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Coase Theorem, Economics and Justice.  
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of Coase Theorem for Chicago school  
in law and economics

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# **Coase Theorem, Economics and Justice**

## **The epistemological and analytical meaning of Coase Theorem for Chicago school in law and economics.**

Samuel Ferey<sup>1</sup>

The publication of *The Problem of Social Cost* by Ronald Coase in 1960 is traditionally considered as the birth of contemporary Economic Analysis of Law - (Hovemkamp [1995]). More precisely, Coase's contribution played a major role in the development of law and economics inside the Chicago school in law and economics. After proposing a demonstration based on theoretical arguments, numerical examples and legal cases, Coase wants to show that if transaction costs are zero, if property rights are

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perfectly defined and if agents are in competition, the amount of externalities will be invariant and efficient whatever the initial allocation of property rights is.

This result, a true « Say's law » of welfare economics according to Calabresi (Calabresi [1968], p. 73), has been largely discussed. Immediately the issue which arises deals with the epistemological meaning of the theorem. As Hovenkamp states: “is Coase theorem an empirical statement, a tautology, a normative statement (nor purely descriptive, nor purely analytic?”<sup>2</sup> (Hovenkamp [1990], p. 786). The ambiguity which surrounds the Coase Theorem is mostly due to different interpretations of its meaning. Indeed, a lot of different interpretations of Coase theorem are now available: sometimes, it is considered as a positive statement (Cooter, [1982], p. 14) or at least as a heuristic one (Medema et Zerbe [2000], p. 877 ; Zerbe [1980], pp. 86-87); sometimes as a normative argument against State interventionism (Mackaay [2000]); sometimes as an empirical statement which may be experimentally tested (Hoffman and Spitzer [1982]); sometimes, even, as a political and ideological statement in favor of liberalism (Kelman [1979], Farrell [1987], p. 114, Calabresi [1991], p. 1212).

The aim of our paper is not to deal with the whole controversies and debates about “Coase Theorem” nor to put the ‘right’ interpretation on Coase theorem but rather to propose a possible interpretation from an epistemological and methodological point of view. We would like to put the stress on two points. Firstly, Coase theorem may be epistemologically considered as a purely analytic statement - neither empirical nor normative - as soon as we consider it inside the Chicago tradition in economics. Secondly, it seems to us that this analytical statement has broad normative consequences insofar as it draws a frontier between law on the one hand, and economics on the other hand. This characterization of the theorem makes it possible to assess the role of Coase theorem in the birth of law and economics movement inside the Chicago school.

Let's see the first point. According to us, Coase theorem can be said to be a “theorem” insofar as it is an analytic statement – in the epistemological sense–: a pure deduction from hypotheses. These hypotheses are, for Coase, extremely peculiar and we will show that they are mainly inherited from the Chicago tradition in economics. But, at the same times, this analytic statement has also broad normative consequences. Here, we have to proceed carefully. At first sight, and a lot of economists follow this line of

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<sup>2</sup> The word “theorem” is actually due to Stigler (Stigler [1972], (1966), p. 106). Stigler seems to understand it as an analytic statement. Here, the expression “Coase theorem” is employed to make reference to the coasean reasoning itself presented in his 1960's article.

reasoning, Coase theorem is a normative argument in favor of liberalism and market. But, according to us, the normative meaning of Coase theorem is different and, in a sense, broader and more radical. One can not say that Coase theorem is an argument in favor of one particular normative theory since its normative meaning consists precisely in a statement of the *neutrality* of justice from the economic efficiency point of view. Indeed, Coase argues that when theorem is valid, normative issues (mainly allocation of property rights) have no influence on efficiency. Law – or even Justice – and Economic obey their own rationality. In other words, in case of zero transaction costs, the allocation of rights may be decided on the grounds of any principles: justice, fairness, even random or tyranny! Whatever these principles are, they will have no consequence on economic efficiency.

Taking this epistemological meaning seriously allows to put the stress on different results. Indeed, one of the enigmas of the theorem is to be discussed bottom-up. Coase Theorem is defended by liberal economists – while it can not be said specifically “liberal” from a normative point of view – and criticized by heterodox economists – while they could use the theorem as a critical argument against the “big trade-off” between justice – or fairness – and efficiency. The fate of Coase Theorem in Chicago law and economics tradition illustrates this paradox very well<sup>3</sup>. The second main result of the epistemological characterization of the Coase theorem proposed in this paper is to show how the theorem plays a role of ‘theorem of impossibility’ for the Chicago school: the more the theorem is valid, the more the introduction of positive transaction costs are necessary in order to analyze the law. In other words, while Chicago economists use widely the theorem and have always tried to defend it against critics (see for example Demsetz), they find it impossible to consider economically the law without recognizing that transaction costs exist and so that market is not the only mean of coordination.

Our demonstration is in three parts. In the first part, we follow step by step the coasean reasoning presented in the 1960’s article. In this part, we will also use other texts written by Coase in order to precise some arguments of the original text (**I. Coase Theorem statement**). The second part tries to show that Coase theorem may be characterized as an “analytic statement”. We show that the deductions presented in the

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<sup>3</sup> This paradox explains perhaps that Chicago economists were, initially, opposed to Coase reasoning (Coase in Kitch [1983]). Indeed, after the publication on his article on broadcasting in the *Journal of Law and Economics* in 1959, Coase has been invited by Aron Director to present more precisely his reasoning to Chicago economists (at Director’s Home). At the beginning of the dinner, every Chicago economists (Friedman, Stigler, Kessel...) voted in favor of Pigou. After the dinner, there were no opposition anymore.

original text are based on a representation of economics inherited from the Chicago school in economics: Coase theorem finds its analytical roots in Chicago microeconomics. Coase is less a walrasian or an edgeworthian – as sometimes it is said – than a marshallian as Chicago economists and he shares with these economists their methodology and most of their analytical tools: partial equilibrium analysis, competition hypothesis, rents and opportunity costs (**II. Economics through Chicago glasses: the world of zero transaction costs**). Lastly, we try to build an interpretation of Coase theorem from a law and economics perspective. We show that the frontier between law and economics is all the more strong than transaction costs are zero. The paradox of the Chicago school in law and economics is presented. Chicago economists find it impossible to consider economically the law without recognizing the market is not the only mean of coordination. In a sense, all the Chicago school in law and economics, from theory of property rights paradigm (Alchian, Demsetz) to Posner, will have to face this paradox (**III. Coase Theorem, Justice and Economics**).

## I. THE COASE THEOREM STATEMENT

When Coase published his article concerning the Social Cost, the aim of the paper is not explicitly economic analysis of law but welfare economics<sup>4</sup>. The aim of Coase is to show that the traditional economic solutions to externalities (as Pigou's proposals in *Economics of Welfare*) are not relevant. By proposing a new approach to these topics, Coase's analysis will play a key role in the foundation of the contemporary economic analysis of law research program. In this part, we would like to present and discuss briefly the content of the coasean reasoning. Thus, we will follow step by step the Coasean article and more precisely the first five sections of the 1960's article where transaction costs are supposed to be zero. As the main points of the reasoning are illustrated by Coase with numerous examples, we will also use here one of the most famous example, the case of the rancher and the farmer. This paradigmatic case is presented by Coase in these terms: "let us suppose that a farmer and cattle-raiser are operating on neighboring properties. Let us further suppose that, without fencing between the two properties, an increase in the

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<sup>4</sup> Coase himself prefers the expression « harmful effects » than the word « externalities » (for an analysis of Coase ideas from the point of view of the history of the concept of externalities, see Caron [1998]).

size of the cattle-raiser's herd increases the total damage to the farmer's crops" (Coase [1960], p. 3).

Traditionally and, according to Coase, because of the influence of Pigou (Coase (1960), p. 1), "the economic analysis of such situation has usually proceeded in terms of a divergence between the private and social product" (Coase [1960], p. 1)<sup>5</sup>. Therefore, the levels of production of cattle will be too important insofar as the cattle-raiser does not bear all the social costs. Pigouvian analysis induces the necessity of an external intervention which makes private costs and social costs equal. All the article is built against such an analysis (Coase [1994], (1960), p.114).

Before presenting the heart of the Coasean criticism, we may briefly present the hypothesis of Coasean reasoning. First of all, and without giving a more precise definition of the concept, transaction costs are supposed to be zero. Secondly, only producers (profit-maximizers) are concerned in the Coasean example. Thirdly, Coase supposes that the marginal prejudice is rising with the level of production (in the table, the marginal losses rise when production rises). According to Coase, this hypothesis has no consequence on the validity of the theorem but allows an easier presentation<sup>6</sup>. Moreover, Coase deals with the case of a single rancher and a single farmer (Coase [1994], p. 117). In other words, the equilibrium prices are not influenced by the behavior of the two agents as far as externality is concerned. The hypothesis here is a traditional hypothesis of partial equilibrium. Lastly, the social cost is defined, as in Pigou's *Economics of Welfare*, as the number of units of goods destroyed valued at the equilibrium price.

On these grounds, Coase may directly criticize the Pigouvian solutions. Contrary to Pigou, Coase does not consider that one agent "inflicts" a prejudice to another. The heart of the Coasean criticism is presented in the section 2 of the article: externalities are, by nature, reciprocal (Coase [1994], (1960), p. 114). And this simple assertion is sufficient to create a new "paradigm" (Medema [1994], p. 68). Indeed, it is clear that, without cattle, there would be no prejudice. But, symmetrically, without crop, the prejudice would not occur. In other words, the harmful effects are not due to one agent in particular but are due to the existence of the coexistence of two economic activities. According to Coase,

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<sup>5</sup> Coase is explicit on this point, see Coase [1994], (1960), p. 113.

<sup>6</sup> According to Coase, the damages borne by the farmer is equal to the loss inflicted by the rancher: the farmer uses some factors of production in order to produce some units of crop ( $Q_d$ ) but these units are destroyed and he can not sell them at the market price ( $p_c$ ). His damage ( $D$ ) is equal to the value of the destroyed production,  $D = Q_d p_c$ . Coase supposes that the marginal damage is rising. As the market price is given, Coase suppose that the destroyed quantities of good are rising with the units produced by the rancher. Actually, Coase supposes the convexity of the production function (Medema et Zerbe [2000], pp. 844-846).

“the real question that has to be decided is, Should A be allowed to harm B or should B be allowed to harm A” (Coase [1994], (1960), p. 114).

In order to illustrate the coasean insights, two cases have to be analyzed: the case where the rancher is liable and the opposite case where the farmer is liable. The third section of the article presents a numerical example which we may summarize in the following table (Coase [1994], (1960), p. 115)<sup>7</sup>.

Number in herd	Farmer crop losses	Farmer marginal losses	Rancher net gains	Rancher marginal gains
0	0	0	0	0
1	1	1	10	10
2	3	2	15	5
3	6	3	18	3
4	10	4	20	2
5	15	5	18	-2

**Table 1 : Gains and losses for different levels of production**

If rancher was alone, his behavior would be a behavior of maximization of his net gains. He will produce 4 units to have a maximum net gain of 20 (his marginal gain is negative after 4). If he has to pay for the prejudice, he has to take into account the consequences of his actions on the farmer. The damage is a private cost which is added to other production costs. In this case, it is clear that the rancher will not produce the 4<sup>th</sup> unit. The new equilibrium for the rancher is a production of 3.

After presenting this example, Coase asserts that the final equilibrium will be the same if the rancher was not liable (Coase [1994], (1960), p. 121). Indeed, if the right belongs to the rancher, he will not take account of the damages and he will produce 4. But, in this case, the farmer would like that the rancher produces less. The farmer may buy the right from the rancher. There is mutual possibilities of exchange: the marginal loss for the farmer is 4 while the marginal gain for the rancher is 2. The exchange may occur until the marginal loss and the marginal gain are equal. In our example, the farmer

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<sup>7</sup> In terms of property rights, the farmer owns an absolute right on his land which is violated by the actions of the rancher.

would accept to buy the right from the rancher until his marginal loss is superior to the marginal gain of the rancher.

By comparing the two cases, and supposing that all the exchanges occur, we see that the resources allocation is the same under the two rules of liability. So, Coase concludes that when transaction costs are zero and when property rights are perfectly assigned, the economic situation does not depend on the legal attribution of the rights (Coase [1994], (1960), p. 124).

That is the famous result named « Coase theorem ». Actually, two different thesis are defended by Coase<sup>8</sup>. The first one, named “invariant” thesis, states that resources allocation are the same whatever the initial distribution of property rights is. The second one, named “efficiency” thesis, states that the final result will be efficient insofar as the value of production will be maximized. This twofold statement is now called “Coase theorem”.

## **II. Economics through Chicago glasses: the world of zero transaction costs**

The huge literature which has followed the publication of Coase theorem is mainly due to the strength of the conclusion<sup>9</sup>. Beyond the numerous dimensions of the debate about Coase theorem, we would like to show that the world of zero transaction costs, used by Coase, is mainly the economic world used by Chicago school in economics. Like Chicago economists, Coase may be considered as a post-marshallian and he shares with Chicago tradition in economics a lot of common tools to analyze economic phenomena like the partial equilibrium method, the costs as opportunity costs or a similar representation of competition.

In this part, we would like to show that the Chicago grounds are the conditions of validity of the theorem. It is because Coase employs Chicago economics that he is able to maintain the validity of his result. Studying different criticisms and the answers proposed by Coase (notably in his article “Notes on the Problem of Social Cost”) makes it possible to demonstrate this characteristic. Among the different criticisms, we have chosen those

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<sup>8</sup> This distinction is crucial (see for example Zerbe [1980], p. 84-85). The invariant thesis is stronger than the efficient one since it may exist several efficient resources allocations. Therefore, invariant thesis is easier to criticize.

<sup>9</sup> The bibliography provided by Medema and Zerbe in the *Encyclopaedia of Law and Economics* gives a glimpse inside the ‘cathedral’ of the Coase theorem (Medema et Zerbe [2000]). However, the authors do not really discuss the normative content of the theorem.

which seem the most significant. We deal firstly with the conception of costs as opportunity costs and, then, we deal with the representation of the competition.

*1/ Resources allocation, rents and profit-maximization*

i) Rents and opportunity costs

At the end of the 1960's, a lot of economists have criticized the Coasean position on the grounds that Coase would suppose the existence of "ricardian rents" (Wellisz [1964]). That criticism is very often adopted (for example, Nutter [1968], pp. 505-507 ; Regan [1972], p. 433, Demsetz [1972], pp. 19-22). Coase himself has replied to this critic in the "Notes on Problem of Social Costs" (Coase [1994], (1988), pp. 93-202).

We may summarize this criticism very briefly: the possibility for the agent to buy the right from the other agent would depend on the existence of positive profit (or, in other words, on the existence of rents on the factors of production). Indeed, in case of zero profit, the one who bears the prejudice would have no resource to buy the right. Buying the right would be an additional cost and his profit would become negative. According to this criticism, the initial attribution of right matters. Let us suppose the rents of the farmer are zero (zero profit). If he initially owns the right, he may continue to produce while if he does not own the right, he has to buy it from the rancher and he has no resources to buy it. Invariance thesis does not hold.

The Coasean answer is interesting because it makes it possible to precize an important point concerning the notion of costs employed by Coase. According to Coase, the rents of a factor of production are the difference between what it yields and what he could yield in the best alternative use. Coase shares this definition of cost with Chicago economists (Stigler [1972], (1966), p. 99). The concept of rent is the twin of the concept of opportunity cost. The cost of a factor of production A is not his historical cost but is equal to the maximum product that he could yield in the best alternative use (Stigler [1972], (1966), p. 98). According to this definition, the best alternative use is the key element as far as allocation resource is concerned (Stigler [1972], (1966), p. 99)<sup>10</sup>.

Indeed, let us follow Coase and let us take the most difficult case for Coase. Let us suppose that the rent of the farmer ( $R_f$ ) is inferior to the rent of the rancher ( $R_r$ ) which is

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<sup>10</sup> The rents have their origins in the fact that some factors of production are specific (limited in quantity for example) that is to say their supply (at least in the short run) is not elastic.

inferior to the damages (D) (for example,  $R_f=30$ ,  $R_r=40$  et  $D=50$ ). If the farmer is liable, he would bear a loss of 20 and will abandon his activity. Only the rancher will produce. In the opposite case (if the rancher would be liable), the rancher would have no interest to buy the right since his rent is 40 while he has to pay 50 for the prejudice. But Coase insists always on the fact that the damage is reciprocal. The rancher may have “another solution” (Coase [1994], (1988), p. 200): he may buy the right from the farmer in order that the farmer *does not cultivate* his land. The rancher is ready to buy this right at any price inferior to 40 while the farmer is ready to sell the right at any price above than 30. There exists a possibility of a mutual advantageous exchange. In this case, the efficient resource allocation consists in avoiding to farm the land. In both situations, allocation of resources is the same and the value of the production is maximized. Indeed, if the farmer and the rancher continued their activity, the surplus would be 20 ( $R_f + R_r - D$ ), if the farmer produced alone, the surplus would be 30, and if the rancher produce alone, the surplus is 40.

Studying the criticisms concerning the existence of ricardian rents is interesting insofar as it allows to show that the concept of costs used by Coase in his reasoning is typically the same as the concept used by Chicago economists, namely opportunity costs. By the way, Coase has always been very clear about its conception of costs. When he was professor at the London School of Economics in the 1930's, Coase had always defended this conception of costs and he had published some papers on this topics (Arena [1999], pp. 32-33). For Medema Coase tried to struggle the conception of the cost as historical costs (Coase cité in Medema [1994], p. 54-55)<sup>11</sup>. So, we can assess very clearly, with Veljanovski, that the underlying logic of the Coase theorem is a logic of opportunity costs (Veljanovski [1982], p. 54). This logic will be also the heart of the answer to another criticism, the validity of the theorem in the long run.

## ii) Invariance and long run equilibrium

In the initial presentation of Coase theorem, the long run equilibrium is not really concerned since the reasoning is explicitly a short run one (with possibility of positive

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<sup>11</sup> This conception of the cost as opportunity cost is present in a lot of works of Coase. We can give two examples: his article about the marginal cost controversy (Coase [1946]) and his article about the Public Utilities which shares also this idea (Coase [1970], p. 123).

profit). At the same times, according to Coase, liability rules have not any long term effects (Coase [1994], (1960), p. 121). But, for a lot of students, the validity of the theorem in the long run is dubious (Calabresi [1965], [1968] p. 67 ; Nutter [1968] pp. 504-507 ; Demsetz [1972], p. 19, Veljanovski [1982], p. 67). For example, Regan asserts that even if the Coase reasoning is valid in the short run, there will be changes in allocation of resources in the long run (Regan [1972], p. 432). The risk is that different liability rules have an impact on the profitability inside and outside each industry (Demsetz [1972], p. 19). Indeed, the previous examples have shown that Coase agreed with the existence of a distribution of rents. The one who owns the right also owns a revenue due to the sell of the right. But in the long run, there is an incentive for other agents to enter in this market where the profitability is important. These entries will have consequences on the production of the good concerned and on the allocation of resources. The invariant thesis seems impossible to hold in the long run.

Against Calabresi, Chicago economists have tried to defend the validity of the theorem in the long run. Nutter then Demsetz propose numerous arguments (Nutter [1968], Demsetz [1972]. According to Demsetz, for example, the concept of rent is crucial. Demsetz discusses the link between existence of rents and profitability. He acknowledges that the rents on factors of production will rise (and so the revenues to the owners of these factors). But, for Chicago economists in general and for Coase in particular, this rise of rent has only an effect on the distribution (Nutter [1968], p. 507 ; Coase [1994], (1988), p. 204). Indeed, if we suppose that factors of production are let out by the agents, the price of these factors will rise. More precisely, the price will rise exactly of the same amount than the rent: profits will not be changed. Only the owners of the factor of production are concerned by the rents. The revenues du to the liability rule will be capitalized, the value of these factor will rise and no incentive to entry will appear<sup>12</sup> (Demsetz [1972], p. 21).

To conclude the brief presentation of some critics against the Coase theorem, the key point for us is the fact that the logic underlying the Coase theorem is clearly a logic of opportunity costs. Coase shares one of the grounds of Chicago tradition, costs as opportunity costs. We will see that Coase shares also its conception of competition.

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<sup>12</sup> The idea of a capitalization of the rents of the factor of production is explicitly expressed by Stigler as a consequence of the competition of entrepreneurs (Stigler [1972], (1966), pp. 237-238).

## *2/ Competition: The Chicago tradition*

The second main debate concerning the validity of the Coase theorem deals with the conception of competition. Indeed, theorem holds because agents are in competition. The contemporary interpretations of Coase theorem are divided on this topic. More precisely, the opposition between bargaining and competition is, today, the main distinction in the literature<sup>13</sup>. At the same times, Coase himself does not seem very interested by the debate. A first reason may be proposed to take account of this silence. What we would like to show is that this silence is understandable insofar as, when he works with zero transaction costs, Coase adopts the Chicago conception of competition<sup>14</sup>.

First of all, the situation studied by Coase is clearly a partial equilibrium situation. But, we have to precise that only the market of the products (for example, crop and cattle) are concerned by this hypothesis. There is no competition on rights. Therefore, the question which arises is the following one: if agents are not in competition when they exchange the right, how the exchange of right may take place? Game theorists have seen in the coasean situation a typical example of a bilateral monopoly<sup>15</sup>. Buying and selling the right is a situation where there is production and distribution of surplus<sup>16</sup> (Medema et Zerbe[2000], pp. 851-852). According to Cooter, for example, a “pessimistic approach assumes that people cannot solve the distribution problem” (Cooter [1982], p. 17). This critic of Coase theorem is twofold: one deals with the hypothesis of rationality used, another deals with the consequence of the indeterminacy of exchange.

Concerning the first point, Coase has always minimized the importance of strategic rationality (cf. for example Coase [1994], (1960), p. 117). Concerning the second point, the problem is to know at which price the agents will make the exchange. Indeed, as Coase himself acknowledges, people are not in competition and there not exist a market for the right. The exchange risks always being undetermined. But Coase

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<sup>13</sup> The main reference stays the article of Cooter [1982]. In this article, Cooter distinguishes between two theorems. The first one is the Coase theorem: people cooperate and manage to an contractual agreement. The second one is an “Hobbes theorem”: the conflict between people is so strong that they can not reach an efficient situation (Cooter [1982], pp. 18-19).

<sup>14</sup> Coase himself has not really contribute to the literature in game theory. He only wrote a note on the article published by Aivazian and Callen in 1981 and a short text in the “Notes on the Problem of Social Cost” (Coase [1981], [1994], (1988), pp. 185-192).

<sup>15</sup> See Samuelson quoted *in* Coase [1994], (1988), p. 188.

<sup>16</sup> Samuelson mentions Coase theorem very early (Samuelson *in* Coase [1994], (1988), p. 188) but it is only during the 1980’s that the interpretation of Coase theorem in terms of game theory has really became important. Game theorists apply their analytical tools to Coase theorem: cooperative solution vs. non-cooperative solutions, perfect or imperfect information (See for example McKelvey and Page [1999]).

systematically underestimates the strength of this argument. He seems to consider that the fact that there exist an opportunity of mutual advantageous exchange is sufficient for his reasoning. It is sufficient to have shown that the willingness to buy and to sell the right create the conditions to the exchange. Coase does not negate the importance, as far as distribution of revenue is concerned, of a lot of circumstances (as the “power” of negotiation for example (Coase [1994], (1988), p. 119))<sup>17</sup> but he argues that the distribution topics do not matter concerning the validity of his reasoning

Indeed, what is important is to know who finally has the use of the good. Whatever the price, the only important thing is that the good is in the hand of the agent who values it most. That’s why Coase may conclude, in his “Notes on the Problem of Social Cost”, that the fact that the gains of people are undetermined is meaningless as far as Coase theorem is concerned (Coase [1994], (1988), p. 192).

These brief elements about the debate about the hypothesis of competition is interesting for us. Indeed, the ambiguity surrounds the opposition between bargaining and competition because Coase adopts the traditional view at Chicago concerning the competition. Therefore, we have tried to show that its conception of the world of zero transaction costs is mainly inherited from the Chicago tradition in economics. These characteristics make it possible to understand why it is mainly with the Chicago school that Coase has tried to discuss. But, if the world of zero transaction costs is the economic world viewed through Chicago glasses, then the normative meaning of the theorem becomes crucial. Indeed, with Coase theorem, Chicago economists face a sort of “theorem of impossibility”. As far as the theorem holds, a Chicago analysis of law is impossible because the discussion about the norms – and notably the legal ones – are radically independent from economics.

### **III. Coase Theorem, Justice and Economics**

The numerous criticisms and commentaries about Coase theorem are often the first step to ask a more general question: what is the epistemological meaning of the theorem? Is a positive statement, a normative one, a tautology, a theorem? (Medema et Zerbe

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<sup>17</sup> If the rancher is ready to buy the right 40 and if the farmer is ready to sell it 20, the price will be between 20 and 40. According to Coase, it is difficult to maintain that exchange will not occur.

[2000], p. 876; McKelvey and Page [1999]). Here, we would like to propose a interpretation of the Coase theorem from the point of view of law and economics. It seems to us that Coase theorem draws a radical separation between the norms on the one hand and the economic phenomenon on the other hand. Therefore legal order and economic order are considered as two independent aspects of social life. Each of them obey their own rationality. Since Law has no influence on economic efficiency in case of zero transaction costs, efficiency may be based on any legal or normative principles.

This independence is really paradoxical for Chicago school in law and economics. Indeed, it induces on the one hand to consider positive transaction costs in order to economically analyzed the law and, on the other hand, to abandon market as the only mean of coordination. In order to present this paradox, we will study, firstly, what Coase means when he distinguishes between positive and normative analysis as the theorem is concerned. Then, we show that we have to think the relation between legal norms and positive economics beyond the coasean ideas themselves in order to understand the true meaning of the theorem.

#### *1/ A “liberal” theorem?*

For most of students, the background of the publication by Coase of “The Problem of Social Cost” is the evolution of political positions of Coase himself. According to Calabresi, for example, it seems impossible to understand the theorem without taking account of the “liberal turn” of Coase (Calabresi [1991], p. 1212). And it is true that most of economists use the theorem as a liberal argument (See for example, Mackaay [2000], p. 165). The normative content of the theorem would be the following: it would present an positive analysis of externalities which would propose economic policy, the market solution<sup>18</sup>. This normativity depends from the empirical validity of the theorem.

Certainly, it is possible to argue that Coase proposes to abandon traditional State interventions (taxes on externalities *etc.*) (Coase [1994], (1960), p. 174). Caron has well shown that the consequences of Coase’s analysis is to argue that the concept of market

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<sup>18</sup> This opinion is not unanimously accepted. According to Zerbe, for example, “Coase’s work is not in itself a guide to policy” (Zerbe [1980], p. 84). We have to be prudent here because a lot of policies are said to be “coasean”. For example, the proposition of a market for right to pollute is not coasean in its spirit. Indeed, the level of right to pollute needs to be precisely determined in order to limit externalities at their efficient level (Cooter [1982], p. 9-12).

failure used by welfare economists are not based on solid grounds (voir Caron [1998], p. 99-101). In 1962, Buchanan and Stubblebine uses the theorem against State policies since the existence of externalities is not a “prima facie” reason in favor of public intervention anymore (Buchanan et Stubblebine [1962], p. 465). For Demsetz, the coasean reasoning is also a strong argument against any State’s taxation (Demsetz [1972], p. 14). According to those economists, the theorem has to be considered as a strong argument against public policies<sup>19</sup>.

In a way, this interpretation is reinforced by Coase himself. In his articles about the links between positive and normative analysis and public policies, he maintains that the normative oppositions are not the results of different value judgments but are mostly the results of different predictions about the “economics consequence of an action” (Friedman, quoted *in* Coase [1994b], (1974), p. 48)<sup>20</sup>. On this topic, he declares to agree the Friedman’s position presented in the *Essays of Positive Economics*. Certainly, Coase asserts also that economists have to be prudent and humble (« *humility* » Coase [1994b], (1974), p. 48), but from the point of view of the normative/positive distinction, he clearly thinks that a positive analysis becomes necessarily a policy prescription (Coase [1994b], (1974), p. 48). In this framework, it is obvious that the normative meaning of the theorem depends on its ability to describe and explain the true behavior of economic agents. But, it seems to us that this first interpretation of the normative content hides the most important. It hides a more complex relationships between normative and positive analysis.

## 2/ *The neutrality of norms*

From the point of view of economic analysis of law, coasean reasoning induces very peculiar relationships between positive economics and normative analysis. Certainly,

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<sup>19</sup> According to Coase, the criticism of State is mainly based on the belief that it is necessary to compare different social institutions. Market and State are only two possible means in order to solve economic problems. All the work of Coase is precisely to make economists aware that there is a continuum of institutions, alternative to market and state, which may be efficient. The role of the economist is to compare the true efficiency of each of this social institutions. The reason of the relative efficiency have to be found in the existence of transaction costs.

<sup>20</sup> A similar opinion may be found in Stigler for whom the economist accepts the “*basic values of the community*” (Stigler [1972b], p. 4).

the words “norms”, “justice” or “ethics” are never used by Coase in his article<sup>21</sup>. So, it is understandable that a lot of students does not want to see in the Coase theorem another meaning that a positive one (Medema et Zerbe, [2000], p. 877). But, at the same times, the theorem states very clearly that if property rights are perfectly defined, if transaction costs are zero then the final allocation of resources is efficient and invariant. The rights may be attributed to the rancher or to the farmer, the crops size and the cattle size will be the same and the value of production will be maximized.

Actually, Coase tries to show that a contradiction between the principles of justice and the efficiency topics can never occur. On the one hand, we have legal norms, ethics and justice and on the other hand, we have efficiency considerations. In others words, the legal or ethical principles on which the attribution of the rights to the individuals is based have no influence on the manner whose these rights are (economically) used (Hovenkamp [1990], p. 809). It would even be possible to attribute these rights at random! In this sense, the theorem draws a frontier between positive and normative topics. As such, it is impossible to consider the theorem as an argument in favor of one particular normative theory and there is no way to consider it as a “liberal” theorem. Therefore, the theorem is largely discussed bottom-up: it is defended by liberal economists while it is not precisely a liberal statement and it is attacked by heterodox economists while they could find in it a strong arguments in favor of their own positions. The more valid the theorem is, the more possible policies of redistribution are.

In order to precise this point, the fifth section of the Coase’s article is particularly useful. Coase maintains clearly the independence between the normative arguments and the economics ones. As Coase states, whatever the legal principles used by courts in order to justify their decision, the problem for the economists is always the one which he has analyzed in the first part of his article. The legal principles given by courts to explain their decisions have not to disturb economists (Coase [1994], (1988), p. 135)<sup>22</sup>.

To illustrate his position, Coase presents numerous example of English common law. The diversity of these examples are interesting insofar as it presents a lot of normative principles used by courts in order to decide the litigation. Sometimes, judges consider that the causality is the key-point to be analyze to solve the conflict. In *Sturgens*

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<sup>21</sup> In the 1960’s article, only one reference to normative topics may be found. Coase quotes Frank Knight in order to show that most of times, the welfare economics results always in a study of ethic (Coase [1994], (1960), p. 180).

<sup>22</sup> Coase is even clearer. According to him, some legal arguments used to decide the attribution of a right is as relevant as the eye-color of the judge (Coase [1994], (1960), p. 135).

*c. Bridgeman*<sup>23</sup>, the material causality is sufficient to attribute the right to one of the agents. Sometimes, it is the violation of the freedom which seems to be the key-point of the court's solution (like in the case *Cookes c. Forbes*<sup>24</sup>). Sometimes, judges decide according to a standard of behavior (*Andrea c. Selfridge and Company Ltd*<sup>25</sup>).

In any of these legal cases, we have a lot of different of legal principles used by judge in order to decide to which the right has to be attributed. But according to Coase, these normative principles have no consequence on the true economic nature of the situation (Coase [1994], (1960), p. 133). In case of zero transaction costs, the economic nature of the situation is always the same (Coase [1994], (1960), p. 131). Therefore, Coase theorem draws a frontier between normative principles used in the society (and applied by courts) and economic considerations.

To conclude, we may even push further the Coasean reasoning. Coase provides a final answer to libertarians. Let us take, ones again, the example of the rancher and the farmer, and let us suppose that the farmer is the legitimate owner of the right. In this case, according to a libertarian, the behavior of the rancher is a breaking of property rule and a violation of the property of the farmer. But, from the point of view of economic efficiency, the only reference to a "legitimate" property of a resource is no relevant. Making together, as libertarians do, efficiency, justice and property is a non-sense since efficiency may be based on any normative principle. And more one believes in the perfect functioning of the market, more he has to abandon such equivalence between efficiency and particular principles of justice.

## CONCLUSION

Law and Economics, and more particularly Chicago school of law and economics, is largely based on the Coase theorem presented in the Coase's 1960 article. But, the foundation of this new research program inside Chicago school in economics is really paradoxical. Indeed, the normative content of the theorem insists on the fact that, with zero transaction costs, normative sphere (and notably Law and legal decisions) has absolutely no influence on economic sphere. It seems impossible to build an economic

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<sup>23</sup> Coase [1994], (1960), p. 126.

<sup>24</sup> Coase [1994], (1960), p. 128.

<sup>25</sup> Coase [1994], (1960), p. 147.

analysis of law without using the concept of transaction costs. This result is all the more important for Chicago economists than, as we have tried to show, the theorem is demonstrated inside a Chicago school framework. Therefore, for Chicago school in law and economics, Coase theorem is extremely ambiguous: either, Chicago school does not accept positive transaction costs and it finds it impossible to say anything about the law; either, it accepts Coase reasoning and it is necessary to take account of positive transaction costs. But, in this case, Chicago economists have also to recognize that market is not the only mean of coordination. All the developments in law and economics at Chicago (from property rights paradigm – Alchian, Demsetz – to Posner's theory) face this paradox and try, each of them, to pursue an impossible task: accepting positive transaction costs without sacrificing market as the only mean of coordination.

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