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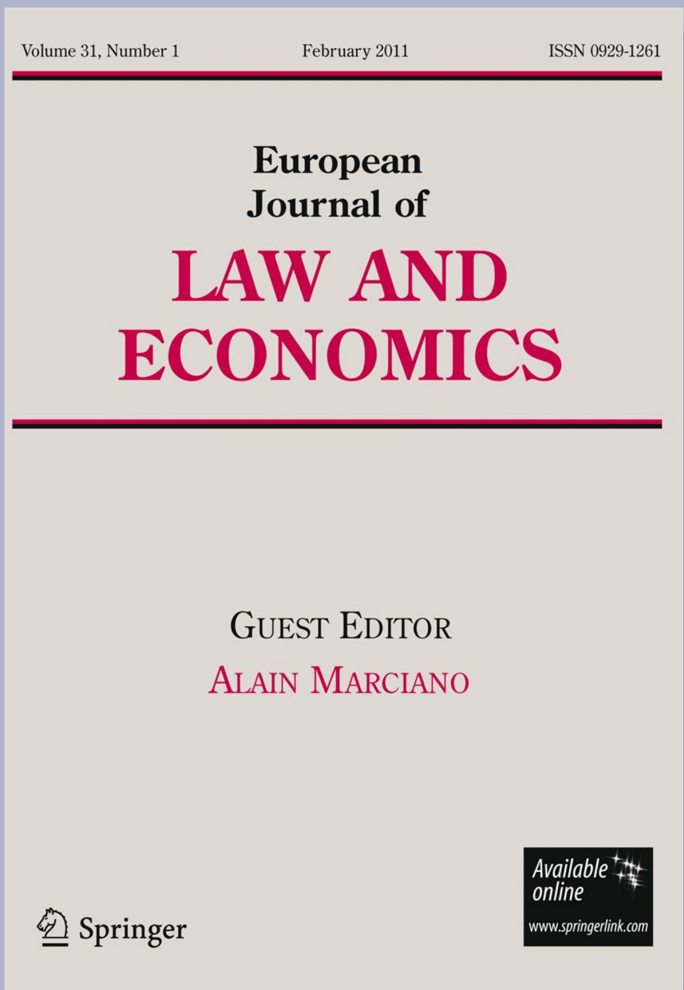

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Ronald Coase, "The Problem of Social Cost" and The Coase Theorem: An anniversary celebration

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The articles gathered in this special issue were written in homage to Ronald Coase (who was born 100 years ago) and to "The Problem of Social Cost" (that was published 50 years ago), an article evidently of the utmost importance for "law and economics" in particular and, more broadly, also for economics. The legacy of Coase is therefore important and indeed multiple. This introduction, and this issue, would be too short to remind in what it consists while thousands of pages were written on the subject—among which can be singled out Medema's Ronald H. Coase (An Intellectual Biography) (1994) and The Legacy of Coase (1995). The celebration of the 50th anniversary of the publication of "The Problem of Social Cost" nonetheless offers us the opportunity to remind or revisit important elements about Coase's 1960 path-breaking article.

In the first place, it may not be useless to stress that, as the standard history of law and economics goes, "The Problem of Social Cost" represents nothing less than the beginning of "modern" (Hovenkamp 1990, p. 494) or "new" (Posner 1975) law and economics—by which it is of course not meant that law and economics did not exist before Coase and did not evolve after Coase: not only, there were economists who paid attention to the legal dimension of economic phenomena before Coase but the latter established a new paradigm (Manne 1993), bringing rigour and formalism to approaches—essentially those developed by the old institutionalists—too descriptive and lacking of a solid theoretical background. But also, "The Problem of Social Cost" marks the entering in a new era does not mean that law and economics did not continue to evolve after Coase. From this perspective, it would be unfair to ignore that other contributors have also played a crucial role—for the instance the other "founding fathers" identified by the American Law and Economics Association in 1991, Guido Calabresi, Henry Manne and Richard Posner. Similarly, one should not

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Courtesy of the Ronald Coase Institute, Photographer: David Joel.

forget that major transformations occurred in particular in the early 1970s when Posner "transformed" "law and economics" into an "economic analysis of law". However, this does not lessen the importance and impact of Coase: directly or indirectly, these changes relate to "The Problem of Social Cost" and to Coase.

Decisive to explain both the success and importance of Coase is the fact that he reasoned within, rather than outside or against as did the old institutionalists, neoclassical economics. As he noted, "for me, "The Problem of Social Cost" was an essay in economics. It was aimed at economists. What I wanted to do was to improve our analysis of the working of the economic system" (Coase 1993, p. 250), an objective that could be reached only by including in his analysis features that were at the same time "obvious" and "overlooked" (Coase 1994, p. 3). In other words, it is because he applied a "law and economics" perspective to an economic problem that Coase's article is important and has played an important role. More precisely, as we all know, the paper is about the possible "divergence between the private and social product of the factory… [whose…] actions… have harmful effects on others" (Coase 1960, p. 1). Thus, Coase influenced economic analysis by showing how important it is to take legal rules and institutions seriously into account as well as by changing radically the views of economists, legal scholars or social scientists had on the definition of "the problem of social cost" and the solutions to remove it. Actually, to understand what Coase brought to economics and to law and economics, as well as and how he and his work influenced economists, we must keep in mind how economists perceived the problem of social cost, and what the paper meant, in the late 1950s.

Fifty years later, it seems that externalities as a cause of market failures—at least since Marshall or Pigou—have always been viewed as a crucial question among economists and, therefore, that Coase was working on a very standard question. However, analyzing such questions was relatively uncommon among economists. Certainly, in the late 1950s and early 1960s, market failures were becoming topical but it was recent—it dated from the publication of Paul Samuelson's articles on "The Pure Theory of Public Expenditures" (1954, 1955, 1958). In addition, among the not so many economists or social scientists who really paid attention to externalities and to the problem of social cost, those who claimed that externalities should not necessarily be viewed as a cause of market failures were even less numerous—besides Coase, another exception is James Buchanan, one of his colleagues at the University of Virginia who started to work on the same issues in 1956; Guido Calabresi, law professor at the Yale Law School, was also interested in the same topic along the same lines since 1959 but his work was ignored by economists. Thus, "The Problem of Social Cost" was devoted to an original question. It was also original to challenge the then standard Pigovian theses about the problem of social cost and to argue that tortfeasors should not necessarily be liable of the consequences of their actions on others, as Coase did. And finally, it was rare to read articles in which were detailed the conditions under which "harmful effects"—Coase did not use the word "externalities"—should not be viewed as problematic for the efficiency of market mechanisms. And Coase was one of those, along with Buchanan and Calabresi, who did that. But, the similarities with Buchanan and Calabresi probably end at this point. Coase's explanation was, and remains of course, very specific: in the absence of transaction costs, externalities are internalized, that is private and social costs coincide and, in addition, legal rules do not matter—in the sense that they do not affect the allocation of resources. In other words, the result put forward in "The Problem of Social Cost" seems to be that known as the "Coase Theorem"—that we will discuss later.

Retrospectively, once again, presenting "The Problem of Social Cost" in this way may appear reductionist and strangely outdated, viewed the number of recent works about Coase (Bertrand 2006, 2009, 2010; McCloskey 1998; Medema 1994, 1995; Medema and Samuels 1997; Posner 1993; Klaes 2000) and even by by Coase himself (1994) that have demonstrated that "The Problem of Social Cost" is not only a defense of the efficiency of market mechanisms. It has also been stressed that Coase is not a strict, unambiguous defender of market mechanisms. But, in the early 1960s, commentators depicted Coase as a pro-market economist (Miller 1962), defending the efficiency of markets even in presence of externalities. Stanislaw Wellisz noted that "[t]he modern-old economists, and especially Coase and Buchanan, challenge the established position: they claim that the private market can lead to a Pareto optimum despite externalities since it is possible to establish a market in externalities" (Wellisz 1964, p. 347). Jack Wiseman wrote that "[r]ecent writings, notably by Coase and Buchanan, have demonstrated, at least to my satisfaction, that economists' notions of the character of social costs and benefits, and of their implications for public policy, are by no means free from ambiguity" (Wiseman 1963, p. 41); and added "Coase, Buchanan, and others have demonstrated, conclusively in my view that the existence of externalities provides no a priori reason to believe that resource allocation will be affected in any particular way, or e.g. that such allocation would be improved… were the gainers and losers in fact penalized and compensated" (Wiseman 1965, p. 8).

Wiseman's positive remarks—that actually predate the "official" acknowledgement by Stigler and the Chicagoan economists of the "Coase theorem"—were exceptions. At that time, a non-negligible part of the literature on Coase criticized his defense of the efficiency of markets for being based on unrealistic assumptions. Thus, for instance, the two professors of law at the University of Chicago Walter Blum and Harry Kalven characterized "the general analysis offered by Ronald Coase" as "Utopian" because "the relationship between the parties involved in auto accidents is too remote from any conceivable bargaining arrangement to make this analysis usable" (Blum and Kalven 1967, p. 264).[1] A few years later, during a conference on "product liability" organized by the Association of American Law Schools and the American Economic Association, Roland McKean insisted that "[t]here now seems to be general agreement that Coase is right if one accepts the basic assumptions" (1970, p. 31) upon which his analysis rests and immediately added that "these assumptions are fairly heroic" and also the consequence: "[w]e

[1] Blum and Kalvern's critique is posterior to the establishment of the Coase Theorem by Stigler. But it was not the first critique raised against Coase. Calabresi was the first one to level a specific criticism at the Coase negotiation result—namely that the result does not hold in the long run (Calabresi 1965, n. 28, p. 730). Calabresi later (1968) acknowledged his mistake but what is important is that the literature up to that point had not leveled an incorrectness claim (on Calabresi and the Coase theorem, see Marciano 2010). I thank Steve Medema for having stressed this point to me.

know that, like any other assumptions used to simplify and think about reality, they do not hold in the real world" (1970, p. 31). He came back to this point in the discussion after the presentation of his paper: "I regard the Coase theorem as an important point of departure from which to go forward into the real world and ask which arrangement most reduces total costs in comparison with other arrangements for a particular product category" (McKean in Manne 1970, p. 118; and then again on p. 119). His belief in the validity of the Coase theorem in the "real world" only is such that he noted how he "was a bit shaken to realize that Professor Dorfman thought I was applying the Coase theorem and leaving it at that" (McKean in Manne 1970, p. 118) and that "he seemed to be regarding me as saying, in accord with the Coase theorem, that the liability assignment really does not make any difference in the real world" (McKean in Manne 1970, p. 118). Robert Dorfman, precisely, an economist from Harvard University, compared economics with physics and the law of gravity, that "works best in a vacuum" (Dorfman in Manne 1970, p. 122) and "is not helpful at all in predicting more terrestrial projectories" (Dorfman in Manne 1970, p. 122). Now, economists are like "ballistics experts": they are "not concerned with problems in a vacuum" (Dorfman in Manne 1970, p. 122) but in "actual markets" (Dorfman in Manne 1970, p. 122). Similarly, Grant Gilmore, a law professor at the University of Chicago, accepting McKean's claim that Coase's theorem rests on "fairly heroic" (McKean 1970, p. 105), insisted on the necessity to acknowledge a difference "between Professor Coase's world in which there are no transaction costs and all exchanges are voluntary and a world in which there are always transaction costs and few, if any, exchanges that are voluntary" (Gilmore 1970, p. 106). And, accordingly, he stressed that this led to the conclusion that Coase's analysis necessarily meant a lack of explanatory power for real world problems:

> I do not for a moment dispute or deny the great value of abstract theoretical analysis or the pure delight of engaging in it. I doubt that it gives us, or is meant to give us, guidance in handling real problems in the real world (Gilmore 1970, p. 116).

—which was another way to argue that Coase's analysis was useless because of the lack of realism of its assumptions.

Of course, there were also economists who were not only convinced by Coase's result and for whom unrealistic assumptions were certainly not problematic. These were mainly the economists of the University of Chicago and, more specifically, George Stigler, who played an important role in the success of "The Problem of Social Cost". And even if we know that it was Stigler who established the Coase Theorem in the third edition of The Theory of Price (1966), why and how Stigler defended the theorem is far less well known. This is the purpose of Steve Medema's article to recount how the Chicagoan economist and 1986 Nobel Prize in economics invented the Coase theorem and how he repeatedly defended his invention in various articles over the years. To Medema, this evidently shows that the Coase theorem was probably more important to Stigler than it was to Coase. Also, and this is particularly interesting, we understand that Stigler never denied that the theorem was based on unrealistic assumptions and was "contemplating a world that does not exist" (Medema, this issue). He thus significantly wrote that "[i]f the proposition strikes you as incredible on first hearing, join the club. The world of zero transaction costs turns out to be as strange as the physical world would be with zero friction" (Stigler 1972, quoted by Medema, this issue). However, in contrast to those who also emphasized this point, he never viewed this feature as a limit. On the contrary, as we have noted above and as Medema argues, the Coase theorem is useful to improve our understanding of how our world, our economy functions. Or, in other words, the validity of the Coase theorem is not connected to the realism of its assumptions.[2] To Stigler, the Coase theorem should be discussed only on theoretical rather than on empirical grounds. Empirical evaluations are nonetheless useless to test the validity of a theory—that actually depends on its internal logic—but are only relevant to determine the "domain of applicability" of the theory (Stigler 1989, p. 632).

Thus, as if following or agreeing with Stigler, a large part of the works based on "The Problem of Social Cost" consisted in discussions on the practical usefulness and the empirical validity of one of its central, but not unique, result about transaction costs, bargaining and the internalization of externalities. In her paper, Élodie Bertrand presents two of these empirical studies—Cheung (1973) and Ellickson (1986)—that have tried to validate the existence of "Coasean mechanisms" in a real-world environment. While Cheung demonstrated that, under certain conditions, "markets for what could be seen as 'externality' can exist", Ellickson showed that individuals do not bargain to remove externalities or, in other words, no market seems to exist. Surprisingly, in the case analyzed by Ellickson, the absence of a market and of bargaining coincides with low transaction costs. This suggests that other factors than transaction costs are important to explain why and if individuals bargain to remove externalities—a conclusion that has important normative implications: it means that removing or decreasing transaction costs may not help to increase the efficiency of the situation. Also interesting is the fact that, according to Ellickson, individuals find means to solve the problems resulting from their interactions. Whether or not it "serves to maximize the aggregate welfare that members obtain in their workaday affairs with one another", as Ellickson (1991, p. 167, quoted by Bertrand, this issue) noted is debatable. But it may nonetheless be that "people tend to structure their affairs to their mutual advantage" (Ellicskon 1986, p. 686). More broadly, this might mean that the existence (Cheung) or absence (Ellickson) of a market does not depend on "objective" costs and benefits but rather relates to individuals subjective perceptions. This is not different from what James Buchanan argued about externalities in a paper published in 1959: external effects, when they exist, are "fully reflected in the individual choices made

[2] This was one of the most interesting part of the discussion in the 1968 conference on liability that Stigler attended, as a member of the organizing committee. He did not present a paper and did not much participate in the debates. The few words he said are particularly important and significant. For him, the existence of transaction costs did not prove anything about the Coase theorem: "everybody says that once we put transaction costs in, we are playing in a different ballpark. But that is not so… When people say that the theory no longer holds once we have departed from the zero transaction case, they are making what I think is an unfounded conjecture" (Stigler in Manne 1970, p. 124). It only evidenced a lack of methodological concern or a prejudice against theory: "I should like to start by complaining against the anti-theoretical attitude of all of the speakers" (Stigler in Manne 1970, p. 124).

for or against the collective action" (Buchanan 1959, p. 130). To Buchanan, it can thus be said that transaction costs do not matter because they are part of the transaction.

Another important aspect of Bertrand's article, or rather of the papers that she discusses and analyses, is that the Coase theorem—the findings included in or summarized by the Coase theorem—can be used to explain "real world" phenomena and to propose policy recommendations. This contradicts the view, put forward above that the Coase theorem is not usable in this (our) world. It thus seems that there are two interpretations of Coase's findings in "The Problem of Social Cost": some scholars interpret Coase's result as being about an "artificial world" while others view it as being usable in our world. This is exactly what the contribution written by Andrew Halpin is about. Halpin claims that it is not sufficient to compare positive with normative interpretations of Coase's result. The model proposed by Coase, or rather the model built by using Coase's insights, can be interpreted as a description of the real world or the world as it is; in that case, we have what Halpin names a "direct" model to which he opposes an "indirect" model which consists in interpreting the result as a description of an ideal and artificial world. Even if a direct model is mainly positive and an indirect one is essentially normative, Halpin argues that one can reach normative recommendations within a direct model and also that one can use an indirect model from a positive perspective. The problem is therefore to know from where one speaks and to avoid confusions within and between models. Halpin discusses the consequences of these confusions, and also shows how Coase's work impacted our understanding of the relationship between law and economics, in our world. One of the reasons Halpin puts forward to explain such impact is Coase's ability to force upon his audience a clearer grasp of reality: was it not the first, one of the firsts at least, to insist on the reciprocal dimension of harmful effects? He was also one of the firsts to insist on the role of transaction costs in the functioning of the economy.

Herbert Hovenkamp, in his article, somehow connects the two elements and develops a really original argumentation about Coase's contributions to economics and to law and economics. The general purpose of Hovenkamp's article is to sketch a general (quite) comprehensive theory of what Coasean markets are, based on "The problem of Social Cost" and also on "The Nature of the Firm" and to show that there are connections between the two articles. When one goes into the details of the analysis, it appears that Hovenkamp is also making a more specific claim about the stability of Coase markets. Hovenkamp stresses that high transaction costs are not always problematic. In effect, when transaction costs are low, individuals may lack of the incentives that could lead them to end negotiations and to find a settlement. To some extent, one might argue that, just like in the case discussed by Ellickson, transaction costs are never high or low; their level is simply and subjectively determined by the individuals. Second interesting point emphasized by Hovenkamp is that Coasean markets are smaller than neo-classical markets, and involve very few participants. When too many participants participate in a transaction, then bargaining is impossible or at least difficult. More precisely, argues Hovenkamp (this issue), "[w]hen a Coasean market has more than two players solutions are even more elusive and can produce instability and "cycling"". Positive transaction costs might break the cycle. But the corollary is that the initial assignment of property rights has an impact on the allocation of resources when there are too many participants involved. Another, quite important, corollary is that reciprocity and instability are connected. In effect, by emphasizing the reciprocal dimension of the problem of social cost, Coase put all the parties on the same footing. He thus erased, deleted differences and asymmetries between the parties, and accordingly required an unanimous consent between the parties. Hovenkamp then argues that unanimity creates instability. In other words, reciprocity only represents one part of the problem of social cost. The other part consists in the differences between the parties.

The preceding papers evidence that the Coase theorem can still be debated, that it may receive various interpretations and that it may lead to various policy recommendations and to various legal remedies to solve the problem of social cost because of positive transaction costs. An additional proof of the importance, relevance and strength of Coase's 1960 article lies in the applications, extensions the Coase theorem still receives. This is what demonstrate Barbara Lupi and Francesco Parisi who analyze how the normative propositions that can be drawn from the Coase theorem are affected by the existence of asymmetric transaction costs—that is, when the parties involved in a transaction do not necessarily face the same transaction costs. In other words, the provide the foundations of an asymmetric application of the normative Coase theorem. Let us note here that this article rests on the same premises as Hovenkamp's article: specific problems arise when there are differences, asymmetries between the parties. Luppi and Parisi then show that the best way to deal with asymmetric transaction costs probably consist in using mixed legal remedies—property and liability rules— but also that this is also what courts already, even if "occasionally" as they note, do.

Finally, Giovanni Ramello analyzes the case of property rights and knowledge, and more precisely discusses the limits of an analysis of knowledge in terms of property rights. He thus notes that property rights are conceived as aimed at improving the efficiency of the allocation of resources, in particular because they allow the internalisation of the external effects that result from human interactions. However, at the same time, property rights—and this is the case when they are established on knowledge—can generate new forms of externalities. This results in, Ramello notes, a puzzling situation since a mechanism aimed at correcting market failures create other, new forms of failures and concludes that "[i]n a sense this contingence obliges Coase to meet Pigou as pure property right system cannot be envisaged without some state/regulatory intervention" (Ramello, this issue).

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