line with social product could work if it were structured so as to take into account *all the effects* on the implicated activities. Thus, by taxing externalities on "the fall in the value of production (in its

22. Coase, *supra* note 1, at 41.

widest sense),” the theoretical structure of the Pigouvian tradition is rescued.²³ Presumably, this approach would be structured so as to take into account both the reciprocity of causation and the feedback loop. However, despite admissions that this approach might be acceptable on the theoretical plane, Coase argues that it would take far too much in the way of information concerning individual preferences, interrelations among the damages caused, calculation of loss of value, and so on.²⁴

D. IDEALIZED FRAMES OF REFERENCE

In Coase's view, the Pigouvian approach is also inadequate because it posits an *idealized frame of reference* as the guide for economic prescriptions. As Coase sees it, the trouble with such idealized frames of reference is that they do not provide much guidance as to how to get from here to there.²⁵ Coase would agree that a world in which private product and social product coincide perfectly in all markets is surely preferable to the one we have. But that observation is of no use whatsoever for suggesting improvements in the world we actually have.

II. DEFINING TRANSACTION COSTS

In the Coasean world of market-based law and economics, Pigouvian inquiries about the nature and identity of this or that externality have been displaced. The crucial inquiries are no longer which activity creates the externality and how best to internalize it. Now, the questions are whether significant transaction costs are present and, if so, which social arrangement will most effectively minimize the incurrence of costs associated with the encounter of transaction costs.

In order to answer these questions and to apply the analytical formulae of the market-based approach, it is critical to determine as accurately as possible whether transaction costs in a market (or a proposed market) are significant or not. Not only must the concept of transaction cost perform frequently in the market-based transaction cost analysis,

23. *Id.*

24. In the pollution context, for instance, Coase stated concerning the prospect of following this approach:

But to do so would require a detailed knowledge of individual preferences and I am unable to imagine how the data needed for such a taxation system could be assembled. Indeed, the proposal to solve the smoke-pollution and similar problems by the use of taxes bristles with difficulties: the problem of calculation, the difference between average and marginal damage, the interrelations between the damage suffered on different properties, etc.

Id. at 41-42.

25. *Id.* at 43.

but it must also withstand extraordinarily strong conceptual pressure. Much of the conceptual labor of the market-based approach is done up front in the identification of the character and magnitude of transaction costs. If the concept of transaction cost is to sustain all this intellectual pressure, then it must have a relatively noncontroversial and definite meaning. The more volatile the concept of transaction costs, the less reliable the conceptual edifice it supports.

In response to this problem, the market-based transaction costs theorists have stumbled upon two approaches. One approach (I will call it the "definitional approach") is to define transaction costs in some abstract comprehensive manner so as to distinguish them from all other costs. The other approach (I will call it the "ad hoc approach") is simply to identify, at a less abstract, more operational level, the various recurrent patterns of transaction costs.

A. THE AD HOC APPROACH

The ad hoc approach has been most popular with the market-based law and economics scholars. Perhaps because of their legal training and orientation, these scholars have tended to develop categories of transaction costs that seem to be designed for easy recognition by judges, lawyers, legal academics, and law students. It seems fair to say that this approach reflects the *practical intention* of making transaction cost analysis readily available to produce legal outcomes in specific cases. The classic patterns of transaction costs that have been identified include the following:

- free rider,
- holdout,
- bilateral monopoly,
- identification of contracting parties,
- information acquisition and production,
- policing of agreements,
- detection of breach,
- enforcement of agreements,
- valuation difficulties, and
- negotiation costs.

Like rules of thumb, of course, these "mid-level" categories must be redeemed by the theory that informs them. As much as these categories may seem intelligible in some common sense way to legal thinkers, their *particular meaning* and their *status* as transaction costs depend upon whether they conform to theoretical criteria for determining what counts

as transaction costs. The fact that these categories may seem intelligible to lawyers is no economic triumph if the lawyers systematically misunderstand the categories in a way that distorts their economic meaning and function. To put it another way, the validity, usefulness, and meaning of these categories is not self-executing. The economist should draw no comfort when the lawyer nods knowingly and says, "Bilateral monopoly? Free rider?—Yeah, I know exactly what you mean." On the contrary, these mid-level categories must be redeemed by the theory that ostensibly produced them. Free rider, holdouts, and so on are all technical terms; they cannot be redeemed as useful economic concepts solely by appeal to common sense. Instead, appeal must be made to . . .

B. THE DEFINITIONAL APPROACH

When we turn to the theoretical definition of transaction costs, however, we encounter serious controversy among economists. Several economists have noted that the definition of transaction costs is elusive and contested.²⁶ Indeed, among economists, the concept has even aroused a certain degree of intellectual derision: "Transaction costs have a well-deserved bad name as a theoretical device . . . because there is a suspicion that almost anything can be rationalized by invoking suitably specified transaction costs."²⁷

Given this warning, as well as the singular importance of the concept of transaction costs in the literature, Coase's original version is surely worth another look:

In order to carry out a market transaction it is necessary to discover who it is that one wishes to deal with, to inform people that one wishes to deal and on what terms, to conduct negotiations leading up to a bargain, to draw up the contract, to undertake the inspection needed to make sure that the terms of the contract are being observed, and so on. These operations are often extremely costly, sufficiently costly at any rate to prevent many transactions that would be carried out in a world

26. As late as 1982, Cento Veljanovski could state (with some veracity): "Although the zero transaction cost assumption is constantly invoked by economists, its content remains largely unexplored. There is at present no theory of transaction costs . . ." Veljanovski, *supra* note 2, at 57. "Put differently, there are too many degrees of freedom; the concept wants for definition." Williamson, *Transaction-Cost Economics: The Governance of Contractual Relations*, 22 J.L. & ECON. 233, 233 (1979). "Transaction costs are difficult to measure . . . Until some objective means of measuring them is devised, all the above assertions concerning the effects of various institutions on transaction costs and on resource allocation, remain no more than assertions." Toumanoff, *A Positive Analysis of Market Failure*, 37 KYKLOS 529, 538 (1984).

27. Fischer, *Long Term Contracting, Sticky Prices and Monetary Policy: Comment*, 3 J. MONETARY ECON. 312, 322 n.5 (1977).

in which the pricing system worked without cost.²⁸

Other economists, providing a wide variety of different and sometimes conflicting interpretations of the concept, have variously described transaction costs as follows:

1. Costs that occur "when trading partners attempt to identify and contact one another (identification costs), when contracts are negotiated (negotiation costs), and when the terms of the contracts are verified and enforced (enforcement costs)."²⁹
2. The costs of bringing bargainers together, maintaining and revising the agreement, and the capital required to effect the agreement.³⁰
3. The costs "like those of getting large numbers of people together to bargain, and costs of excluding free loaders."³¹
4. The three classes of "search and information costs, bargaining and decision costs, policing and enforcement costs . . . [which] reduce to a single one . . . [the] resource losses due to lack of information."³²

Among economists, controversies over the definition of transaction costs have been significant—but not so much because of the practical import of the concept for the construction of legal rules. Rather, the definition has been controversial largely because including or excluding certain costs from the definition can affect the validity of the Coase Theorem. Thus, on the one hand, an overly expansive view of transaction costs threatens to make the Coase Theorem tautological.³³ On the other hand, an overly restrictive view of transaction costs can effectively invalidate the Theorem. Between the Scylla of tautology and the Charybdis of invalidity, the debates among economists have focused on a number of recurrent issues. One such issue concerns whether the zero transaction cost assumption rules out strategic behavior in bargaining.³⁴ Another

28. Coase, *supra* note 1, at 15.

29. Toulmanoff, *supra* note 26, at 531.

30. Mishan, *The Postwar Literature on Externalities: An Interpretative Essay*, 9 J. ECON. LIT. 1, 16 (1971).

31. Calabresi, *Transaction Costs, Resource Allocation, and Liability Rules—A Comment*, 11 J.L. & ECON. 67, 68 n.5 (1968) (noting the difficulty in distinguishing transaction costs from the costs of selling, which are normally assumed to be handled optimally by the market).

32. Dahlman, *The Problem of Externality*, 22 J.L. & ECON. 141, 148 (1979).

33. Veljanovski, *supra* note 2, at 57; Cooter, *The Cost of Coase*, 11 J. LEGAL STUD. 1, 14 (1982); Calabresi & Melamed, *Property Rules, Liability Rules and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1095 (1972).

34. See Veljanovski, *supra* note 2, at 58. This includes the literature on blackmail and extortion. See, e.g., Bromley, *Externalities, Extortion, and Efficiency: Comment*, 68 AM. ECON. REV. 730 (1978); Daly & Giertz, *Externalities, Extortion, and Efficiency: Reply*, 68 AM. ECON. REV. 736 (1978); Daly & Giertz, *Externalities, Extortion and Efficiency*, 65 AM. ECON. REV. 997 (1975); Demsetz, *On Extortion: A Reply*, 68 AM. ECON. REV. 417 (1978). The argument turns upon whether extortionate behavior (which would arguably vitiate the Coase Theorem) can be subsumed under the concept of transaction costs (so as to rescue the validity of the theorem). For Ronald

major issue, partly related to the first, concerns what kinds of information costs can be considered transaction costs.³⁵ Among economists, however, very little of the theoretical discussion about the meaning of transaction costs has focused on what function the concept of transaction costs plays in the prescriptions for, or the explanations of, legal rules.

Thus, on one side, the economic theorists have not focused on the *practical* significance or implications of the theory of transaction costs. On the other side, the more practically-minded market-based law and economics scholars have failed to discuss seriously the *theoretical implications* of their conceptualization of transaction costs in terms of the ad hoc categories. The theory and practice of transaction cost analysis, thus, remain disconnected. And the concept of transaction costs thus remains something of a black hole.

III. THE RECIPROCAL NATURE OF THE PROBLEM

Black holes can be dangerous to a theory. The danger is particularly serious here because the black hole occupies the intellectual space of the concept of transaction cost—a concept that plays a crucial performative role in market-based theory. The concept of transaction cost, after all, is the one that determines whether actual markets should be created or whether the supplanting of pricing markets is authorized. Accordingly, without some well-developed understanding of how to define and identify transaction costs, there is a serious risk that the efforts of the market-based theorists to create, expand, or improve upon markets may in fact make things worse. The very absence of a solid understanding of the concept indicates that market-based prescriptions may be founded on wholly erroneous identifications of transaction costs. But there are even more reasons to think that the market-based approach will make things worse. One of them is that the predicate inquiry into the presence or absence of significant transaction costs succeeds in reinstating the same sort of misconceptualization that Coase detected in the Pigouvian approach.

Like the market-based approach, the Pigouvian analysis also provides a predicate determination for the supplanting of pricing markets.

Coase's most recent thoughts on the subject, see Coase, *The 1987 McCorkle Lecture: Blackmail*, 74 VA. L. REV. 655 (1988).

Strategic behavior also includes, for instance, dissimulation of information in bargaining. Such exercises of bargaining power can themselves create transaction costs and prevent efficient allocation of resources. Saraydar, *Bargaining Power, Dissimulation, and the Coase Theorem*, 139 ZEITSCHRIFT FÜR DIE GESAMTE STAATSWISSENSCHAFT 599 (1983).

35. Veljanovski, *supra* note 2, at 63-65.

In the Pigouvian world, nonmarket solutions are authorized when one activity imposes an undesirable externality upon another. Thus, in the Pigouvian world, the identification of externalities is the predicate determination for governmental restructuring of market outcomes. As Coase demonstrated, however, the very way in which the Pigouvian approach conceptualizes conflicting use problems eclipses crucial parts of the analysis. Specifically, by framing the predicate inquiry in terms of "Did *A* inflict harm on *B*?" the Pigouvian approach represses *the reciprocal nature* of conflicting use problems. As Coase sees it, the predicate Pigouvian question already assumes too much about the nature of the problem. As a result, where externalities are found, the Pigouvian conceptualization improperly skews the analysis towards governmental nonmarket solutions and away from market solutions.

Now, much as the market-based approach may differ from the Pigouvian analysis, there are, nonetheless, some commonalities. It is these commonalities, I will argue, that render the market-based approach deficient. First, consider the differences in the two approaches. The market-based approach displaces the Pigouvian inquiry into the presence of externalities with a predicate inquiry into the presence or absence of high transaction costs. Substantively, this is indeed a new inquiry; one would have difficulty trying to situate this new predicate inquiry on the same spectrum (or even the same map) as the Pigouvian predicate inquiry. However, for all this substantive difference, there is, nonetheless, a commonality of form shared by the Pigouvian and market-based predicate inquiries. What they share, I will argue, is a failure to take into account *the reciprocal nature* of the economic problem posed.

Transaction costs are nearly always specific to particular economic activities. There are very few transaction costs worth talking about that apply across the board. Most transaction costs discussed in the market-based literature are particular to the economic context specified. One well-known implication that follows from the context-specific character of transaction costs is that if transaction costs are significantly reduced or increased, the mix of goods produced will be affected. Another implication that follows from the context-specific character of transaction costs is that whether one finds significant transaction costs in any given economic context depends crucially upon how that context is described. In other words, it depends upon how one specifies the markets and uses implicated.

Putting these two implications together, one can see that transaction costs stand *in a reciprocal relation to the markets or uses specified*. Now,

there is a sense in which market-based theory surely knows this. And yet, there is also a sense in which it quite clearly does not. I am more sure of the latter because *the very way in which market-based theory is practiced* reveals a lack of attention for the reciprocal relation of transaction costs and the specified economic context.³⁶ Indeed, while market-based literature spends considerable effort analyzing whether transaction costs are high or low in a given economic context, it expends very little effort considering how to specify the economic context. On the contrary, market-based theorists rarely worry about how to characterize the product markets, the uses, or the parties implicated in a particular context. Even more scarce is a market-based theorist who does analyses based upon alternative conceptualizations of the economic context. In short, the question of how to specify implicated markets and uses is simply not a big issue for market-based theory. The fact that it is not a big issue is telling—it means that market-based theory is missing *the reciprocal nature* of the problem. Indeed, if one took seriously the view that transaction costs stand in a reciprocal relation to the economic context specified, one would not go around proclaiming boldly the presence or absence of high transaction costs in *this* or *that* context without worrying at least a little bit about how to describe *this* or *that* context. By making the inquiry into the identity and magnitude of transaction costs the predicate question for deciding between market and nonmarket solutions, and by suppressing the problem of how to define the economic context, market-based theory represses the reciprocal nature of the problem.

This repression creates some problems. One obvious problem is that the market-based theorists have not paid much attention to the difficulties involved in the specification of markets and uses implicated in a particular context. Nor have they spent much time worrying about the problem attending the very idea of specifying a context. One consequence is that the market-based approach often seems as epistemologically naive in its specifications of the economic context as the Pigouvian approach was naive in its confident identifications of externalities. This epistemological naivete is evident in the general practice of market-based theorists *to specify productive or consuming uses rather narrowly and then to use this specification as a fixed baseline for economic analysis.*

36. People will generally be quite willing to explain the meaning, structure, and significance of their own theories. Generally, they will say all sorts of laudatory things about the meaning, structure, and significance of their own theories. Quite often they will actually try to do this within the theories themselves. And sometimes they will even insist that what they say about their theory actually makes it (i.e., the theory) so. Unaccountably, they will sometimes get upset when you do not believe them.

Both the *narrow specification of uses* and the *fixed baseline treatment* are objectionable. To treat any productive or consuming use as a *fixed baseline* is to overlook the reciprocally constitutive relation between transaction costs, on the one hand, and productive or consuming uses, on the other. Because the fixed baseline approach conceives the economic problem in *static* terms rather than *reciprocal* ones, it invites erroneous results. Such erroneous results are likely to be particularly serious when the productive or consuming uses are specified *narrowly*—that is, in a way that seriously misrepresents the affected and implicated uses. Indeed, the practice of freezing narrow specifications of productive and consuming uses into fixed baselines for analysis can be expected to produce two major types of problems.³⁷

The first type of problem can arise in the situation where the specification of markets and uses yields the conclusion that transaction costs are so high as to preclude exchange. In such situations, market-based theorists are prone to recommend some nonmarket legal solution that either eliminates or circumvents the presence of high transaction costs. Such an approach may be acceptable when the specified markets and uses must in fact be taken as given because of paramount economic or technological reasons. In such situations—where one can be absolutely certain that the product markets or consuming uses specified must be taken as given—it may be appropriate to take these markets or uses *as a fixed baseline* for analysis. There is, after all, no point to inquiring into the possibility of market substitutes or market solutions if it is transparently clear that they do not exist. However, where market substitutes and market solutions are possible, treating specified markets and uses as a fixed baseline will skew the analysis. In situations where the specified markets and uses are found to be high, the fixed baseline approach will

37. My argument here tracks with Coase's arguments about the reciprocity of causation. See *supra* text accompanying note 17. Coase's reciprocal view of causation impeaches the Pigouvian analysis by demonstrating that the Pigouvian approach improperly treats the externality "victim" activity as a *fixed baseline*. I apply Coase's argument to show that the market-based theorists improperly take narrowly specified activities as a *fixed baseline* for analysis. Interestingly, both Coase's arguments and my arguments parallel the fixed-baseline arguments made in 1943 by Robert Hale, a noted legal realist. Hale, *Bargaining, Duress, and Economic Liberty*, 43 COLUM. L. REV. 603 (1943). Arguing on explicitly normative terrain, Hale showed that when you have two reciprocally constituting variables such as market value and the law, it does not help things much to hold one variable constant as a measure to justify the legitimacy of the other. *Id.* at 625-26. My arguments also track Duncan Kennedy's use of the fixed baseline to criticize liberal law and economics. Kennedy, *supra* note 3, at 410-21 (demonstrating that liberal law and economics greatly underestimates the difficulties in specifying the character of the background or fixed baseline of legal rights). Thus, in this Article I see myself as aligned with a critical tradition exemplified by Hale, Coase, and Kennedy and opposed to a so-called "constructive" tradition exemplified by Pigou and Posner.

skew the analysis toward legally imposed nonmarket solutions and will improperly preclude a consideration of market adjustments and market solutions. That is because by incorporating the specified markets and uses into a fixed baseline, the possibility of a market solution has been excluded in the very posing of the problem. To say that specified markets and uses are treated as a fixed baseline means precisely that the possibility of substitute markets or uses has been ruled out.

Now, if one is wedded to the conceptual structure of the market-based approach, it is tempting at this point to think that a mistake has just been made in the analysis. It is tempting to think that if transaction costs are high for the specified uses and markets, then a market solution would have been impossible in any event. In a sense this is correct: A market solution would have been impossible *within the context described by the specified uses and markets*. But that is neither here nor there. It is neither here nor there because those specified uses and markets were improperly taken as a fixed baseline for the transaction cost analysis. This was improper precisely because there were market alternatives to those uses and markets. On the whole, the point here is an ironic one: Given their stated preferences for actual markets, one would have thought that the market-based theorists would be especially loathe to supplant pricing markets except when absolutely necessary.³⁸ And yet, when market-based theorists treat as fixed baselines specified markets and uses for which there are in fact substitutes, the effect will sometimes be to overlook, hinder, or prevent market solutions. This will be the case (at least sometimes) when the fixed baseline of specified markets and uses results in a finding of high transaction costs.

Taking specified markets and uses as fixed baselines for analysis sometimes leads to the reverse but equally objectionable result: an improper bias towards actual pricing markets. This result is far less ironic and more difficult to recognize. The error here takes several steps to complete. First, the market-based theorist specifies some markets and uses. Second, he treats these markets and uses as a fixed baseline. Next, he discovers that transaction costs are low, and ultimately, he recommends that entitlements be created and allocated so as to facilitate the working of an actual pricing market. For instance, the market-based theorist might recommend the creation of absolute property rights—with the award of the right going to the party who can most easily initiate an

38. On the preference for actual pricing markets, see R. POSNER, *supra* note 6, at 13. See also *supra* note 12.

exchange.³⁹ Now, given that the market-based theorist here is recommending the facilitation of an actual market, it is difficult to see how the analysis could possibly have gone wrong. And yet it has.

The error again stems from the treatment of the specified markets and uses as a fixed baseline. The problem now, however, is not that there is a market alternative. There isn't any. Rather, the problem is that there may be a nonmarket alternative—one that has been blocked by significant transaction costs and excluded from the analysis by the fixed baseline of specified markets and uses. The problem is that by taking the specified markets and uses as a fixed baseline and then discovering that transaction costs are low, the analysis has been skewed towards the creation of market solutions and away from the consideration that there may be a nonmarket alternative that should be realized by means of legally imposed nonmarket solutions. Now, because of the ideological hold of market solutions, this problem is significantly more difficult to understand than the previous one.

Perhaps the problem is best understood through an example. In their famous baby selling proposal, Landes and Posner argued in favor of relaxing legal restrictions on the baby market so that adoptive parents could obtain babies more easily.⁴⁰ That article (as well as its sequel)⁴¹ caused quite a brouhaha, but that is not the point here. Rather, the point here turns upon the way Landes and Posner specified the implicated markets. In both articles it was immediately assumed that the relevant market could be specified in terms of sellers and buyers of babies. In the introduction to the first article, Landes and Posner write, "Part I of this paper develops a model of the supply and demand for babies for adoption under the existing pattern of regulation and shows"⁴² And in the sequel, Posner writes, "[f]or heuristic purposes (only!) it is useful to analogize the sale of babies to the sale of an ordinary good, such as the automobile or a television set."⁴³ One consequence of describing the market in this way—as a baby market—is that the preferences or interests of the babies become wholly subordinate to those of the willing seller (the natural mother) and the willing buyers (the prospective adoptive parents). And indeed, the babies' preferences and interests are virtually an afterthought in both articles. There is nothing surprising about these results—at least not if one treats the baby market as the fixed baseline for

39. See *supra* text accompanying notes 7, 8.

40. Landes & Posner, *The Economics of the Baby Shortage*, 7 J. LEGAL STUD. 324 (1978).

41. Posner, *The Regulation of the Market in Adoptions*, 67 B.U.L. REV. 59 (1987).

42. Landes & Posner, *supra* note 40, at 324.

43. R. POSNER, *supra* note 6, at 64.

analysis. Treating this market as the fixed baseline, however, improperly obscures another implicated market. It also improperly skews the analysis towards an actual pricing market solution. Another market implicated here might be called "the parent market." Indeed, there is no particular reason why economic analysis warrants taking the parents' point of view as opposed to the babies' point of view. And if one considers the babies' perspective, it becomes apparent that adoption is not just about the transfer of babies, but the exchange of parents as well. Now, the parent market (as I have called it) is obviously blocked by significant—one might say, biological—transaction costs. But that is not, within the market-based approach, a reason for discounting the parent market from the analysis. Note that I am not suggesting here that the parent market be considered the specified market. On the contrary, that would just entrench a different market as a fixed baseline. What I am suggesting, however, is that if one takes seriously the babies' interests in potential parents, it is hardly self-evident that the establishment of an actual pricing market in babies is a welfare enhancing solution. All together then, this example shows that treating specified markets and uses as fixed baselines can (when transaction costs are low) improperly lead analysis away from the consideration of nonmarket solutions and skew the analysis towards market solutions.

It turns out that taking the implicated markets and uses as fixed baselines can result in improper bias toward market solutions when transaction costs are low, and an improper bias towards nonmarket legal solutions when transaction costs are found to be high. The practice of market-based theory thus yields a pattern of very selective interferences in the legal system. Sometimes these interferences are aimed at creating actual markets, and at other times they are designed to supplant pricing markets. One question, of course, is what economic conception authorizes and justifies such selective interference? No longer can these selective interferences be justified by reference to the presence of high or low transaction costs. This strategy does not work anymore because, as we have just seen, the presence or absence of significant transaction costs is itself dependent upon a skewed conceptualization of the economic situation, one that takes specified uses *as a fixed baseline*.

These difficulties stem from the failure of market-based theorists to take the reciprocal character of the relation between transaction costs and the specified markets and uses seriously. It is important not to overstate the consequence of this oversight. It is, after all, true that the more sophisticated the market-based theorists are in specifying the implicated

markets and uses, the less it matters whether the reciprocal character of the problem is taken into account. Of course, at the same time, it is also true that the more sophistication the market-based theorists display in their specification of the economic context, the more inconclusive and conditional their analyses will be. Sophistication and determinacy seem to be inversely related here.⁴⁴

One consequence of this ratio is that the market-based approach provides a perverse intellectual incentive towards idealized simplifications of economic problems and their context. If one hopes to answer (as market-based theorists do) the question of whether transaction costs are significant in a given context, it becomes very tempting to give a simplified account of the implicated markets and the economic issue at stake. Indeed, if the analyst is to display any confidence in his assessment of the character and magnitude of transaction costs, he must first severely limit the identity, number, and interests of the parties implicated and the markets and uses affected. Failure or refusal to truncate the analysis along these lines will likely yield inconclusive results.

Thus, the market-based approach invites a simplified account of the implicated markets, parties, and interests. In turn, because the identification of costs as transaction costs depends upon such simplified descriptions, the validity and usefulness of the identification of a cost as transaction cost becomes questionable itself. Granted that some cost may look like a transaction cost relative to the caricatured picture of the market constructed by the analyst, but the question remains: What relation does this caricature have to the real economy? One obvious problem is that the caricature may fail to correspond to any sector in the real economy. However, even if there is a correspondence, another problem emerges. By excising a limited sector of market relations from a web of economic relations, the caricatured representation may very well succeed in severing important economic relations between the isolated sector and the rest of the web. If one wants to isolate contexts from the rest of the economic web for analysis, perhaps that is acceptable. But, one still has to know where to cut, and it is not clear that market-based theory has any discernible theory about how or where to cut.

44. This claim is borne out by an examination of the first, second, and third editions of Judge Posner's *Economic Analysis of Law*. The progression has been from simplicity and determinacy in the first edition to greater complexity and indeterminacy in the third. The first edition is given to declarative statements that elevate economics to the status of a determinative ontology. The third edition, by comparison, is given to the conditional voice and accords a much greater role to cultural contingency.

One response to these arguments, of course, is that at most they show that one should be careful about how to specify implicated markets and uses. This is true: one should be careful. But being careful is not enough. All the care in the world will not help one if one's conceptual structure doesn't provide you the foggiest idea what you should be careful about. And that is precisely the problem here: The conceptual structure of market-based analysis is itself epistemologically inadequate. It might be characterized as naively optimistic. Indeed, an examination of the practice of market-based theory reveals that the market-based theorists must think it is very easy to isolate economic contexts for analysis. The image of the economic sphere that emerges from the work of market-based theorists is of many little economic contexts or problems all laid out neatly in exquisitely partitioned vertical and horizontal arrangements. The contexts are always discrete (having been specified that way), and they never overlap, interpenetrate, or reciprocally constitute each other (let alone, reciprocally destabilize each other); nor do they negate, displace, or subsume each other; nor do they ever do anything of a modernist or post modernist character. They are just there. So while the problems and issues that the market-based theorists analyze can be exceedingly challenging, nonetheless, the analysis can always be performed against a neat background that is fixed, determined, and stable.⁴⁵

While this methodology is no doubt comforting for the market-based theorist, it does tend to place in question the relevance of his conclusions outside his model. Consider Coase's railroad hypothetical again. Let us say that the railroad and the farmers, both distraught with the frequency of fires, seek to make a deal. The farmers and the railroad are both engaged in production. In seeking to make a deal, they are clearly trying to alter the system of coordination within which they operate. To this end, the farmers consult an economist who tells them that chances for improvement are slim due to free riders, holdouts, and all

45. Much of the argument here tracks with the theory of the second best. Lipsey & Lancaster, *The General Theory of Second Best*, 24 REV. ECON. STUD. 11 (1957).

The general theorem for the second best optimum states that if there is introduced into general equilibrium system a constraint which prevents the attainment of one of the Paretian conditions, the other Paretian conditions, although still attainable, are, in general, no longer desirable From this theorem there follows the important negative corollary that there is no *a priori* way to judge as between various situations in which some of the Paretian optimum conditions are fulfilled while others are not. Specifically, it is *not* true that a situation in which more, but not all, of the optimum conditions are fulfilled is necessarily, or is even likely to be superior to a situation where fewer are fulfilled.

Id. at 11-12. While the theory of the second best accepts in principle the possibility of defining and identifying individual markets, it contests the value of optimizing conditions in a specified market unless conditions have been optimized in all markets. More radically, my argument questions the very basis for identifying and defining individual markets as indeed separate and distinct.

that. From the perspective of the farmers, the cost of hiring the economist is a *transaction cost*. Indeed, if the coordination system had been better organized in the first place, this transaction cost could have been reduced or eliminated entirely. The economist, of course, does not see things this way. As the economist sees it, providing economic information for businesses is a productive enterprise. The fee charged by the economist is just as much a *production factor cost* for agricultural production as are the costs of the other knowledge that are factors of agricultural production—knowledge such as what seeds to plant and when. To secure his fee, the economist has a consulting contract containing all sorts of mind-spinning clauses about the rights and duties of the obligor and the obligee—all drafted by an attorney. No doubt, the economist wishes that this attorney (who is after all nothing but a *transaction cost*) would charge less for her services. The economist might well think that if only the system of coordination (the legal system) were simplified, these transaction costs would be lessened. The attorney, of course, does not see things this way. She realizes that a simplification of the legal system would prevent the economist from protecting and hence developing his know-how. As she sees it, her legal advice is very much a *cost of producing* the know-how. From her perspective, the *real transaction costs* are the costs of the U.S. mail, the various courier services, the telephones, the conference rooms, the law offices, and the art work in the law firm reception areas. These are all aspects of the system of coordination (i.e., they are all transaction costs).

One point illustrated by this example is that depending upon how one specifies the ultimate goods to be produced, one ends up with conflicting characterizations of whether certain costs are transaction costs. Thus, if the specified markets are railroad service and crops, then the fee of the economist might be considered a transaction cost. Accordingly, it might be considered a net gain to use the legal system to eliminate this cost. A serious economist, however, is unlikely to let the analysis rest here. He might point out that what is considered a transaction cost from the perspective of markets in railroad service and agriculture is not a transaction cost if the markets involved are specified differently. For instance, if the specified market is production and dissemination of useful economic information about how to structure private dealings, then the economist's fee is not self-evidently a transaction cost. And accordingly, it is not self-evidently the sort of cost that should be economized or eliminated by altering the legal system. Given this latter specification of the implicated market, what appears to be a transaction cost is the lawyer's fee. But if one describes the market as the provision of knowledge about

how to best use valuable entitlements conferred by the state, then the lawyer's fee is not self-evidently a transaction cost. It is not the sort of cost that should obviously be economized or eliminated by altering the legal system.

A second point illustrated by this example is that when one abandons the comfortable world of the economist's hypotheticals for that of a real service economy (like our own), it becomes much more difficult to know how to identify both markets and transaction costs. As the example above shows, economic activity can be characterized as operating on many levels, and what counts as the production of an ultimate good within one level of the market may very well count as a transaction cost for another level of the market. The question of what counts as a transaction cost is, therefore, largely *an aesthetic one*—one linked reciprocally to another aesthetic determination, namely, the specification of the economic context.

A related point is that what appears to be a transaction cost from the perspective of certain specified markets will often turn out not to be a transaction cost from the perspective of other specified markets.⁴⁶ It follows that economizing, eliminating, or circumventing transaction costs in a specified market is not self-evidently welfare enhancing. On the contrary, whether such measures are welfare enhancing depends upon how the market has been specified and what role that specified market plays in other markets.

This is the sort of link that market-based theorists seem to disregard. Indeed, their writings reveal that they regard the task of defining and isolating implicated markets and identifying transaction costs as relatively simple and unproblematic. One virtue of this simplicity is that it becomes possible for them to treat transaction costs as deadweight welfare losses. This, of course, brings back memories of a previous conceptual universe—specifically the Pigouvian one—where it was once possible to consider externalities as deadweight welfare losses. One of the truly interesting things about the treatment of certain costs as deadweight welfare losses is that this way of thinking leads quite easily to the

46. The point is illustrated by Carl Dahlman in a similar context:

Furthermore, it is difficult to see in what significant way ordinary transportation costs or proportional transaction costs differ from regular costs of production . . . Fundamentally, therefore, both transportation costs and proportional transaction costs are productive in precisely the same way that resources used up in the physical transformation of inputs into outputs are productive—indeed they could be treated in an identical manner with no loss of information. *All that is required is to interpret an exchange as a productive activity requiring certain resources in a specified technological relationship.*

Dahlman, *The Problem of Externality*, 22 J.L. & ECON. 141, 145 (1979) (emphasis added).

conclusion that these costs can be eliminated costlessly. But, as Coase demonstrated (at least, with respect to externalities), it isn't so.

IV. FEEDBACK LOOPS, OVERINCLUSIVENESS EFFECTS, AND INDIVISIBILITIES

Even if it were feasible to develop a conception of transaction costs that could be applied uncontroversially to the real economy, the market-based approach would still be on the wrong track. That is because the identification—even the reliable identification—of the presence, absence, and nature of transaction costs is itself insufficient to ground the prescriptions offered by the market-based approach. The general problem is that the various market-based formulae for economizing, eliminating, or circumventing transaction costs yield legal rules that produce economic effects that remain unanalyzed within the market-based analysis itself. In a word, the legal rules produced by the market-based approach are *overinclusive* with respect to their intended effect.

The problem here is similar to the feedback loop problem that Coase identified in the Pigouvian approach. Coase's feedback loop argument shows that even if the Pigouvian analyst is accurate in identifying a cost as an externality imposed by one activity upon the other, this achievement is largely irrelevant for fashioning an efficient legal regime. It is irrelevant inasmuch as the conclusion that an externality should be internalized does not coincide with the conclusion that we should adopt a legal regime that internalizes the externality. The difference between the two is that the choice of legal regime can and often will have economic effects beyond merely internalizing the externality. Thus, the effects of the legal rule designed to internalize an externality are generally overinclusive relative to that goal, and if those overinclusive effects are not taken into account, the efficiency of the rule remains, as Coase demonstrates, indeterminate. Furthermore, depending upon the nature of those overinclusive effects, it will be preferable, at least some of the time, to refrain from adopting a rule that internalizes an externality.

The same feedback loop argument applies with respect to the market-based approach. There are two major ways in which the market-based approach produces overinclusive effects. First, contrary to the market-based approach, it is not the case that a determination that transaction costs are low or high is analytically adequate to authorize the conclusions, respectively, that actual pricing markets should be created or supplanted. Second, it is also not the case that a determination that actual pricing markets should be created or supplanted is analytically

adequate to authorize the conclusion that we should adopt a legal rule that accomplishes these goals. In both of these cases (moving from transaction cost identification to prescription and moving from prescription to legal rule) the predicate determination is insufficient to authorize the conclusion. There are two reasons for this overinclusiveness.

One of these reasons was explored in the last section. Indeed, the claim in the last section that market-based theorists typically specify the economic context *very narrowly* and then use it as a *fixed baseline* for analysis indicates that the market-based approach produces extraordinarily idealized representations of the real economy. Inasmuch as these idealized representations of the economic context are probably lacking any strong linear correspondence to the real economy, it follows that any prescription derived from such idealized pictures is likely to produce all sorts of wondrously overinclusive (and unanticipated) effects when put into practice.

A second reason that the rules produced by market-based analysis are likely to yield significant overinclusive effects is that the bulk of market-based analysis does not seem to take into account indivisibilities. This is somewhat ironic because Coase's own attack on Pigou is premised in part upon the fact that the Pigouvian analysis did not take into account indivisibilities.

In the attack on Pigou, Coase demonstrates that a liability rule that makes the railroad pay for the crop fires it "causes" will not necessarily be desirable. Coase's demonstration depends upon the fact that the effects of the liability rule are not confined merely to the internalization of the externality but extend to the conflicting activity. Quite often, Coase's hypothetical prompts the following question: Well, why not adopt a legal rule that affects only the externality and not the associated activities? The Coasean answer is that this question presupposes the naive view that economically desirable results can be transcribed unproblematically into legal rules and that in turn the legal rules can inscribe their intended effects unproblematically onto the economic realm. As Coase demonstrated, that is simply not true. Indivisibilities within legal rules will often preclude legal rules from tracking economically desirable determinations. It is simply not the case that law is so mutable, so unstructured that it can be finely tuned to achieve a predetermined economically desirable outcome and nothing else. Similarly, distinctions that the law establishes or seeks to establish will often be

unrealizable *as such* because of indivisibilities of an economic or technological nature.⁴⁷ Here too, simply because the law commands a certain outcome clearly and unequivocally (i.e., "Internalize your externalities!"), does not mean that this outcome *and only this outcome* will be achieved. On the whole, absent incredible naivete or pathological optimism, there is simply no reason to suppose that the set of internal divisions possible within the law should track with the set of internal divisions possible within the economic realm.⁴⁸

Yet, for some reason, the market-based theorists seem to have ignored this problem. This is a serious oversight because if there are legal or economic indivisibilities and these are not considered in the analysis and in the prescription of legal rules, then the legal rules that emerge from this analysis will produce all sorts of unintended and wondrously overinclusive effects. Some of these overinclusive effects are bound to be undesirable, and some of them sufficiently undesirable to outweigh whatever gains have been realized in reduction, elimination, circumvention, or economizing of transaction costs *in the specified product markets*.

Of course, one answer to these arguments is that so long as the market-based theorist insists upon a tight fit between the markets and uses narrowly specified in the analysis and the scope of the operative effects of the legal rule, there is no problem. At least here, one would think the market theorist has avoided the problem of overinclusive effects. However, this is not the case; the more the market-based theorist tailors a rule specifically to certain narrowly defined uses, the more the rule will succeed in entrenching or subsidizing those very narrow uses to the detriment of alternative, competitive, or conflicting uses. There is a serious feedback loop problem here: The more a rule is framed in terms closely tied to a narrow specification of markets and uses, the greater the chance that savings on transaction costs in terms of the specified uses will translate into losses for alternative, competing, or conflicting uses not specified initially. The reason for that is obvious: If a rule extends its transaction cost saving effects to only a few select activities while excluding alternative, competing, or conflicting activities from these economizing effects, the latter will be harmed relative to the former. For instance,

47. In other words, there is no reason (other than a naive view of the matter) to believe that the sorts of distinctions or conceptualizations that are plausible in law, in economics, and in technology can be transposed unproblematically from field to field.

48. On the contrary, part of the challenge of law and economics (as the name itself should indicate) is to see how the two different conceptual structures can be mapped against each other. Interestingly, this problem has been largely ignored by the market-based theorists in their sustained drive to show how one conceptual structure reduces to the other.

it is not self-evidently welfare enhancing to reduce transaction costs in a baby selling market if there are significant numbers of moralists who would be "willing to pay" to preclude such transfers.⁴⁹ On the contrary, the gains from reducing transaction costs in a baby selling market could well be outweighed by the loss associated with heightened transaction costs facing the moralists.

The point here is that the more the market-based theorists tailor legal rules to very narrowly specified markets, the more these rules are likely to have unanticipated (and in some cases unwanted) effects. These effects will surface in markets that have not been specified or considered in the analysis but which are, nonetheless, linked to the specified markets by relations of competition, conflict, or substitution.

V. INFORMATIONAL PREREQUISITES FOR MARKET-BASED TRANSACTION COST ANALYSIS

Now, it is, of course, possible to imagine a rehabilitated form of market-based transaction cost analysis—one that would avoid some of the errors I have pointed out above. Thus, for instance, it need not be the case that transaction cost analysis has to be based on highly specific and restrictive assumptions about the affected activities. It is possible to develop more realistic, more inclusive representations of the economic field.

The problem with this more intellectually appealing approach, however, is that it requires a great deal of information—information which very often will not be available. The information required is information about the product markets affected, associated markets, consumer preferences, and the like. It will turn out, then, that market-based transaction cost analysis will require virtually the same amount of information as would be required to run a suitably rehabilitated Pigouvian taxation system. In fact, such a rehabilitated Pigouvian approach could very well provide an interesting frame of reference for evaluating the comparative

49. For reasons that are readily understandable (though hardly justified) the interests of third party moralists or aestheticists in preventing market exchanges are routinely discounted in the market-based approach. For instance, with respect to third party moralists in the baby selling context, Posner writes:

One should always be suspicious of arguments against the market when they are made by people who have no desire to participate in it themselves, people who want to restrict the availability of goods to other people. Most people who invoke vague symbols in opposition to "baby selling" have no interest in or expectation of either adopting a child or conceiving one out of wedlock.

Posner, *supra* note 41, at 71. I take it that Posner is offering a conventional buyer's argument here, not an economic one.

advantages (or disadvantages) of a market-based transaction cost analysis.

To do that, however, Pigou's approach must be rehabilitated from Coase's criticisms. Quite apart from the thrust of Coase's argument, the unbearable cost of Pigou stems largely from the failure to follow through on his own analysis.⁵⁰ Part of the price of reconstructing the Pigouvian approach is that the end result is not pretty: the reconstructed Pigouvian approach demands (generally) too much information to yield economically correct or reliable results. The reconstruction is also ironic in that one of the effects of reconstituting the Pigouvian approach is that it begins to look a lot more like transaction cost analysis.

A reconstructed Pigouvian approach would go something like this. Internalizing externalities through a Pigouvian tax depends on identifying *all the externalities* of both conflicting activities, assessing their proper cost, and devising a legal regime that does no more (and no less) than internalize those externalities.⁵¹ In Coase's railroad hypothetical, Pigou's error (from a Pigouvian perspective) was in failing to consider the externalities visited upon the railroad by the farmers under a liability regime. In other words, Pigou neglected the reciprocal nature of the problem. Regulating the railroad's spark-emitting behavior is not sufficient because it fails to provide appropriate incentives for the farmers to avoid fires.⁵²

However, this problem can be solved, even under a Pigouvian approach. Indeed, under a liability regime, the railroad has what might be called "implicit property rights" in burnt crops. Under this regime, the railroad pays for all crops that burn. Therefore, when the farmers plant on marginal lands close to the railroad tracks, the farmers impose an uncompensated cost on the railroad (i.e., an externality). We customarily think of this behavior as opportunism. Nonetheless, the farmers' opportunism here could be considered an externality; by planting more crops, the farmers effectively increase the railroad's cost without compensating the railroad for those costs.⁵³ In going from a no liability

50. See Cooter, *supra* note 33, at 6.

51. The reason Pigouvian analysis failed in Coase's railroad hypothetical is that not all the externalities were recognized. As Cooter points out, Coase failed to include in the analysis the costs to the farmers of leaving the fields fallow. *Id.* at 6.

52. Regan, *The Problem of Social Cost Revisited*, 15 J.L. & ECON. 427, 436-37 (1972).

53. For a discussion of the concept of externality, see Dahlman, *supra* note 46, at 141 (interpreting Pigou's concept of externality to mean that when all voluntary contractual arrangements have been entered, some trades remain that should be internalized, but with which market forces by themselves cannot cope).

regime to a liability regime, the railroad and the farmers have switched places as the emitters and the recipients of externalities.

Having reframed the problem, it becomes theoretically possible to perform a Pigouvian analysis that yields efficient results.⁵⁴ The question becomes: What legal regime minimizes *the total* of divergences of the private from the social product of all affected activities? Or, to put the question another way, which legal regime minimizes the total costs of *all* externalities?⁵⁵ It is not impossible to answer these questions, just very difficult. To answer them, the government (or its academic advisors) must possess an incredible amount of information.⁵⁶

One might argue that the informational difficulties would be so great and the likelihood of government error so large that the Pigouvian approach is simply unworkable, unwise, or too costly. According to this argument, the reconstructed Pigouvian analysis fails because the necessary empirical information is unlikely to be forthcoming. Admittedly, there is something to this argument.

But consider the information necessary for proper market-based transaction cost analysis—that is, an analysis microeconomists would find intellectually acceptable. Unhappily, the market-based approach, like the Pigouvian approach, also requires a tremendous amount of information. In order to do market-based transaction cost analysis, one must first identify which goods would be traded absent transaction cost barriers.⁵⁷ Second, one must know which potential markets will be affected

54. Coase acknowledges this point when he states in connection with the polluting factory hypothetical:

A tax system which was confined to a tax on the producer for damage caused would tend to lead to unduly high costs being incurred for the prevention of damage. Of course this could be avoided if it were possible to base the tax, not on the damage caused, but on the fall in the value of production (in its widest sense) resulting from the emission of smoke.

Coase, *supra* note 1, at 41. Coase then goes on to note (and not without some justification) that such a strategy requires a "detailed knowledge of individual preferences" which would be difficult to assemble. *Id.*

55. Or one could simply be modest about the whole externality problem and merely ask that when an activity is carried to an extreme, (i.e., too many fires) it be reduced to "minimum standards of acceptability." Baumol, *On Taxation and the Control of Externalities*, 62 AM. ECON. REV. 307, 318 (1972). Modesty might be called for simply because of the extremely limited information available.

56. Coase noted that it is unlikely that anyone could assemble the knowledge of individual preferences necessary to answer these questions. See *supra* note 54. Baumol advocates "minimum standards of acceptability" criteria for reducing offending externalities because of the limited nature of the information available. Baumol, *supra* note 55, at 318.

57. Dahlman, *supra* note 46, at 150 (concluding that any assertion that certain externalities represent a deviation from an optimal allocation of resources rests on an affirmation by the analyst that she possesses information superior to that available to market actors).

by minimizing transaction costs. Third, one must determine which kind of transaction costs currently or potentially impede exchange of the goods directly implicated as well as other goods in peripheral markets. Finally, one must devise a legal regime that does no more (and no less) than reduce only select obstacles to exchange of the goods (i.e., the identified transaction costs). In light of all this, the suggestion that the transaction cost approach in the hands of the government (or legal academics) is more likely to achieve efficient results than a reconstructed Pigouvian approach is . . . well, it's a daring stance.

VI. THE LIMITATIONS OF IDEALIZATION

As Coase demonstrated in his seminal article, there are definite costs to asking the wrong question, and so it is with market-based transaction cost analysis. The attempt to decrease transaction costs by applying the analytical formulae of market-based transaction cost analysis can lead to inefficient results.⁵⁸

The transaction cost approach is premised on the idealization of the perfectly competitive market. Thus, an important benchmark for market-based transaction cost analysis is what the perfectly competitive market would have produced without transaction costs. Ironically, this approach is exactly the sort of idealization of a coordination system that Coase cautioned against.⁵⁹ It is a special case of what Demsetz called the "nirvana approach."⁶⁰

Coase cautions against using nirvana states as benchmarks for evaluating actual economic performance, and for good reason. While there is little doubt, for instance, that a perfectly costless pricing system is preferable to the one currently in place, it is equally true that a perfectly costless system of government allocation would be preferable. But so

58. For discussion of these formulae, see *supra* text accompanying notes 6-12.

59. While obviously counter to the received understanding of Coase's article amongst legal academics, nonetheless it seems to me that the compelling criticism and critique of idealized economic models is probably the most important contribution that Coase makes in *The Problem of Social Cost*. Coase, *supra* note 1. And, while few lawyer-economists seem to notice, Ronald Coase keeps cautioning against idealizing any particular form of social coordination. Coase, *The Coase Theorem and the Empty Core: A Comment*, 24 J.L. & ECON. 183, 187 (1981); Coase, *supra* note 34, at 672-73; Coase, *supra* note 2, at 15.

It may be that Coase's modernism is so cognitively foreign to the prevailing rationalism amongst lawyers that his message is systematically misunderstood. For elaboration, see Schlag, *Missing Pieces: A Cognitive Approach to Law*, 67 TEX. L. REV. 1195, 1201-02 (1989).

60. The "nirvana approach" specifies the outcomes that would be reached in a perfect world as the appropriate criteria to evaluate the real one. Demsetz, *Information and Efficiency: Another Viewpoint*, 12 J.L. & ECON. 1, 1 (1969).

what? Presumably, few people would draw much comfort from an argument that a proposed change in the current regime is desirable because it approximates what a perfectly working system of government allocation without transaction costs would produce. At the very least, it is a safe bet that this argument would not reassure the market-based Chicago theorists. Why then is there any comfort in the argument that a modification of the legal regime approximates what a perfectly costless pricing system would produce? This question gains special urgency once one recognizes the volatile character of the concept of transaction costs. But, even apart from the volatility of the concept of transaction costs, it remains questionable how any comfort can be drawn from the assertion that some proposed change approximates what a costless, perfectly competitive free market would produce.

For partisans of the market-based transaction cost approach, the answer must be that we can discern more accurately what a costless pricing system would produce than what a costless government allocation system would produce. Put another way, one needs a great deal more information to determine what a costless government system would produce than to determine what a costless market regime would produce. But this argument does not hold. And it does not hold for several reasons. First, while it might be argued that there is a very elaborate model for the pricing system (whereas there is none for government allocation),⁶¹ nonetheless, the zero transaction cost assumption succeeds in reinstating a relative conceptual parity. That is because the zero cost assumption throws so much of the context for the application of the pricing model into question that the application of the model becomes . . . well, let's say—a real challenge. Because the concept of transaction costs is so volatile, it is extremely difficult to distinguish what the zero transaction assumption requires to be assumed away from what it does not. If there is no clear answer to that question, it is hard to see how any model (no matter how rigorous) applied to such a volatile context could produce reliable results.

But there is something even more troubling about the zero cost assumption. Assume that it is possible to engage in the zero transaction cost mental experiment. Put away such doubts as whether it is even possible to imagine a zero transaction cost world or whether such a mental experiment can yield any conclusions at all. Suppose instead that (in a specific case of your choice) the mental experiment actually does produce

61. *Contra*, Lange, *On the Economic Theory of Socialism*, 4 REV. ECON. STUD. 53 (1936) (describing a socialist system for allocation of resources).

some results. Now consider the culturally humbling possibility that these results come back in the form of French civil law—in fact, it turns out that the Code Napoleon is the last word on transaction cost reduction strategies. Now what are you going to do? Right—exactly—and that is precisely the point: Imagining what would happen in a zero transaction cost world is of limited utility because it tells you so little about what you should do in this one. The reason it tells you so little is twofold. First, in making the zero transaction cost assumption, one eliminates so many features of the real world that any subsequent conclusions reached in the analysis are largely irrelevant for the real world. Second, the zero transaction cost experiment yields absolutely no insight for deciding how one should effectuate a zero transaction cost solution in the actual world. And as soon as the mental experiment is over, the positive transaction costs come crashing down all around.

There is another reason that imagining a zero transaction cost perfectly competitive market is not demonstrably superior to imagining a costless governmental allocation. Ironically, it turns out that both mental experiments require very much the same information. In order to replicate market outcomes, one needs to identify the product markets affected, the nature and magnitude of the transaction costs precluding exchange, and the preferences and the intensity of preferences of the affected parties. That is a great deal of information. It is almost, but not quite, enough information to decide what costless government allocation would produce in the absence of transaction costs. Thus, imagining what outcomes a frictionless market produces is hardly easier, or more helpful, than imagining what costless government allocation produces. They are largely the same inquiries; they both require a great deal of information about preferences—information likely to be distorted by strategic behavior.

Perhaps the argument that one should look at what a costless pricing system would produce is really an invitation to look at certain forms of information—notably, the kind of information a market produces such as prices, payments, outputs, etc.⁶² Similarly, it may be an invitation to disregard other types of information—notably the kind that the government obtains such as votes, protests, expertise, etc. If this is the argument for using the perfectly costless market as the benchmark, it too fails. It is well known that just as government information tends to provide a distorted picture of actual preferences and values, so too does the

62. For a discussion of the informational character of the market, see von Hayek, *The Use of Knowledge in Society*, 35 AM. ECON. REV. 519 (1945).

information provided by the market. One reason that markets do not work costlessly is that markets provide inaccurate or insufficient information concerning preferences. In part, this is because the participants often misrepresent their own and others' preferences. It is also because markets provide information about exchange opportunities, but only as conveyed in prices.⁶³ Indeed, it is well known that markets provide less than optimal information about those goods or costs not easily defined in property or contract regimes,⁶⁴ or those not amenable to the commodity form,⁶⁵ or public externalities,⁶⁶ or public goods.⁶⁷ Those goods and costs will tend to be undervalued by the market. Presumably, they should be assumed away as part of the zero transaction cost assumption. But it is hard to believe that this sort of imaginative exercise is cognitively possible. To strip the market of such goods and costs is to bracket so many of the legal entitlements that constitute the market itself that it is difficult to envision what it is that one would be imagining. It would come close to imagining a nonsequitur—something like a free market without any private property rights.⁶⁸ On the other hand, if these kinds of goods and costs cannot, as a cognitive matter, be effectively assumed away under the zero transaction cost assumption, then attempting to replicate the zero transaction cost world in a legal regime will result in instituting known inefficiencies into that regime. In short, the idealization of the costless pricing system as a benchmark for government action replicates within the government all of the shortcomings of the pricing system. Such an approach institutionalizes not just the benefits, but all the infirmities of the pricing system within an alternative scheme of coordination—a scheme of coordination that, theoretically at least, might be capable of overcoming these infirmities.⁶⁹ Perhaps the most serious problem is that the idealization of the costless market effectively eclipses

63. Veljanovski, *supra* note 2, at 63.

64. Toumanoff, *supra* note 26, at 535-36.

65. Radin, *Market-Inalienability*, 100 HARV. L. REV. 1849, 1870-87 (1987).

66. Veljanovski, *supra* note 2, at 66.

67. Toumanoff, *supra* note 26, at 538.

68. As Coase himself notes, "Cheung has even argued that, if transaction costs are zero, 'the assumption of private property rights can be dropped without in the least negating the Coase Theorem' and he is no doubt right." R. COASE, *supra* note 2, at 14-15 (citing Steven N. S. Cheung, *Will China Go "Capitalist"?*, 37 (2nd ed., Hobart Paper 94 London: Institute of Economic Affairs, 1986).

69. As Veljanovski puts it: "The market-based approach to efficiency simply leads to the wrong emphasis; it focusses attention on methods to make social and legal arrangements more market-like instead of looking for the most efficient methods of coordinating economic and social activity." Veljanovski, *supra* note 2, at 69.

alternative forms of information that would allow the satisfaction of preferences—the sort of information that can be *gathered* from voting behavior, protests, and expertise, etc., as well as the sort of information that can be *created* by regulation, licensing, product specification, etc.⁷⁰

The short of it is that there is no reason to prefer prices, output, and other forms of market information concerning preferences when dealing with the types of human goods and costs for which market information is known to be unreliable. One must not overstate the case; other forms of information (votes, expertise, etc.) can also be unreliable. But that just proves my point—that it is economically wrongheaded to canonize any single form of social coordination as the ideal.

This point applies not only to normative but also to positive microeconomics. In positive microeconomics, the idealization of the market as the ultimate telic driving force in social and economic arrangements is simply a special case of *the myth of the final resting place*. Market exchange is not a final resting place. Just as individuals sometimes establish black markets to circumvent inefficient legal obstructions to exchange, they also band together in firms or quasi-governmental organizations (i.e., gangs, old boys clubs, political parties) to bypass inefficient market structures.

Microeconomics is no more immune to the conceptual and material changes brought by modernism and post modernism than any other discipline. There is no ideal social coordination for *all* aspects of productive or exchange activity. On the contrary, some forms of social coordination are sometimes preferable to others. Often a particular system of coordination provides better information concerning preferences, better information concerning the status (contingency and life expectancy) of preferences, or a cheaper mechanism for realizing or altering preferences.

This, of course, presents a somewhat more complex picture of the problem than the partisans of the market-based approach have suggested. For one thing, it means that each system of coordination provides its own information (and its own information deficits) concerning the successes and failures of the various systems of coordination. In turn, this

70. For an argument that regulatory, licensing, and product specification requirements and other constraints on market exchange can be welfare enhancing insofar as they reduce search and information costs, see Barzel, *Transaction Costs: Are They Just Costs?*, 141 ZEITSCHRIFT FÜR DIE GESAMTE STAATSWISSENSCHAFT (Zgs) 4, 13-15 (1985).

implies that no one coordination system serves as the universal benchmark for measuring the adequacy of the various coordination systems.⁷¹ On the contrary, claims about the adequacy of the various coordination systems remain contestable. That conclusion should not be terribly surprising; coordination systems are largely about providing and creating information.⁷² It would, therefore, be rather surprising if one could do economics without considering epistemology.

Put simply, one can't: foregoing epistemology (as the market-based analysts have attempted) does not work very well. This becomes evident when one ponders the mind-staggering fact that the champions of Coase at Chicago have repeated *the very same* mistakes that Coase detected in Pigou and warned against repeatedly. How could the analysts from Chicago have made the identical mistakes?

Actually, these mistakes are easily made if one adopts a certain epistemological stance. Let us start with the positions advanced by the market-based theorists and proceed toward their epistemology. The market-based analysts hold that there are various possible coordination mechanisms to allocate goods: the market, the firm, and the government. So far so good. The choice for market-based analysts is generally between allowing allocation of goods to be governed by a decentralized pricing market and firms (as they propose) or by government expertise and regulation (as others propose). But that is *never* the choice that they, the courts, legislatures, or anyone else must make. Instead, the choices are between following various *theories* of coordination mechanisms and between following various *representations* of the economic issues or economic facts. *There is no unmediated epistemological access to something called "the free market."* There are only *theories* and *representations* of "the free market."

Thus, the choice is *never* between mimicking, creating, or maintaining a free market and doing something else. Instead, the choice is between following *a theory* of what the free market will do in light of *this particular representation* of the economic facts and issues and . . . following *a theory* for doing something else. But that is a very different choice because it requires a critical assessment of the theoretical and informational status of the very economic theory used to perform the analysis.

71. Oliver Williamson notes that Coase repeatedly argues for comparative analysis under different coordination systems. Williamson, *supra* note 26, at 261.

72. As Veljanovski notes, the central economic problem here is "the identification of structural mechanisms that will lead to the revelation of preferences and their efficient satisfaction." Veljanovski, *supra* note 2, at 59.

In prescribing solutions to welfare economics problems, the theoretical and informational deficits of the approach being used must be considered. Various economic prescriptions are always derived and implemented within an environment of theoretical and informational deficits. Each welfare economics approach, whether market-based, Pigouvian, or institutional, has its own theoretical blind spots and informational needs. It may be that sometimes the market-based approach furnishes the appropriate solution, but there is no reason to think that the market-based approach will generally be correct. To paraphrase Coase, in the absence of the conceptual obstacles or informational deficits in the welfare economist's analysis of a problem, the efficient outcome will be arrived at no matter which approach is taken. Of course, in the real world, the conceptual structures of various economic theories, their ideological orientations, and the information they require for implementation will affect the outcome.

CONCLUSION

The partisans of market-based transaction cost economics are asking the wrong questions—questions that are unintelligible. There is, of course, something worse than asking unintelligible questions—and that is answering them. The proponents of market-based transaction cost analysis appear to have done both.

To treat the presence, absence, and identity of transaction costs as the predicate determination for deciding whether to create or supplant actual pricing markets is wrongheaded. It is wrongheaded because the concept of transaction costs is too volatile to serve such an important role in the analysis and because the privileging of this inquiry suppresses the reciprocal relation between transaction costs and the specified economic context. This suppression in turn leads to specifications of the economic context that will improperly skew the analysis towards market solutions in some cases and nonmarket solutions in others.

Besides, the failure to consider seriously how to specify the economic context—the markets and uses implicated—leads to the oversight of indivisibilities. In consequence, the market-based analysis will, like its Pigouvian precursor, sometimes lead to the wrong result.

Another difficulty with the market-based approach is that the proper implementation of this approach requires a great deal of information. It requires a great deal of information about markets, affected parties, and preferences—information that is unlikely to be readily and uncontroversially available.

All these difficulties of the market-based approach have something in common: The market-based approach repeatedly idealizes the nature of the problem, the context, and the possible solutions. The zero transaction cost assumption may well be simply the most notorious manifestation of this drive to idealize. Idealization has social costs. In part that is because it leaves you without the foggiest idea of how to get from here to there, and in part it is because it leaves you thinking you do.

One interesting question is whether the market-based approach can overcome these difficulties? Well—maybe, but the price is likely to be too high for the market-based theorists. For one thing, they would have to admit that things are far more complicated than initially thought. For another, they would have to reconcile themselves to conclusions that are far less authoritative, far less confident, and far less conclusive. But perhaps the biggest price that the market-based theorists would have to pay is the recognition that their intellectual enterprise is steeped not in *science* but in *aesthetics*.⁷³ Posing as both explanation and theory, most of the market-based transaction cost analysis turns out to be *interpretation*. It is a type of interpretation that is fiercely constrained and formalized in some respects and astonishingly open-ended and underdeveloped in others. It is an utterly bizarre fusion of determinacy and indeterminacy.

The short of it is: there is no reason to believe that the answers provided by the market-based approach are economically sound, and there are at least a few reasons to think otherwise.

73. Dahlman, *supra* note 46, at 156 ("This is not science; it is metaphysics: value judgments and political goals will enter into determination of whether externalities occur in the world."). Cf. Braucher, *Review Essay*, 13 LAW & SOCIAL INQUIRY 741, 766-71 (1988) (insisting on the normative dimension of economic analysis of law).