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## Posnerian rhapsody: The role of the coase theorem in economic analysis of law

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POSNERIAN RHAPSODY:

THE ROLE OF THE  
COASE THEOREM IN  
ECONOMIC ANALYSIS  
OF LAW

STEVEN G. MEDEMA

CHOPE Working Paper No. 2023-08

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CENTER FOR THE  
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## Posnerian Rhapsody:

### The Role of the Coase Theorem in *Economic Analysis of Law*

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**Abstract:** This paper examines the evolving role played by the Coase theorem over the several editions of Richard Posner's *Economic Analysis of Law*. In doing so, the paper shows both the grounding of Posner's efficiency norm in the theorem's logic and his increasing emphasis on the theorem's invariance claim as its key feature. While Posner's analysis in the book relies increasingly on the Coase theorem over time, its role became much more that of a thought construct, or benchmark for legal reasoning, than an operational proposition about legal adjudication.

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## Posnerian Rhapsody:

### The Role of the Coase Theorem in *Economic Analysis of Law*

Abstract: This paper examines the evolving role played by the Coase theorem over the several editions of Richard Posner's *Economic Analysis of Law*. In doing so, the paper shows both the grounding of Posner's efficiency norm in the theorem's logic and his increasing emphasis on the theorem's invariance claim as its key feature. While Posner's analysis in the book relies increasingly on the Coase theorem over time, its role is much more that of a thought construct, or benchmark for legal reasoning, than an operational proposition about legal adjudication.

«Is this the real life? Is this just fantasy? ... Nothing really matters ... Any way the wind blows ...»

Freddie Mercury<sup>1</sup>

«... the Coase Theorem ... is about the invariance of the initial assignment of rights when transaction costs are zero (or low)».

Richard Posner<sup>2</sup>

«The invariance result is sort of a 'red-herring.' The entire line of argument from Pigou to Coase is based on efficiency, not invariance».

Harold Demsetz<sup>3</sup>

If George Stigler can rightly be labeled «the first apostle of the Coase theorem», Richard Posner might well stand next to him as its most influential.<sup>4</sup> As important as the work of Ronald Coase (1960), Guido Calabresi (1961; 1970), and Gary Becker (1968) was for the eventual development of the field, Posner's 1973 treatise, *Economic Analysis of Law*, showed legal scholars and economists alike, and in magisterial fashion, the insights that can be gleaned from the application of economic analysis to issues across the legal spectrum. It is fair to say

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<sup>1</sup> Freddy Mercury, «Bohemian Rhapsody». *A Night at the Opera*, EMI Records, 1975.

<sup>2</sup> Personal correspondence with the author, May 12, 2012.

<sup>3</sup> Personal correspondence with the author, June 29, 2012.

that Coase's analysis in «The Problem of Social Cost» (1960), not least his passing remark about the potential efficiency of the common law, was foundational to much of Posner's work.<sup>5</sup> The present paper, though, takes up a different line of influence: that of the Coase theorem, as it came to be called, on Posner's thinking, particularly as evidenced in *Economic Analysis of Law*.<sup>6</sup>

The Coase theorem tells us that, under certain assumed conditions, legal rights will find an efficient ultimate resting place regardless of how they are initially assigned by the court (the efficiency claim), and that the associated allocation of resources will be invariant across initial specifications of those rights (the invariance claim). In time, the theorem became a cornerstone of the economic analysis of law, though this was no part of Coase's intention when formulating his insight. It is also fair to say that Posner deserves no small amount of the credit—or, depending on one's perspective, the blame—for this. It was Posner who, more than anyone, exposed legal scholars, law teachers, and law students to the economic analysis of law during the field's formative period. His almost immediate influence as *the* exponent of (and missionary for) the economic approach to law gave him an outsized influence in shaping how the Coase theorem and its import came to be understood by multiple generations of scholars and students alike.<sup>7</sup>

All of this is relatively uninteresting if one considers Posner little more than a passive vessel through which knowledge of the Coase theorem was poured out to the legal community.

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<sup>4</sup> Bertrand (2018). On Stigler and the Coase theorem see also Marciano (2018) and Medema (2011; 2023a).

<sup>5</sup> Posner's earliest comments about the efficiency of the common law antedate *The Economic Analysis of Law*. See Posner (1971, 222; 1972a, 33), as well as Coase (1960, 20-24).

<sup>6</sup> While the theorem also makes numerous appearances in Posner's scholarly research and in the opinions written during his tenure as a U.S. federal court judge, space limitations preclude a treatment of those in the present paper. The view that emerges from these other sources, however, is largely consistent with that discussed here. On Posner's use of the Coase theorem in his judicial opinions, see Medema (2019).

<sup>7</sup> That said, Posner cannot be credited with the early diffusion of the Coase theorem into the community of legal scholars. That was the work of Guido Calabresi, through both his writings and his teaching during the 1960s at Yale Law School (Medema, 2014a).

But this would be to miss the more important point. Posner's understanding of Coase theorem shaped key aspects of his approach to the economic analysis of law. Complicating things even further is the fact that perceptions of the theorem's meaning, import, and even correctness as a proposition in economic theory were very much in flux throughout the last third of the twentieth century (Medema, 2020). One artifact of this was an evolution in Posner's view and treatment of the theorem that plays out across the early editions *Economic Analysis of Law*. In short, though Posner was at once shaped by and participated in shaping professional understandings of the Coase theorem, one cannot understand Posner's view on the theorem's role in the economic analysis of law without tracing how that view unfolded and evolved over time.

### **I. Finding Coase and Becoming Posner**

Posner's interest in applying economics to the law antedates his exposure to, and immersion in, the Chicago milieu, as does his initial encounter with Coase's article. The latter came in late 1967 or early 1968, not long before he took up his first academic position at Stanford, while Posner was working as the general counsel of President Johnson's Task Force on Telecommunications Policy. As Posner recalled it,

Someone on the staff, I forget who, showed me Coase's «Problem of Social Cost». It was in a library copy of the JLE [*Journal of Law and Economics*] and a reader had scribbled all sorts of critical comments in the margins, basically dismissing it as nonsense. I read the article and found it completely convincing. Never having read or even heard of Pigou, I had nothing to unlearn in order to accept Coase's analysis.

(Posner to the author, July 16, 2012)

Indeed, looking back on that period several decades later, Posner considered lawyers' lack of «commitment» to Pigou the main reason why they were, on average, more accepting of the

Coase theorem than were economists. Lacking Pigovian blinders, Posner said, Coase's result was «obviously right» (Posner to the author, May 12, 2012).<sup>8</sup>

Posner arrived at Stanford in the late summer of 1968, already interested in applying economic analysis to antitrust. This interest led him to introduce himself to Aaron Director, who had retired from Chicago some years earlier but had an office at the Stanford Law School. While it might be tempting to infer that Director set Posner on his course to applying economic analysis to the far-flung corners of the law, this was not the case. Director, as Posner has noted, had little interest in applying economics to other fields. Instead, Posner says,

Aaron's significance for me was (1) he taught me how to think like a Chicago economist and (2) he introduced me to Stigler and Coase, and in this and other ways was instrument [sic] in my moving to Chicago after only one year at Stanford. (Posner to the author, October 3, 2006)

Posner first met Stigler only a few months after that initial visit with Director and later reported that these encounters were the «decisive» ones for him—Director and Stigler being the individuals from whom he «really learned price theory». Interestingly, his education came «Orally». Though Stigler was the author of a best-selling price theory textbook, Posner found the book «too compressed and elliptical for me to get much out of it». Beyond that, his education was, in his words, «very unsystematic!»:

I have done little reading in economics textbooks. I read of course Coase's and Demsetz's articles, and many of Stigler's, lots on antitrust and public utility regulation, and later Becker, as well as the law and economics articles of the era—Turner, Calabresi, Baxter. Some other stuff too, which I don't remember very clearly. I sat in

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<sup>8</sup> Posner's remarks about the benefits of not having been exposed to the Pigovian approach echo Stigler's commentary in his 1966 textbook presentation of Coase's result. See Stigler (1966, 113).

on some lectures George gave at Stanford on regulation, but that's it as far as sitting in on lectures was concerned. I did hire a graduate student when I came to Chicago to help me with calculus and econometrics. (Posner to the author, April 25, 2007)

The effect of all of this, though, was rather immediate, as shades of his 'Chicago' education began to emerge in Posner's writing already in 1969.

## **II. Before 1973**

Posner's first published application of Coase's result came not long after his Chicago conversion, in a 1969 article on «The Federal Trade Commission».<sup>9</sup> When discussing the role played by the law of contracts in protecting consumers, Posner noted that, in situations where parties are in a contractual relationship, it might be useful to classify injuries caused to one party by another—e.g., injuries to passengers or crew resulting from a plane crash—as breaches of contract, reserving tort law for situations where the parties involved are not in a contractual relationship. We could thus dispense with government regulation of airline safety, relying on the airlines to negotiate with crew and customers a set of mutually agreeable wages and ticket prices that take safety considerations into account. A plane crash resulting from the airline's failure to perform according to the agreed upon safety terms would then be treated as a breach of contract, leaving the airline liable for death or injury and obviating the need for recourse to the tort system (Posner, 1969, 64n.76).

Though Posner's 1969 article made no reference to the source of this insight, its origins became clear two years later in his article, «Killing or Wounding to Protect a Property Interest» (1971), when he turned to a discussion of the implications of that topic for questions of liability more generally:

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<sup>9</sup> See Posner (1969). His choice of title seems to intentionally parallel that of the article in which Coase (1959) made his initial statement of the result that came to bear his name.



One might also question the assumption that the rules of liability prescribed by the tort law actually affect conduct. As Professor Coase has shown, where transactions between interfering parties can be effected without cost, the market will bring about an optimum adjustment between the interfering activities regardless of the rule of liability initially prescribed by the law. (Posner, 1971, 224)

While allowing that transaction costs may well preclude such negotiations, Posner argued that negotiations should be feasible when the parties involved are already in a contractual relationship, meaning that the allocation of risk could be negotiated into prices paid and received. As such, he concluded, «Coase’s insight, were it taken seriously, might lead to a redefinition of the boundaries of tort law that excluded all sorts of accidents and injuries incidental to» contractual relationships (224, citing Posner, 1969, 64n.76, discussed above).

A modern student of the Coase theorem will immediately recognize this insight about pre-existing contractual relationships as an obvious extension of Coase’s result. However, the insight owes not to Coase, or even Posner, but to Guido Calabresi, who for a decade had made it a centerpiece of his economic analysis of accident law. Calabresi had first laid out this contention in his classic 1961 article, «Some Thoughts and Risk Distribution and the Law of Torts», and further refined it over a series of publications that culminated with his highly influential book, *The Cost of Accidents* (1970). The major difference between Coase’s result and Calabresi’s was that Coase posited harmful effects as the subject of negotiation between small numbers of parties whereas Calabresi’s analysis contemplated a competitive markets environment that internalized external costs through the mechanisms of demand and supply.<sup>10</sup>

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<sup>10</sup> See, e.g., Calabresi (1961; 1965a; 1965b; 1967; 1968), as well as the discussion in Medema (2014b) and Marciano and Medema (2020). Calabresi’s 1961 article was the culmination of work begun when he was a law student at Yale in the 1950s, and he did not encounter Coase’s article until after his own was published. Nor was Calabresi, by his own admission, original here, as this market-based invariance claim could be found in the economics literature on workers’ compensation law going back to the early part of the century

As it happens, Posner had reviewed Calabresi's book for the *University of Chicago Law Review* in 1970, welcoming Calabresi's suggestion that, in theory at least, parties in a pre-existing voluntary contractual relationship can be expected to internalize potential accident-related costs. Where he parted company with Calabresi, in fact, was in the latter's contention that various market imperfections—in particular, the inability of individuals, for psychological and information-related reasons, to properly evaluate risk—render the theory largely inapplicable. The reality of individual risk aversion, Posner argued, obviates the first of these concerns, while the second «should not be a serious problem in a competitive economy» (Posner, 1970, 640-641). Posner, it seems, had absorbed his Stigler very well.<sup>11</sup> But the result was that, by the time he came to write the «Killing or Wounding» paper a year later, Posner had effectively melded Calabresi's conclusion into Coase's. That is, in Posner's hands Coase's result worked through the media of both bargaining and impersonal market processes. Perhaps not surprisingly, both of these expressions of Coase's result were to figure in Posner's later work.

Posner's discussion of Coase's result to this point had followed Coase, Stigler, and Calabresi in emphasizing the efficiency of ultimate outcomes. Though this is completely in keeping with expectations from the scholar who made the pursuit of efficiency through law a signal virtue, the fact is that Posner's understanding of the Coase theorem was evolving. The first indication of this came in a 1972 assessment of regulation in the cable television industry, where Posner weighed in on the question of whether cable television companies should have to pay to rebroadcast the signals of broadcast stations. Posner argued that though economic

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(Calabresi, 1961, 506n.23).

<sup>11</sup> Stigler's views on the explanatory power of the individual rationality postulate and on the efficacy of competitive markets are well known. Stigler (1966) provides a basic overview, but a beautiful illustration of both of these views in a Coase theorem context can be found in Stigler (1989). Though published some two decades after the period under discussion here, Stigler's archive reveals that he had been musing on these matters at least since the late 1960s.

analysis «lends little support» to arguments for imposing limitations on rebroadcast, it also cautions against assuming that such limitations would impede the growth of cable television services. The reason, he argued, could be found in Coase: «Where transactions are permitted and are feasible, the initial assignment of legal liability will not affect resource use» (Posner, 1972b, 121). Having said this, Posner immediately followed up by emphasizing that «The qualifications in this statement must not be ignored: The parties must be free to bargain, and transactions must not be prohibitively costly».

Two aspects of these remarks are worth noting. First, though Posner had insisted on «zero» transaction costs in previous writings, here he tells us that Coase’s result holds in an environment where transaction costs are positive, but low enough to permit bargaining.<sup>12</sup> This represents a movement away from Coase’s own 1960 position, which emphasizes that efficiency and invariance are only assured if transaction costs are *zero*, in favor of a dramatic expansion of the theorem’s domain. The implication is that, in Posner’s hands, the theorem was more than a theoretical curiosity; it was an operational result on which the law could rely in a variety of circumstances.

A second instance of evolution evidenced in Posner’s 1972 remarks is his emphasis on Coase’s invariance claim—that the ultimate allocation of resources is unaffected by the legal decision—as opposed to the efficiency claim that had been central to his earlier invocations of Coase’s result. As we shall see, invariance was to become increasingly central for Posner, and a clue as to why can be found in his review of Calabresi’s book. There he notes that both Coase and Calabresi had shown us that it is not always a simple matter for the court to determine the efficient course of action. But if the Coase theorem tells us, in effect, that the

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<sup>12</sup> More recent scholarship has demonstrated that this claim is incorrect—that the Coase theorem’s efficiency and invariance claims cannot be sustained in a regime of positive transaction costs. See, e.g., the discussion in Medema (2020).

judge's decision does not matter, this obviates any concerns about an inefficient initial placement of rights emerging from the legal process so long as transactions are, as Posner put it, «feasible».

### **III. The *Economic Analysis of Law***

Even knowing Posner's prodigious capacity for work and his ability to crank out books and papers at a seemingly superhuman rate, it is shocking to realize that he drafted *Economic Analysis of Law* during the summer of 1972 (Domnarski, 2016, 73). Given the paucity of literature in the field on which he could rely in formulating his analysis, Posner's ability to apply economic thinking—to which he was still relatively new at that point—across the legal spectrum at this stage was remarkable, and a signal of the extent to which he had not only absorbed the lessons learned from Stigler, Becker, Director, and Demsetz but was able to translate them into insights about the law.<sup>13</sup> And while Coase was no fan of Posner's project—in fact was openly hostile to it—the result that bears his name is very much the backbone of Posner's analysis in the book.<sup>14</sup>

Though the use of the Coase theorem as an analytical device pervades Posner's treatise, the reader's introduction to Coase came not through «The Problem of Social Cost», but instead through its predecessor, «The Federal Communications Commission» (Coase, 1959). The subject was property law, the topic of the book's second chapter, where Posner used Coase's 1959 discussion of broadcast frequency allocation to illustrate how economic thinking changes one's perspective on property rights.<sup>15</sup> This set the stage for the analysis of «incompatible uses» a few pages on, which found Posner introducing the topic via Coase's

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<sup>13</sup> Posner's debt to Demsetz is discussed in Posner (1973, xi).

<sup>14</sup> Domnarski (2016, 66-67) provides a discussion of the tensions that arose between Coase and Posner already in the early 1970s.

<sup>15</sup> As is now well known, a disagreement with Director and other Chicagoans about the argument in the FCC paper is what led Coase, at Director's instigation, to write «The Problem of Social Cost». See Medema

(and Pigou's) example of damage caused by sparks from a railroad engine.<sup>16</sup> When flying sparks set fire to the farmer's crops, Posner noted, the legal question is whether the emission of sparks is simply a byproduct of the railroad's property right or, instead, an invasion of the farmer's. While this would seem to be a fundamental distinction, Posner turns the tables by asking, «Does anything turn on the answer?» (1973, 16) He then proceeded to lead the reader through a simple numerical example to show that it does not—or at least might not. Drawing on Coase's logic, Posner showed that the farmer and the railroad have an incentive to reach an agreement that maximizes joint property values if the original assignment of rights does not accomplish that from the outset. Based on this, he concluded that,

Whatever the relative values of the competing uses, it seems that the initial assignment of rights does not affect which use ultimately prevails. The efficient, or value-maximizing, accommodation of the conflict will be chosen whichever party is granted the legal right to exclude interference by the other (1973, 17).

Though Posner does not label this result the 'Coase theorem'—he did not use the term in the book until the second edition—he states that it «was *demonstrated* in Ronald Coase's important article, *The Problem of Social Cost*» (17n.1, emphasis added).<sup>17</sup>

Having traced out the economic logic underlying Coase's result, Posner immediately inserted a lengthy footnote that elaborates the other major themes of Coase's 1960 article and, more importantly for our purposes, softens the claim that he had just made:

A qualification of the Coasian analysis should be mentioned here: The initial

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(2023b).

<sup>16</sup> Interestingly, Posner chose the railway sparks example, from much later in Coase's paper, rather than the farmer-rancher illustration that has come to be so closely associated with the Coase theorem. Though both illustrations have their roots in the law, one possible explanation for Posner's choice is the greater prominence of the railway sparks example in common law history. On the origins of the farmer-rancher illustration, see Medema (2023b).

<sup>17</sup> Posner's first published reference to a «Coase theorem» appears to have been in his 1975 *Texas Law*

assignment of rights, even where transaction costs are zero so that efficiency is not affected, may affect the relative wealth of the parties and this may affect the use of resources in two ways. First, if the parties do not spend their money in identical ways, a shift of wealth between them will alter demand for the various goods and services that they buy, however slightly. Second, where the right ends up may depend on how the initial assignment is made, if the value of the right represents a large fraction of the wealth of either party. (Posner, 1973, 18n)<sup>18</sup>

Lest the reader be inclined to dismiss Coase's result based on these qualifications, Posner was quick to insist that «Neither point undermines Coase's conclusion that *efficiency* is unaffected by the rule of liability if transaction costs are zero» (1973, 18n, emphasis added). But Posner was not convinced that these qualifications had much force against the invariance claim either, hinting that they had little «practical significance» (18n) and so could safely be ignored.

Another Chicago lesson learned.

Of greater concern, for Posner, was the effect of transaction costs, the reality of which meant that one could not move directly from Coase's insight to the conclusion that «the initial assignment of rights is immaterial from an economic standpoint». But here Posner found another source of guidance from Coase's result—that «*efficiency is promoted by assigning the legal right to the party who would buy it ... were it assigned initially to the other party*». The reasons, he argued, are two. First, this approach minimizes the need for costly transactions. Second, it ensures that the outcome will be efficient in those cases where transactions are cost-prohibitive and the court's decision thus determines a right's final resting place (18,

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*Review* overview of the economic approach to law (Posner, 1975).

<sup>18</sup> Posner (rightly) credits Ezra Mishan (1967) for this insight.

emphasis added).<sup>19</sup>

The combination of these two insights—one taken from life absent transaction costs and one from their presence—led Posner to «an economic principle» for deciding among conflicting uses: Assign the right to the party who values it most highly. Why? Because in doing so, «the law can anticipate and thus obviate the necessity for a market transaction» (18). This prescription has often been given the ‘mimic the market’ moniker in the subsequent literature, but that is to miss the essence of Posner’s point. He is not making a market-centric argument, that «The market would give us outcome  $x$ , and that the judge should import market outcomes into the law». His argument, instead, is agent-centric: Coase’s result shows us what would happen if the parties were left to their own devices and transaction costs did not get in the way: They would land on an outcome that placed the right where it was valued most highly. This comes through clearly in Posner’s discussion of the ‘duty to rescue’ in his chapter on torts. There he argues—against common law precedent—that if one can assume person  $A$ , who is in need of rescue, would have been willing to pay enough to induce  $B$  to rescue her, then  $B$  should be liable if he fails to lend aid (76). The court’s job, then, is to do the agents’ collective bidding and replicate that outcome—whether because transaction costs prevent them from getting there themselves or to save them the costs of doing so.

Those inclined to ‘Chicago’ caricatures may be surprised by the attention Posner gave to the problems posed by transaction costs—to issues such as uncertainty about with whom to transact, hold-out problems, having to negotiate with multiple agents, and free-riding—as impediments to the application of Coase’s result (24-25). He was certainly willing to contemplate the result’s operation in two-party contexts, such as property rental and leasing agreements, arguing that it is a relatively simple thing for parties to draft protective terms into

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<sup>19</sup> Posner allows that determining the efficient placement of rights may be difficult in cases that are more

contracts where justified (31). But even here Posner cautioned against excessive exuberance, emphasizing that «it should not be thought that two-party transaction costs are always low», for if they were «the United States and the Soviet Union would long ago have divided the world between them» (31n.1). Ironically, Posner was particularly concerned about the problems posed by bilateral monopoly—ironic because this was also the source of Paul Samuelson’s hostility to the theorem, leading him to claim that it was not valid even in theory.<sup>20</sup> Posner’s concerns on this score went only to applicability, but he was sufficiently circumspect about bilateral monopoly that he raised its prospect more than any other as a limit to the theorem’s applicability, even going so far as to justify the government’s eminent domain power on these grounds. That is, though one could interpret the Coase theorem as providing an argument *against* eminent domain power—suggesting that, if the government valued the property more, they would be willing to purchase it for the requested price in a voluntary transaction—Posner was of the mind that the hold-out problems created by these bilateral monopoly situations are sufficiently severe to justify eminent domain power and thereby avoid the need for costly negotiation (1973, 21-22).

#### **IV. Posner Evolving**

The revisions made to *Economic Analysis of Law* in the decades that followed reflect the building out and filling in of the contours of the field at the hands of Posner and many others, as well the evolution of Posner’s own thinking. This evolution was particularly evident in his use of the Coase theorem, which became an increasingly overt and prominent part of Posner’s explanatory toolkit. It was brought in with the introduction of new topics as Posner expanded the domain of his analysis, but also used to enhance the discussion of topics that he had treated

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complex than the simple numerical example he uses in the text (1973, 18-19).

<sup>20</sup> See, e.g., Samuelson (1963; 1995) and the commentary in Medema (2023a), which provides an extensive discussion of Samuelson’s hostility to the Coase theorem.



without reference to it in earlier editions.

The modifications introduced on this score for Posner's second edition (1977) were minimal,<sup>21</sup> but those that came with the third, published in 1986, were momentous. While the first two editions had deferred the mention of the theorem to the chapter on property law, its introduction was now elevated to the book's opening chapter on «The Nature of Economic Reasoning». This chapter includes a section on «Fundamental [Economic] Concepts», which Posner uses to introduce the reader to the assumption of man as a rational maximizer of his self-interest and «the three fundamental principles of economics» derived from it: the law of demand, «alternative price» (that is, opportunity cost), and the gravitation of resources toward their highest-valued use through the exchange process (Posner, 1986, 3-10). Though one might expect Posner to have identified the Coase theorem with the last of these, given its message about efficiency-enhancing exchanges of rights, he instead calls it the «most celebrated application of *opportunity cost* in the economic analysis of law», highlighting the importance of the reciprocal nature of harm argument that underpins Coase's result (7, emphasis added).

The third edition also brought a major modification to Posner's statement of the Coase theorem, which now made no reference at all to efficiency. Instead, the Coase theorem is said to tell us simply that «if transactions are costless, the initial assignment of a property right *will not determine the ultimate use of the property*» (1986, 8, emphasis added).<sup>22</sup> The reader's initial introduction to the theorem, then, went not to the parties' ability to negotiate to an efficient solution but to a contention that the court's decision does not affect how property is

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<sup>21</sup> For example, Posner had noted in his first edition that though a long-term commitment to purchase from a particular seller may *seem* to establish a monopoly relationship between the buyer and seller, this does not mean that the buyer will pay the monopoly price. Why? Because potential competition may hold the price down to the competitive level, assuming transaction costs are sufficiently low (1973, 110). With the second edition, however, Posner claims that this is «just a special case of the Coase Theorem» and presses the reader to ponder why the theorem is not «applicable to *all* monopolization cases» (1977, 207n.2).

<sup>22</sup> With the fourth edition, Posner replaced «determine» with «affect» and allowed that this version of the theorem was «slightly oversimplified», but only in the sense of understating the assumptions required to

used. Posner then went on to provide a brief, modified version of the railroad sparks example from earlier editions, but this time focusing on invariant resource allocations flowing from different initial assignments of rights rather than the efficiency of the ultimate outcomes.

This increased emphasis on the invariance claim is carried through in Posner's more extensive discussion of the theorem in the «incompatible uses» section of the chapter on property, and in two ways. Let us compare the conclusions reached in the first and third editions:

Whatever the relative values of the competing uses, *it seems that* the initial assignment of rights does not affect which use ultimately prevails. The efficient, or value-maximizing, accommodation of the conflict will be chosen whichever party is granted the legal right to exclude interference by the other. (1973, 17, emphasis added)<sup>23</sup>

So, *as Coase showed*, whatever the relative values of the competing uses, the initial assignment of legal rights will not determine which use ultimately prevails. (1986, 43, emphasis added)

Two things stand out here. First, the invariance claim is strengthened in the third edition, with the wishy-washy language of «it seems that» ultimate uses will not be affected replaced with a claim that «Coase showed» that ultimate uses will not be affected. Second, the follow-up sentence from the first two editions, regarding the efficient allocation being adopted regardless of the initial assignment of rights, had disappeared.<sup>24</sup> Invariance, it seems, was more than ever the heart of the matter for Posner.

The third edition also finds Posner taking measures to bolster his discussion of the

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make the theorem correct (Posner, 1992a, 8).

theorem's logic, this via the introduction of a graphical depiction of the continuous case to complement the numerical–discrete illustrations on which he had relied in earlier editions. In doing so, he was able to show, in a more general fashion, the incentives for the parties to negotiate based on the marginal benefits and marginal costs. Here too, however, the focus is exclusively on invariance; no mention is made of efficiency, only of the incentive for agents to negotiate to some invariant outcome, regardless of how rights are initially assigned (Posner, 1986, 44-46).

The footnoted income and wealth effects «qualification» of Coase's result that Posner had offered in his first two editions also saw a refreshing in the third. It was now labeled a «refinement», rather than a «qualification», and to it was added a second highlighting the reality of transaction costs: «Transaction costs», Posner said, «are never zero. In fact, they may be quite high in two-party transactions as we shall see many times in this book» and «generally ... rise with the number of parties to the transaction—perhaps exponentially». Having sounded that sober note, however, he immediately cautioned the reader against using these refinements as an excuse to dismiss the theorem, arguing that it «*should describe reality whenever the transaction cost is less than the value of the transaction to the parties*» (44n, emphasis added). Though Posner toned down this claim slightly with the fourth edition, suggesting that the Coase theorem «*should approximate reality*» in such situations (1992a, 51), he was clearly concerned to minimize the significance of the gulf between the theorem's assumptions and legal-economic realities. Here too, Posner seems to have learned his Stigler well.<sup>25</sup>

The third and fourth editions also brought further reinforcement to two important themes found in the earlier editions: Posner's grounding of the efficiency criterion for judicial

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<sup>23</sup> Posner's statement in the second edition is identical in the essentials to that in the first edition.

<sup>24</sup> This version of the theorem was carried through subsequent editions.

<sup>25</sup> See, e.g., Medema (2011; 2023a).

decision making in the Coase theorem, and his emphasis on the problems posed by bilateral monopoly for the theorem's application. The most prominent manifestations of these changes appear in Posner's discussion of contract law.

Consider the situation of a judge called upon to fill in contractual gaps in a contract dispute. This judge, Posner contended, needs do nothing more than pick up her Coase theorem diving rod and «imagine how the parties would have provided for the contingency [at the time of contract formation] if it had occurred to them to do so» (82). If the contract leaves no clues to this effect, all is not lost, however; the judge can get to the same place by figuring out «the most efficient way of dealing with the contingency», as this «is the best way of deciding how the parties would have provided for it» (Posner, 1986, 82). Though Posner was silent on the connection between this gap-filling method and the Coase theorem in the third edition, pointing only to «a parallel to the analysis in» his chapter on property (1986, 82), the fourth edition made the link explicit (Posner, 1992a, 93).

Despite Posner's continued bar-lowering for the theorem's operation, his concerns about the problems posed by bilateral monopoly seemed to be growing from the second edition onward. The analysis of how the performance of contractual promises may run counter to efficiency provides a representative illustration. Suppose, Posner said, that *A* makes custom-ground widgets which *B* uses in the manufacture of his machines, and that *B* agrees to purchase 100,000 of these widgets from *A*. However, the market for *B*'s machine evaporates after only 10,000 of the widgets have been delivered and *B* announces that he is terminating the contract. *A*, who has not yet done the grinding on the other 90,000 widgets, insists that he will be performing the contract according to its terms and expects to receive corresponding payment. Given that these custom widgets are useless to *B*, performance is not efficient, Posner notes, but fortunately the legal doctrine of mitigation of damages prevents *A* from receiving

damages for any costs incurred after *B* provides notice that it will breach the contract. Having walked the reader through this, however, Posner then pulls back and asks why, «if the Coase Theorem is true», these fine details are of any concern. After all, there are only two parties involved here and ample scope for a mutually beneficial bargain. The problem, he suggests, is that this scenario sets up a «bilateral monopoly» problem: «transaction costs will be high even though (in a sense because) there are only two parties» involved, and thus we cannot rely on negotiations here (1986, 106).<sup>26</sup> Nor was Posner's increasing attention to the problems that transaction costs posed for the Coase theorem limited to situations of bilateral monopoly. He raises transaction costs issues in a growing number of contexts, including those where parties are in pre-existing contractual relationships—situations where, as noted in section III, above, Posner had previously argued that the Coase theorem was likely to be operative.<sup>27</sup>

The theorem's role as a centerpiece of Posner's analytical toolkit was cemented in the fourth edition of the book, published in 1992, which finds Posner significantly expanding his cornerstone presentation of it in the chapter on property law. First, he pulled the «refinements» of the theorem, dealing with wealth effects and transaction costs, out of the footnote in which they had resided for some two decades and put them into the body of the text. Second, he inserted a paragraph immediately following these «refinements» to address the charge, becoming more commonplace in the literature, that the theorem is a «tautology», a statement which says nothing more than that, if gains are available, people will exchange their way to the realization of them. Posner allowed that, so stated, the theorem is indeed a tautology. «But it need not be so stated», he said. Once again, Posner brought the invariance claim to the fore,

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<sup>26</sup> Curiously, Posner was not nearly so pessimistic on this score in his book on *The Economic Structure of Tort Law*, which he wrote with William Landes around this same time. Though Landes and Posner emphasize the potential challenges that bilateral monopoly poses for the Coase theorem's applicability, they seem to have been relatively unconcerned about their import, suggesting that this «normally will not prevent value-maximizing transactions, though it will make them more costly» (Landes & Posner, 1987, 34).

<sup>27</sup> See, e.g., Posner (1986, 265, 460, 636).

arguing that the theorem «can be given empirical content by being restated as the hypothesis that the initial assignment of property rights will not affect the ultimate use of property if transactions are permitted and not highly costly». Having neatly sidestepped the tautology charge, however, Posner was forced to admit that the attempts to date to «test» this hypothesis had yielded «mixed results» (Posner, 1992a, 51).<sup>28</sup>

If Posner was growing increasingly pessimistic about the theorem's direct applicability, its value as a thought construct and explanatory framework showed no signs of waning. Indeed, the fourth edition brought the insertion of an allusion to what some might consider his most extreme use of the theorem, this in his discussion of the regulation of sex. Posner was writing *Sex and Reason* (1992b, 183ff) at the same time that he was preparing his fourth edition, and this seems to have motivated him to insert a section asking «Why Regulate Sex?» into the fourth edition's chapter on family law. Here, Posner suggests that regulations on sexual activity—e.g., laws related to fornication, prostitution, and adultery—may make economic sense if there are third-party effects. Posner cites adultery as one such situation, as it «imposes costs on the adulterer's spouse», and he then asks the reader to contemplate how the Coase theorem bears on this issue (1992a, 157). Unfortunately, one must look to *Sex and Reason* to find Posner's answer: that laws against adultery function as a transaction-cost-minimizing alternative to terms that would otherwise be negotiated into the marriage contract (1992b, 184). Say what you will, but economics in Posner's hands was certainly no dismal science.

Curiously, we find very little in the way of new invocations of the theorem after the fourth edition of 1992.<sup>29</sup> In fact, by the time we arrive at the ninth (and presumably final)

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<sup>28</sup> Zerbe and Medema (2000) and Medema (2020) provide overviews of the empirical and experimental «tests» of the Coase theorem.

<sup>29</sup> Posner did, somewhat belatedly, insert a reference to «Coase's lucid discussion» of the long-running Coase

edition, which was published in 2014, we find Posner's core presentation of the Coase theorem scaled back significantly. Gone was the discussion of «qualifications» and «refinements», the defense of the theorem against the “tautology” charge, and even the simple numerical example of the theorem's operation in the railroad sparks case (Posner, 2014, 50-52). Perhaps not coincidentally, Posner's mentions of the theorem in his judicial opinions follow this same trend, being concentrated in the 1980s and 1990s (Medema, 2019). While the explanation for this trend is not obvious, it may be that, with the passage of time, Posner came to consider the theorem sufficiently part of the the field's fabric that he no longer felt compelled to invoke its potential relevance at every opportunity.<sup>30</sup> Whatever the case, the two-volume collection of literature on the theorem that Posner and Francesco Parisi (2013) published some two decades later demonstrates that he continued to see it as foundational for the economic analysis of law.

## V. Conclusion

What stands out as we examine the several editions of *Economic Analysis of Law* through a Coase theorem lens is that Posner seemed to be getting more and more expansive in his use of theorem-based references, analogies, and explanations. It is not so much that he was adding material *about* and thus references to the theorem—though he certainly did this—as that he was (i) expanding his analysis of certain legal issues and (or by) bringing in Coase theorem-related considerations and (ii) using the theorem to tease out bits of legal-economic logic for his (student) readers and, at moments, asking them to do the same for themselves. In short, the theorem was progressively becoming a more central piece of his analytical and

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theorem controversy in his 1988 essay, «Notes on the Problem of Social Cost» (Posner, 2003, 51n.2), citing (Coase, 1988). This was Coase's first significant published commentary on the theorem and the controversy over it after several decades of virtual silence.

<sup>30</sup> Medema (2019) provides some conjectures about the downward trend in Coase theorem citations in Posner's judicial opinions. One might also speculate that the severe falling out between Coase and Posner in the early 1990s—mended somewhat by Posner's partial recantation of some of his earlier comments, played a role in all of this. However, this would merely be speculation. See Posner (1993a; 1993b), Coase (1993), and Posner (2011).

explanatory toolkit.

While this brief discussion captures only a fraction of Posner's invocations and discussions of the Coase theorem, numerous references to which appear in his scholarly writings and judicial opinions, the themes are largely consistent across his *oeuvre* and, not surprisingly, track neatly with changes found in Posner's treatise.<sup>31</sup> With this in mind, we can summarize Posner's understanding and use of the theorem in four ways. First, Posner increasingly saw the theorem as a general irrelevance result. Yes, the outcome would be efficient, but what really mattered was the legal point that the same allocation of rights and resources will follow, regardless of how rights are initially assigned. Second, and notwithstanding the first, Posner saw the theorem as a prescription for assigning rights efficiently, enabling parties to achieve the outcome they prefer but are prohibited from reaching because of transaction costs. Third, the theorem was an operational result: Posner expected that agents, either through negotiation or within the marketplace, would internalize the relevant benefits and costs in a wide variety of situations to the extent that transaction costs did not get in the way. Finally, and increasingly with the passage of time, Posner used the theorem as a thought exercise, as a benchmark or baseline for thinking about legal rules—for explaining why law is structured in a certain way (e.g., eminent domain power), for revealing seeming inconsistencies in the law or explaining why they are not, and for rationalizing the promulgation of particular legal rules.

Posner's focus on the invariance criterion sets him apart from the typical treatment that one finds in the *economics* literature. The economists' attitude is nicely summed up by our

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<sup>31</sup> Posner invoked the Coase theorem in eight different opinions during his tenure on the bench. The first of these came in *Powers v. U.S. Postal Service*, 671 F.2d 1041 (1982) and involved the competitive markets version of the theorem. When it came to the bargaining version of the theorem, Posner's opinions at times expressed confidence in the possibility negotiated solutions (e.g., *Chrysler Corp. v. Kolosso Auto Sales, Inc.*,



opening quote from Demsetz, who considered the theorem to be all about efficiency, with invariance being nothing more than a «red-herring». Why this difference of perspective? For the economist, Coase's (1960) analysis was a rebuttal to Pigou's claims about externalities and efficiency. But lawyers knew nothing of Pigou and cared even less. To the fresh eyes of a legal scholar, Coase's shocking message is not that externalities can be resolved efficiently absent direct state action, but that law doesn't matter—at least so long as we have it. If this were actually true, of course, there would be no rationale for the economic analysis of law and no «POSNER». It does seem, then, that there are times when transactions costs do indeed serve a useful purpose.

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148 F.3d 892, 894 (1998)) and at other times was more pessimistic about them (e.g., *Walgreen Co. v. Sara*

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