

Teaching the Coase Theorem: Are We Getting It Right?

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Abstract

The authors examine current textbook representations of Coase's analysis of negative externalities [Coase, 1960]. Standard treatments identify Coase's ideas with Stigler's Coase Theorem: a zero transaction cost world in which efficient solutions emerge automatically, regardless of legal rules and the initial allocation of rights. Yet Coase's seminal paper breaks from this mode of analysis. The authors use this intellectual history to distinguish two approaches to negative externalities: blackboard (Pigou, Stigler, Samuelson) and Coasean. They survey 45 microeconomics textbooks and find that 80 percent misrepresent Coase's arguments. They argue that a Coasean approach increases students' critical thinking skills by challenging them to move beyond simple laissez faire or interventionist solutions. (JEL A2); Atlantic Econ. J. 31(2): pp. 133-145, Jun. 03. © All Rights Reserved.

Introduction

A small but growing number of economists, including Ronald Coase himself, argue that Coase's approach to externality problems is misrepresented by standard formulations of the Coase theorem [Coase, 1988; 1994; Friedman, 1991; McCloskey, 1998; Medema, 1994; 1995; Medema and Samuels, 1997; Posner, 1993; Klaes, 2000]. Despite the fact that Coase's ideas are discussed in virtually every undergraduate microeconomics textbook, Coase et al. believe, "to a considerable extent, what is taught in the textbooks is the (externality) theory as it existed before Coase" [Friedman, 1991]. The aim of this paper is to investigate this claim: to identify the distinctive features of Coase's externality analysis; to survey current introductory and intermediate microeconomics texts to determine whether and to what degree they get it wrong, and, in conclusion, to consider the implications of these findings for economic education.

Coase's Two-Stage Argument in the "Problem of Social Cost"

Coase's aim in "The Problem of Social Cost" [1960] was to criticize the modern theory of negative externalities by "exposing the weaknesses of A. C. Pigou's analysis of the divergence between private and social products" [Coase, 1994, p. 10].¹ Pigou's *Economics of Welfare* [1960 (1932)] inspired a generation of economists to see taxes and regulations as the best way to promote economic efficiency in the presence of spillover costs. Coase attacks this analysis on a number of levels, beginning with Pigou's definition of the problem. Pigou defines a negative externality as a perpetrator or victim situation in which one party is causally and

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legally liable. Coase argues however, that such problems are inherently reciprocal, arising from incompatible interactions between two parties rather than the harmful actions of one upon the other. "If we are to discuss the problem in terms of causation, both parties cause the damage" [Coase, 1960, p. 13]. From this perspective it is better to "forget about causation and simply ask which party to a harmful interaction should be induced to change his behavior (maybe both should be) to maximize the social product" [Posner, 1993, p. 201]. In Coase's words [1960, p. 2]:

"The traditional approach has tended to obscure the nature of the choice that has to be made. The question is commonly thought of as one in which A inflicts harm on B and what has to be decided is: how should we restrain A? But this is wrong. We are dealing with a problem of a reciprocal nature. To avoid the harm to B would inflict harm on A. The real question that has to be decided is: should A be allowed to harm B or should B be allowed to harm A? The problem is to avoid the more serious harm."

Coase examines this problem under the standard assumptions of perfect competition, including zero transaction costs.² He is careful to pose this not as a "Coase theory of externalities" but simply as a logical restatement of Pigou's approach [1960, p. 2]. Under these ideal circumstances Coase shows that negative externalities are fully self-correcting; private bargaining yields an efficient (re)allocation of rights. Further, he shows that this efficient solution will emerge regardless of which party bears the legal burden of accommodation. Using his classic example of the farmer and the cattle-raiser, Coase shows that it does not matter for efficiency whether the damaging agent (the cattle-raiser) is held liable for the damage caused [1960, pg. 2-8]. "The ultimate result (which maximizes the value of production) is independent of the legal position if the pricing system is assumed to work without cost" [1960, p. 8].

Coase then presents a second stage of analysis entitled "The Cost of Market Transactions Taken Into Account" [1960, p. 15]. No minor addendum to the previous discussion, it occupies 2/3 of the paper and is the only part for which Coase claims originality [Coase 1994, p. 9]. His aim here is to show that "[o]nce the costs of carrying out market transactions are taken into account... the initial delimitation of rights does have an effect on the efficiency with which the economic system operates" [1960, pg. 15-16]. Coase emphasized this point in his Nobel Prize acceptance speech in 1991: "[When] we move from a regime of zero transaction costs to one of positive transaction costs, what becomes immediately clear is the crucial importance of the legal system" [1994, p. 10]. The crucial legal or economic problem is then to determine the appropriate social arrangement for dealing with the harmful effects [1960, p. 18].

According to Coase, this search for "the appropriate social arrangement" requires a flexible, case-by-case approach. While keen to remind the Pigovians that "there is no reason to suppose that government regulation is called for simply because the problem is not well handled by the market or the firm," he also insists that "there is no reason why, on occasion, such governmental regulation should not lead to an improvement in economic efficiency" [1960, p. 18]. Coase rejects generic prescriptions of all kinds, calling instead for "a patient study of how, in practice, the market, firms, and governments handle the problem of harmful effects," a "detailed investigation of the actual results of handling the problem in different ways" [pg. 18-9].

Coase therefore recasts the problem of negative externalities as a conflict of rights rather than a perpetrator or victim situation (A harms B). He also widens the range of possible solutions by emphasizing the possibility that B may be able to accommodate A more cheaply

than A can accommodate B. Equally important for the authors' purpose, Coase develops these arguments in two distinct stages: (1) under the standard assumption of zero transaction costs (to show that Pigou's conclusions are unwarranted even on their own terms); and (2) under the assumption of positive transaction costs. As the following textbook survey will demonstrate, most current microeconomics texts mispresent Coase's arguments by focusing exclusively on stage one.

Coase vs. Stigler's Coase Theorem

The most influential interpreter of Coase's 1960 article was his University of Chicago colleague, George Stigler. In the third edition of his *Price Theory* text, Stigler uses Coase's farmer or cattle-raiser example to dismiss Pigou's analysis of external effects and to define, for the first time, the Coase theorem: "The Coase theorem thus asserts that under perfect competition private and social costs will be equal [and] the composition of output will not be affected by the manner in which the law assigns liability for damage" [Stigler, 1966, p. 113]. He recognizes the importance of transaction costs but only as a qualification to Coase's perfect-market result [1966, pg. 113-14]:

"[Coase's] proposition must, to be sure, be qualified by an important fact. When a factory spews smoke on a thousand homes, the ideal solution is to arrange a compensation system whereby the homeowners pay the factory to install smoke reduction devices up to the point where the marginal cost of smoke reduction equals the sum of the marginal gains to the homeowners. But the costs of the transaction may be prohibitive—of getting people together, of assessing damages, and so on—so only a statutory intervention may be feasible."

Stigler's theorem was instantly appealing to free-market economists who regarded it as proof that externalities require no government interference. It soon became appealing, for a different reason, to neo-Pigovian interventionists like Paul Samuelson. In a 1966 paper Samuelson flatly rejects Stigler's claim that Coase had dealt a fatal blow to Pigovian theory [1966, p. 1411]:

"The view that R. Coase has shown that externalities—like smoke nuisances—are not a logical blow to the invisible hand and do not call for coercive interference with *laissez-faire* is not mine."

Samuelson rejects Stigler's claim because he sees Coase's so-called theorem as nothing but a restatement of Adam Smith's invisible hand principle, pointing out "the power of competitive markets to allocate resources efficiently" [Samuelson and Nordhaus, 2001, p. 379]. As such he regards it as a non-response to the Pigovian argument that externalities are a logical blow to the invisible hand that do call for coercive interference with *laissez-faire* because private solutions are rarely feasible. Yet herein lies the value of Stigler's Coase theorem to Samuelson. In his hands it becomes a handy strawman—a fanciful Chicago world of self-correcting externalities—against which to tout the scientific and practical superiority of his neo-Pigovian approach.

Samuelson introduced externalities as a standard topic in his *Principles* text in the 1960s. His early expositions make no reference to Coase. He presents externalities and their possible solutions in a thoroughly Pigovian way, as here in his 6th edition [1964, p. 466]:

"[W]herever there are externalities a strong case can be made for supplanting complete individualism with some kind of group action.... There is a clear-cut

economic case for a tax (or a subsidy) wherever an external diseconomy (or economy) creates a divergence between private pecuniary marginal cost as seen by a firm and true social marginal cost.”

In recent editions, Samuelson and William Nordhaus mention Stigler’s Coase theorem but quickly dismiss it as too optimistic [1998, p. 337] and proceed to suggest that most real-world externality problems require Pigovian solutions. In this way Stigler’s theorem continues to provide intellectual support for the very Pigovian tradition that Coase sought to escape.

Clearly this was not Stigler’s intention. He wanted to celebrate Coase’s insight and to strengthen Chicago arguments for laissez faire by extending Smith’s invisible hand to include the exchange of legal entitlements. Yet he largely defeated his own purposes, and Coase’s, by formulating Coase’s critique as a perfect-market theorem. The popularity of the theorem has obscured the uniqueness of Coase’s arguments by making it easier for economists to dismiss them without a hearing, or even a reading.

Coase himself is well aware of the distance between his own views and those ascribed to him *via* Stigler’s Coase theorem. Careful not to impugn his former colleague, Coase embraces the textbook theorem as a salient critique of Pigovian welfare economics [1994, p. 10]. At the same time, he laments the commonplace reduction of his arguments to this zero transaction cost world. “The world of zero transaction costs has often been described as a Coasean world. Nothing could be further from the truth. It is the world of modern economic theory, one which I was hoping to persuade economists to leave” [1988, p. 174].

To briefly illustrate how Coase’s approach differs from Pigovian and Stiglerian “Coase theorem” treatments of negative externalities, consider a competitive market in which suppliers emit air pollutants as a side effect of their production activities (Figure 1). The suppliers’ actions create two kinds of cost: private (paid voluntarily by the suppliers themselves) and external (paid involuntarily by bystanders). The market supply curve represents marginal private costs (MPC); the social cost curve represents marginal social costs (MSC), private plus external. Without corrective actions the market provides Q_E units of output. A standard Pigovian analysis deems Q_E inefficient because it is possible to increase social welfare by eliminating the socially unprofitable units of output ($MSB < MSC$) between Q_E and Q_o . The area E measures the social loss incurred at Q_E as well as the social gain achieved by reducing output to Q_o .

	Market Equilibrium	Pigovian Q_o	Alternate Solution
Gains			
Consumers’ Surplus	A+B+C+D	A	A+B+C+D
Producers’ Surplus	F+G+H	B+F	F+G+H
Tax Revenue	none	C+G	none
Losses			
Pollution Damage	C+D+E+G+H	C+G	none
Social Gain	A+B+F-E	A+B+F	A+B+C+D+F+G+H - costs of accomodation

The Pigovian analysis assumes that the socially efficient quantity (Q_o) will be achieved if only if the polluting firms are required to pay the external costs of their actions. A Pigou tax is one way to create these incentives. If suppliers are required to pay a tax equal to the marginal external costs of their activities, their supply curve will shift up to coincide with the marginal social cost curve. Output will fall to Q_o and social welfare will increase from $(A+B+F-E)$ to $(A+B+F)$, a net gain of E. Another way to achieve the same result would

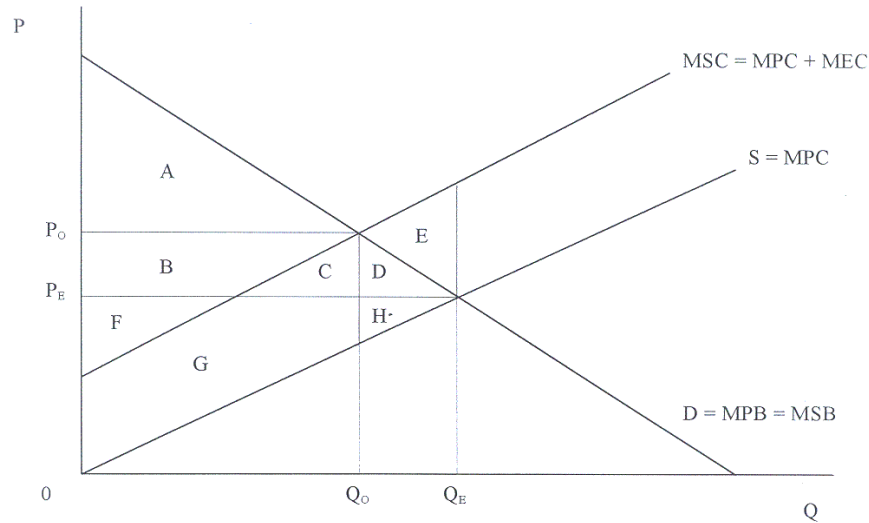


Figure 1: Pigovian Analysis of a Negative Production Externality.

be to institute a liability rule under which suppliers are fully liable for damages imposed upon bystanders. A third possibility is to grant bystanders a property right to clean air. Bystanders then would be entitled to charge suppliers a pollution fee to compensate for any damages. As Landsburg explains, these three methods are “three different ways of describing essentially the same thing” [2002, p. 450]. All three turn external costs into private costs and thus create incentives for suppliers to consider the effects of their pollution when deciding how much to produce.

A standard Coasean analysis, based on the textbook theorem, would point out that the market can move itself to Q_o (assuming that Q_o is the most efficient solution) as long as the relevant property rights are clearly assigned and transaction costs are negligible. Under these conditions the suppliers and bystanders would work out a mutually beneficial set of side payments and the efficient quantity (Q_o) will spontaneously emerge, regardless of the initial allocation of rights. From this perspective the Pigovian approach is flawed because it fails to recognize the efficacy of these privately negotiated bargains.

Coase himself would point out two glaring flaws in these textbook formulations. First, the Pigovian approach assumes that Q_o —the quantity achieved through internalization—is the best possible solution. Other possibilities are ignored.³ To illustrate, consider Deirdre McCloskey’s example of noise pollution around airports [1998, p. 370; 1982, pg. 352-54]:

“We usually think of airplanes as the cause. But wait. Suppose that there were no ears close to the airport. (Or that the ears were easily protected from the noise). In that case the noise would be harmless, and it would be silly to curb it (with a) Pigou and Samuelson tax.”

The standard solution (reducing output to Q_o by taxing the perpetrator) may or may not be the most efficient in this case. If nearby homeowners can be protected from the noise at a relatively low cost (for example, by installing special noise-blocking windows or insulation,

or by altering flight paths or flight schedules), then the best solution may be to eliminate the external costs altogether. In this case the marginal social cost curve would shift down to coincide with the market supply curve and output would remain at Q_E . Social welfare would be $(A+B+C+D+F+G+H)$ minus the cost of implementing this solution. This will be superior to the Pigovian Q_o (where social welfare was $A+B+F$) as long as the accommodation scheme costs less than $(C+D+G+H)$. Coase offers no guarantee that such cost-effective solutions will exist in every case. His only guarantee is that the best solutions will rarely be deducible from a generic textbook diagram.

Second, Coase would remind us that the reciprocal nature of the problem becomes decisive for efficiency when private bargaining is precluded by high transaction costs. In such cases, standard internalization schemes will increase inefficiency unless the “perpetrator” happens to be the low-cost accommodator.⁴ To continue the airplane example, suppose that the least-cost solution is for households to install noise-reducing windows and insulation. This would remove the externality and increase social welfare in the air travel market. On the other hand, if airlines were required to reimburse homeowners for damages, these homeowners would have no incentive to install soundproofing equipment. People would continue to live near airports and fewer flights would be taken due to the added liability costs. Better, in this case, is for households to bear the losses from the noise so that they will take steps to remedy the situation, to society’s benefit.

Coase reaches a similar conclusion in response to Pigou’s claim that British railroads should be liable for the uncompensated damage done to surrounding woods by sparks from railway engines [Coase 1960, pg. 29-34]. Coase maintains that “(i)t is not necessarily desirable that the railway should be required to compensate those who suffer damage by fires caused by railway engines” [1960, p. 31]. He acknowledges that “it would not matter whether the railway was liable for damage caused by fires or not” [p. 31] if transaction costs were zero. But transaction costs in this case were clearly significant, leading Coase to conclude that “from an economic point of view... ‘uncompensated damage’... is not necessarily undesirable. Whether it is desirable or not depends on the particular circumstances” [1960, p. 34].

These examples highlight, as the standard Coase theorem does not, Coase’s stage two argument that “the technological, legal, or moral cause of some damaging externality is not necessarily the correct location for liability for the damages” [McCloskey 1998, p. 354]. When transaction costs are high, efficient accommodation requires a clear and economically correct assignment of liability; only then will the burden of accommodation be borne by the low-cost accommodators. The Pigovian approach yields efficient outcomes only in cases where the perpetrators are the low-cost accommodators. In other cases a Pigovian tax (or equivalent liability rule) will send the wrong signals and become a barrier to efficiency. The standard Pigovian graph is thus a poor guide to policy because it fails to show that “(w)hether it is efficient to tax pollution... depends on the particular circumstances at hand” [Frank 2003, p. 641].

Current Textbook Coverage

The authors surveyed 45 recently published microeconomics textbooks (29 introductory and 16 intermediate) and classified their treatment of externalities as either Coasean or blackboard.⁵ They define Coasean treatments as those that display an understanding of Coase’s arguments in the second part of “The Problem of Social Cost.” It is not necessary to mention Coase by name or to agree with his ideas in order to be classified as “getting it right.” The results are reported in Table 1.

A Few Get it Right

Among recent introductory texts, only Frank and Bernanke [2001], Heyne, Boettke, and Prychitko [2003], Silberberg [1999], and Stockman [1999] present Coase’s Coase. Stockman’s discussion covers both stages of Coase’s argument [Stockman, 1999, p. 475]:

“With sufficiently low transaction costs, the equilibrium is economically efficient regardless of whether firms have the right to pollute, though the law affects who

TABLE 1
Current Textbook Treatment of Externalities

Coasean	
Introductory Texts	Intermediate Texts
Frank and Bernanke [2001]	Eaton, Eaton, and Allen [2002]
Heyne, Bottke, and Prychitko [2003]	Frank [2003]
Silberberg [1999]	Grinols [1994]
Stockman [1999]	Landsburg [2002]
	Pashigian [1998]
Blackboard	
Introductory Texts	Intermediate Texts
Arnold [2001]	Besanko and Braeutigam [2002]
Bade and Parkin [2002]	Browning and Zupan [1999]
Baumol and Blinder [2000]	Hirshleifer and Hirshleifer [1998]
Boyes and Melvin [2002]	Mansfield [1997]
Case and Fair [2002]	Mathis and Koscianski [2002]
Colander [2001]	Neilson and Winter [1998]
Ekelund and Tollison [2000]	Nicholson [2000]
Gottheil [2002]	Perloff [2001]
Gwartney, Stroup, and Sobel [2000]	Pindcyk and Rubinfeld [2001]
Hall and Lieberman [2001]	Schotter [2001]
Mankiw [2001]	Varian [1999]
Mansfield and Yohe [2000]	
McConnell and Brue [2002]	
McEachern [2000]	
Mings and Marlin [2000]	
O’Sullivan and Sheffrin [2000]	
Ruffin and Gregory [2001]	
Samuelson and Nordhaus [2001]	
Schiller [2000]	
Slavin [2002]	
Stiglitz and Walsh [2002]	
Taylor [2001]	
Tregarthen and Rittenberg [2000]	
Tucker [2000]	

makes side payments to whom. With high transaction costs, however, laws and property rights affect the equilibrium quantity, perhaps producing an economically inefficient equilibrium.”

Stockman demonstrates how “(s)ide payments can internalize externalities in situations with sufficiently low transaction costs” [p. 475] but goes on to observe that “(i)n reality, side payments do not internalize all externalities.... High transaction costs make side payments

impractical when it is too difficult or costly to bring people together, bargain and agree on side payments, and enforce an agreement” [p. 475]. In such cases property laws will affect economic efficiency, for better or worse. “Laws and property rights... (will) affect marginal private costs, so they (will) affect equilibrium prices and quantities” [p. 475].

Heyne et al. [2003] present a distinctly Coasean analysis of externalities as conflicting claims of right [p. 313] in a world of ubiquitous transaction costs where “the direction in which compensation ought to be paid (is) often unclear” [p. 302]. Frank and Bernanke [2001] emphasize the reciprocal nature of externality problems [p. 277] and the idea that laws and regulations [such as traffic laws, zoning laws, environmental protection laws, and free speech laws] can promote efficiency in situations where negotiated solutions are not practical, provided that “they place the burden of accommodation on the parties who can accomplish it at the lowest cost” [Frank and Bernanke, 2001, pg. 292-93]. Silberberg [1999] develops a similar series of examples (including the impact of major league baseball’s reserve clause and fault vs. no-fault divorce laws) to “to illustrate the generality of transaction cost problems” and the impact of legal rules on the allocation of legal entitlements and other resources.

Among current intermediate textbooks, only Eaton, Eaton, and Allen [1999], Frank [2003], Grinols [1994], Landsburg [2002], and Pashigian [1998] “get it right.” Landsburg, Pashigian, and Frank provide the most rigorous illustrations of what Grinols calls Coase’s second theorem: “If bargaining is costly and information is imperfect, then liability rules help achieve optimality, and the party that has the least costly way of dealing with the harmful effects of an externality should be made responsible for paying the costs associated with the externality” [Grinols, 1994, p. 551]; otherwise “(a)n improper assignment of property rights (will lead) to a higher marginal social cost and to a socially inferior solution” [Pashigian, p. 715 and pg. 711-12]. Eaton, Eaton, and Allen offer a different view of Coase, suggesting that his analysis is best understood as positive (looking at what the courts did) rather than normative [2002, pg. 580-81]. This highlights Coase’s respect for the economic wisdom of English common law judges who, as Posner points out, “were quicker than the economists to recognize the reciprocal nature of pollution—the sense in which pollution is as much caused by the victim as by the polluter” [Posner, 1993, p. 201].

These exemplary treatments demonstrate the uniqueness of Coase’s anti-blackboard approach and the weaknesses of standard textbook approaches. Equally, they show that Coase’s insights do not end but rather begin once we enter the world of positive transaction costs.

Most Get it Wrong

The survey found that only 14 percent of current introductory microeconomics texts (4 of 29) and 31 percent of current intermediate texts (5 of 16) present Coase’s stage two arguments. The rest (80 percent overall) do not. This 80 percent comprises a broad range, from texts that make little or no mention of Coasean ideas in their discussions of negative externalities to those that discuss Coase in unusual detail yet stop short of presenting his stage two arguments.⁶

Arnold [2001] and McEachern [2000] lie at the latter extreme. In a section titled “Pigou versus Coase,” Arnold stresses Coase’s argument that “it is not clear that the state should tax the person imposing the negative externality (due to) the reciprocal nature of externalities” [p. 709] but does not explain the circumstances under which such a tax would or would not be justified on efficiency grounds. McEachern likewise distinguishes the Coase analysis of externalities from “the traditional analysis of externalities (which) assumes that market failures arise because people ignore the external effects of their actions” [2000, p. 380] and calls attention to Coase’s argument that “the efficient solution to the externality problem depends on which party can avoid the problem at lower cost” [McEachern, 2000, p. 381].

Then, much like Stigler, he stops, saying that “When the number of parties involved in a transaction is high, the chance for a voluntary agreement is small” [p. 381]. He offers no analysis of positive transaction cost cases or any hint of Coase’s contributions toward such an analysis. So one could easily infer from McEachern’s otherwise sophisticated discussion that government-engineered internalization schemes are the only feasible solution to negative externality problems when transaction costs are positive.

The majority of current texts provide a paragraph or two on Coase and his ideas, including a statement of Stigler’s theorem such as “If property rights are well defined and if bargaining is costless, then the private market can achieve an efficient outcome regardless of which of the affected parties holds the property rights” [Tregarthen and Rittenberg, 2000, p. 357]. Some add the assumption that “the number of people involved is small” [McConnell and Brue, 2002, p. 625] or specify the absence of strategic behavior [Pindyck and Rubinfeld, 2001, p. 640]. All convey the standard Stiglerian themes: “private actors can solve the problem of externalities among themselves” [Mankiw, 2001, p. 214]; “the invisible hand is considerably more effective than previous discussions of externalities may have suggested” [Hirschleifer and Hirschleifer, 1998, p. 490]; and, therefore, “you don’t always need government to create an efficient use of resources when externalities arise” [Gottheil, 2002, p. 335; original emphasis].

But Aren’t We All Coaseans Now?

Today’s textbooks are generally more circumspect about government solutions to negative externalities and more hopeful about private solutions than their predecessors 15-20 years ago. Even Samuelson and Nordhaus now strike a more balanced tone [2001, p. 378]:

“A common presumption is that some kind of government intervention is necessary to overcome the market failures associated with pollution and other externalities. In fact, modifications of property rights rather than direct government action can sometimes lead to an efficient outcome.”

Perhaps the most striking example is Mankiw [2001]. In contrast to the old Samuelson genre, Mankiw’s whole discussion of externalities is notably cautious. Where Samuelson would simply have asserted that externalities cause market failure and that government intervention is therefore required, Mankiw will say only that “externalities tend to cause markets to be inefficient” [2001, p. 212; emphasis added] and that “(G)overnment action is not always needed to solve the problem. In some circumstances, people can develop private solutions.... In the real world, however, bargaining does not always work.... When private bargaining does not work, the government can sometimes play a role” [pg. 212-15]. Baumol and Blinder, whose discussion contains no reference to Coase, also emphasize the likelihood of “government failure” [Baumol and Blinder, 2000, p. 279]. Many current texts convey this quasi-Coasean pragmatism about externality problems: presenting a range of solutions, from informal voluntarism to government regulations, stressing the pros and cons of each.

From a Coasean standpoint, however, this pragmatic spirit is still attached to a thoroughly Pigovian way of thinking. Externalities are still posed as perpetrator or victim problems (A harms B) whose possible solutions are limited to standard internalization schemes. And Coase’s ideas, in the guise of Stigler’s theorem, are mostly cast as logical but impractical answers to the Pigovian question: How to restrain A from harming B?

Mankiw is again a good example. His discussion of possible solutions proceeds from pure private solutions to pure government control and finally to his preferred options: Pigovian taxes and tradable pollution permits. Purely private solutions (including negotiation a la the standard Coase theorem) are praised for their appealing logic but rendered doubtful by the fact that “private actors on their own often fail to resolve the problems caused by

externalities... because of transaction costs" [p. 214]. Government regulation (command and control) is also deemed logical but inefficient [pg. 215-16]. By implication, the best solutions are those that employ a combination of government and market forces (such as Pigovian taxes) to "[require] decision-makers to bear the full costs of their actions [and thereby efficiently]... internalize the externality of pollution" [p. 220]. Mankiw's discussion is instructive because it purports to be so even-handed and complete; yet on closer inspection it is confined to a Pigovian framework in which Coase's insights are effectively crowded out. The name Coase stands for nothing more than an "invisible hand solves all" approach whose impracticality serves to persuade the reader that Pigovian internalization schemes are the only sensible answer to most externality problems. This is precisely the old Samuelson and Pigou argument, casting the Pigovian approach as the ideal economic compromise between the two extremes of laissez faire (impractical private solutions) and statism (inefficient command and control).

There is, nevertheless, a Coase-friendly spirit in these recent texts, a willingness to say that "even where government action is appropriate, we must consider market-like instruments to correct market mechanism deficiencies" [Baumol and Blinder, 2000, p. 279]. For economists who wish to pursue this line of thought, and to help their students to do so, a Coasean perspective offers some valuable tools. One person who might've wished to get more mileage out of Coase's ideas was old Pigou himself, the economist who ultimately came to doubt the government's ability to solve externality problems [Pigou, 1954, p. 6]:

"These gaps, positive and negative, between private and public costs were not much in people's minds until recently. Now everybody understands them. It must be confessed, however, that we seldom know enough to decide in what fields and to what extent the State, on account of them, could usefully interfere with individual freedom of choice. Moreover, even though economists were able to provide a perfect blueprint for beneficial State action, politicians are not philosopher kings and a blueprint might quickly yield place on their desks to the propaganda of competing pressure groups."

One can imagine a lively and enlightening dialogue between this 1954 Pigou and the 1960 Coase concerning possible solutions to rights conflicts in the real world of scarce knowledge, competing pressure groups, and positive transaction costs. Yet in most of our textbooks and classrooms, Coase's approach is excluded from this conversation. Most students encounter only a Stiglerian Coase whose perfect-market theorem is of little use in trying to imagine rational responses to entrenched social conflicts such as wars, labor-management disputes, and environmental degradation. Perhaps one way to increase the positive spillovers from our microeconomics courses might be to encourage students to look anew at these age-old problems from the standpoint of "how can A and B better accommodate one another's interests?" rather than "how can we restrain A from harming B?".

Conclusion

Most current microeconomics textbooks fail to recognize the conceptual, methodological, and policy differences between Coasean and blackboard (Pigou, Stigler, Samuelson) approaches to externalities. Treatments are better at the intermediate level and better still in certain field texts.⁷ But overall we find David Friedman's 1991 statement to be correct: "(T)o a considerable extent, what is taught in the textbooks is the (externality) theory as it existed before Coase."

These findings are potentially useful to economic educators who are looking to enhance their students' critical thinking skills. A Coasean approach encourages students to think

beyond the victim or perpetrator model. It gives them the tools to understand laws and policies (such as no-fault divorce, or laws allowing noisy commercial aircraft to fly over private property without permission or compensation)⁸ that simply do not make sense from a Pigovian standpoint. More generally, a Coasean approach can help students to move beyond the initial stage of intellectual development that William Perry [1970] and Craig Nelson [1989] describe as “dualism” [Nelson, 1989, p. 17]:

“In this mode, the intellectual world is seen dualistically... ideas seem clearly right or wrong. Students assume that valid questions have certain answers and that teachers should teach those answers or unambiguous rules for finding them.”

Microeconomics courses may inadvertently reinforce dualistic thinking inasmuch as they (we) teach students to analyze problems for which a single correct answer—for example, an optimal allocation of resources—can be deduced from a graph, table, or set of equations. There is no simple relationship, to be sure, between teaching methods and students’ intellectual development. Some students (especially those able to think in non-dualistic ways) will find plenty of stimulus for critical thinking in conventionally taught courses. Cooter seems to have had this experience in teaching, of all things, the standard Coase theorem: “Anyone who has taught the Coase Theorem to fresh minds has experienced first hand the wonder and admiration which it inspires” [1987, p. 457]. At worst, however, these blackboard approaches inhibit students’ intellectual growth by modeling “the economic way of thinking” as a deductive search for a single correct answer.

Coase’s critique of blackboard economics arose from a similar concern. With regard to externality problems in particular, he believed that professional economists had become too dependent upon the Cold War dualism of markets-vs.-government [1960, p. 43]:

“The usual treatment of [externality] problems... proceeds in terms of a comparison between a state of laissez faire and some kind of ideal world.... A better approach would seem to be to start our analysis with a situation approximating that which actually exists, to examine the effects of a proposed policy change and to attempt to decide whether the new situation would be, in total, better or worse than the original one. In this way, conclusions for policy would have some relevance to the actual situation.”

Viewed in this light, a Coasean approach to externalities opens the door to a rich critical thinking exercise. The objective is well defined (to choose “those legal rules, procedures, and administrative structures which will maximize the value of production” [Coase, 1988, p. 28]) but, as Coase would emphasize, the institutional means of achieving it are variable and uncertain. Students are forced to choose among second-best alternatives without any theoretical guarantee that their preferred solution will be welfare-improving.⁹ They face genuine uncertainty, the essential first step towards critical thinking.¹⁰ They also discover that in such an uncertain world it is impossible to draw or defend policy conclusions without recourse to normative criteria.¹¹ This brings them to the highest levels of critical or Coasean thinking wherein “previously hidden value judgments [are] made explicit in the comparison of [the alternatives]” [Medema 1994, p. 94].

Coase’s contributions are as novel and important in our post-Cold War world as they were in 1960. His departure from the blackboard economics of Pigou, Stigler, and Samuelson was an attempt to increase “critical thinking” among professional economists. Perhaps today it can inspire us to develop new pedagogies (for example, case-study methods) to achieve similar goals with our students.

Footnotes

¹Pigou did not use the term externality, nor did Coase. The term emerged as a shorthand for Alfred Marshall's "external economies and diseconomies" in a series of articles by Meade [1952], Scitovsky [1954], Bator [1958], and Samuelson [1958]. Coase disliked the term because of its suggestion of the need for intervention by an external agent [Coase, 1988, pg. 26-7].

²Coase defines transaction costs as search, bargaining, and enforcement costs [1960, p. 16].

³In contrast, the standard Coase theorem does not assume that the Pigovian Q_o is efficient. As Landsburg explains [2002, p. 456]:

"In the absence of transaction costs, (suppliers and bystanders) will find the most efficient of all possible solutions and agree to a system of reimbursements or bribes that will make them both better off. The most efficient outcome could be either a cutback in production to Q_o or some scheme for eliminating or reducing (the harmful effects). There is no way to determine this outcome from the information available in the graph".

⁴In the absence of transaction costs, the legal location of liability would be irrelevant—neither necessary nor an impediment—to the achievement of efficiency since private bargaining would ensure that the burden of adjustment was (re)allocated to the low-cost accommodator.

⁵Blackboard economics is Coase's term for policy prescriptions based on ideal theoretical worlds that "live in the minds of economists but not on earth" [1994, p. 3].

⁶Most textbooks implicitly recognize the "reciprocal nature" of externality problems through their focus on economic efficiency, that is, the search for the best possible compromise among the interested parties. To say, for example, that "the optimal quantity of pollution is not zero" [Colander, 2001, p. 383], is to say that someone will be harmed no matter what happens and therefore that "the problem is to avoid the more serious harm" [Coase, 1960, p. 2]. In this respect Coase and Pigou share the same goal: efficiency. But their analyses and policy prescriptions could hardly be more different. In principle, Pigovians see emissions taxes (or equivalent forms of liability) as a perfect solution whereas Coase sees them as a possible source of further inefficiency depending on the particular circumstances of the case (including the level of transaction costs).

⁷The authors' research has not yet extended to field texts, though casual inspection of several urban economics textbooks revealed two older ones [Mills and Hamilton, 1994; Hirsch, 1984] in which Coase's Coase is clearly recognized.

⁸These examples are drawn from Eaton, Eaton, and Allen [2002], Silberberg [1999] and Frank [2003]. Frank cites several other examples in which courts have placed the burden of accommodation on victims in the name of efficiency [Frank, 2003, pg. 627-30].

⁹This argument is formalized in Lipsey and Lancaster's general theory of second best [1956]. Once outside the perfect world of Pareto-optimal general equilibrium [Lipsey and Lancaster, 1956, p.23]: "the theory of second best leads to the conclusion that there are in general no sufficient conditions for an increase in welfare."

¹⁰"The first task in fostering critical thinking is convincing students that the subject encompasses meaningful uncertainty" [Nelson, 1989, p. 18].

¹¹In the final section of "The Problem of Social Cost," Coase [1960, p. 43] writes, "It is, of course, desirable that the choice between different social arrangements for the solution of economic problems should be carried out in broader terms... As Frank Knight has so often emphasized, problems of welfare economics must ultimately dissolve into a study of aesthetics and morals."

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