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Coasean Theory of Property Rights and Law Revisited: A Critical Inquiry

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ABSTRACT: Ronald Coase's famous Theorem states that externalities — third-party effects of transactions that undermine the supposed optimality of competitive equilibrium — do not need to be corrected by active government policy, as in the classical presentation by A. C. Pigou, if there are complete markets in property rights. This Theorem, however, is inherently flawed, as revealed by "internal" or "immanent" critique of its assumptions. It thus fails, even on its own terms. Beyond this, however, a more radical critique, which foregrounds issues of social structure, social relations, power and conflict, forms the basis for a comprehensive analysis of (capitalist) property rights. This radical analysis of the Coase Theorem and the debate spawned by it has implications for the entire field of "law and economics" studies, and for its central notion that legal doctrine can be based on any set of pure efficiency criteria.

1. *Introduction*

IN HIS CLASSIC 1960 ARTICLE, "The Problem of Social Cost," Ronald Coase is the first among the new institutionalists to try to incorporate the issues of property rights and transaction costs into economic analysis. He unfolds his argument regarding the issue of how ownership arrangements, which generate external effects, can drive the system into an efficient allocation of resources. In particular, he examines the economic implications of the allocation of legally delineated rights, namely those that have external effects on the value of other individuals' abilities to exercise their rights over assets. The basic feature of his analysis is the notion of transaction cost. Coase argues that the function of the market *per se* is not without costs: "there is a cost of using the price mechanism" (1988a, 38). He identifies three sorts of costs: first, "the most obvious cost . . . is that of discovering what the relevant prices are." The other two types of transaction costs refer to "the costs of negotiating and concluding a separate contract for each exchange transaction which takes place on market" and the costs associated with the establishment of long-term contracts (*ibid.*, 38–39). In his other major article, Coase (1988a, 114–115), he clarifies the concept further. Transaction costs include the costs of discovering "who it is that one wishes to deal with, to inform people that one wishes to deal and on what terms, to conduct negotiations leading up to a bargain, to draw up the contract, to undertake the inspection needed to make sure that the terms of the contract are being observed, and so on." And he concludes that transaction costs are "the cost of carrying out market transactions . . ." Coase uses the notion of transaction cost as a benchmark to divide his analysis into two distinct parts. In the first part, he attempts to identify the essence of property rights in the "imaginary" frictionless world of zero transaction costs; in the second, he tries to explain the allocation of the legally enacted property arrangements in the "real" world of positive transaction costs. In the former case, Coase erects what is universally known as the Coase Theorem, while in the latter he lays the foundations of the economic analysis of law.

One can easily discern in Coase's analysis the foundation of modern neoliberal economics, with the underlying core idea that the market itself is the only mechanism that can produce efficient results. Thus, any government intervention will hinder the efficient operation of the free market and will lead to inefficient allocation of resources. In this vein, Simpson (1996, 58–63) identifies three basic ideas in Coase's economic analysis of law. First is the reciprocal nature of social cost problems where both parties involved are assumed to cause the damage. Second is the "as if market" (indispensible) role of law in a real world of positive transaction costs, which should allocate rights in the same way as the market. Last is an economic, cost–benefit analysis in deciding how to solve problems of social cost.

In what follows and in the context of "internal critique" we focus on what we regard as the main foundational weaknesses of Coase's economics as expressed in the 1960 article. Thus, the analytical substance and strength of the Coase Theorem even in a frictionless world of zero transaction costs is brought into question on the grounds of its tautological nature, the existence of important theoretical gaps from a game-theoretic perspective, and its logically and empirically wrong premise with regard to the separation of the issues of efficiency and distribution. Second, Coase's economic analysis of law is found to be in direct contradiction with (and hence violating) the *de jure* nature of institutionalized rights over property and hence leading to inefficient results both in static and in dynamic terms. Last, and chiefly, in the penultimate section, a more radical, Marxist critique of Coase's analysis is brought to bear based on an alternative methodological and theoretical framework involving issues of social structure, social relations, power and conflict. We argue that the aforementioned social factors are the *sine qua non* condition for a comprehensive analysis of (capitalist) property relations.

2. *The Externality Problem*

The point of departure of Coase's analysis is the externality problem. The term "externality" refers to a consequence upon a third party of the action or activity of another individual. These external effects on the third party may be either harmful or beneficial. So, the problem arises because, in the presence of externalities, the allocation of resources is inefficient and, consequently, a mechanism of internalization of externalities (*i.e.*, a mechanism through which the costs and benefits do not diffuse into the wider economy but are absorbed by the productive and consuming activities that generate them) is necessary in order to allocate resources efficiently.

The traditional economic approach to the externality problem can be traced back to mainstream welfare economics associated with Pigou's (1962 [1932]) analysis. The best-known example is the situation where a factory produces pollution, a negative externality to the surrounding neighborhood. The neighborhood's loss is a form of social cost, but the factory will not take this cost into account in making its own production decisions. Since behavior is assumed to be based on private costs and benefits, externalities may give rise to an inefficient allocation of resources. The Pigovian solution is that government should interfere through the use of a punitive tax to correct the negative externality. By taxing the factory, society can force it to face the social cost (the pollution) that it generates. The purpose of this tax is to make the social become part of the private cost. In this way, the externality will be internalized and resources will then be allocated efficiently from society's viewpoint.

The Pigovian solution to the externality problem is based on two strong intuitions. The first is that Pigovian welfare economics encounters the externality problem from a *moral* viewpoint. Based on conventional notions of causation — the traditional dichotomy between the party that causes the harm (the factory) and the victim (the neighborhood) — Pigou's approach inevitably tries to make the victim whole and "punish" the party that generates the externality. The second intuition refers to the mechanism that internalizes the externalities: use of state intervention through taxes, subsidies, or regulations to alter the behavior (*i.e.*, abate the activities) of the party causing the externality. In his way the Pigovian approach lays emphasis on the role of government interference in the economic sphere.

Coase took the discussion into a different direction by reversing the Pigovian analysis of the externality problem. First, he challenged Pigou's moral viewpoint by pointing out that an externality problem, in reality, is reciprocal in nature:

> The traditional approach has tended to obscure the nature of the choice that has to be made. The question is commonly thought of as one is which A inflicts harm on B and what has to be decided is, How should we restrain A? But this is wrong. We are dealing with a problem of a reciprocal nature. To avoid the harm to B would be to inflict harm on A. The real question that has to be decided is, Should A be allowed to harm B or Should B be allowed to harm A? The problem is to avoid more serious harm. (Coase, 1960, 96.)

In other words, while it is true that there would be no harm to the members of the neighborhood in the absence of the factory's pollution, it is equally the case that there would be no harm to the neighborhood if the members of the neighborhood were not located in the vicinity of the factory. Consequently, Coasean analysis, in contrast to Pigou's theory, changes the moral basis by altering the conventional notion of causation. There is no longer a victim that must be made whole and a victimizer who must be punished; just two potential victims (and beneficiaries), the question being to minimize the overall cost inflicted upon and distributed between them.

Coase goes on to suggest that, being reciprocal in nature, the problem of externalities is also amenable to efficient resolution without state intervention. According to Coase, in a well-functioning capital system, the internalization of externalities can be accomplished by the transfer of relevant property rights between the affected parties. In other words, contrary to Pigou's reliance on government interference, Coase proposed a *market-oriented* solution to the externality problem, through free trade in property rights. This statement forms the core of one of the most controversial theorems in economics, the Coase Theorem.

3. *The Coase Theorem*

In the first part of "The Problem of Social Cost," Coase's analysis refers to a world of zero transaction costs and points out that externalities will be internalized by a mutually beneficial bargain, between the producer of externalities and the victim, irrespective of the initial allocation of property rights. His argument was named "the Coase Theorem" by Stigler[1] and opened a new direction in the field of welfare economics.

One important assumption of the Coase Theorem is that when externalities are present, the affected parties can negotiate directly and costlessly in order to resolve the conflict. Contrary to Pigou's reliance on state interference, which ignored the role of private property rights, Coase shows how free trade in rights can lead to an efficient allocation of resources, if markets operate without frictions. This requires that three conditions be met. First is a clear specification of property rights: the Coase Theorem presupposes *ex ante* fully delineated private property rights. It should be stressed that in Coasean discourse, the concept of property rights is reduced to explaining ownership arrangements in terms of person-to-thing relations. In this way, property rights are defined simply in terms of the actions that people are able to exercise in relation to the things they own. This means that either the party who generates the externality has the legal right to do it, or the victim has the legal right to be compensated for the harmful effect produced by the other party.[2] Second are fully alienable property rights. This

1 "I did not originate the phrase, 'the Coase Theorem,' nor its precise formulation, both of which we owe to Stigler" (Coase, 1988c, 157). Note that both Stigler and Coase were at Chicago and fanatical supporters of free markets, especially at the micro level, with Stigler campaigning for the Nobel Prize for Coase and for Ernest Becker.

2 It is worth noting that the Coase Theorem does not provide either a mechanism to explain how these rights came into existence, or any device to demonstrate how these rights are allocated. Coase attempts to provide a mechanism to justify the efficient allocation of property rights in the second part of his article, where he deals with the role of law in a positive transaction costs world.

means that the affected parties are free to "exchange" their rights until a Pareto-efficient allocation of resources has been attained. Any restriction that hinders the trade of these rights makes the Coasean market-oriented solution potentially inefficient. Last, but not least, the Coase Theorem presupposes that transaction costs are zero: "This is the essence of the Coase Theorem . . . making clear that [the Theorem] was dependent on the assumption of zero transaction costs" (Coase, 1988c, 158). In other words, the costs of negotiating, monitoring, acquiring information and enforcing contractual agreements are zero. Granted these conditions, Coase demonstrates that a market-oriented solution, based on a free trade of rights between affected parties, will bring about an efficient allocation of resources. This is the *efficiency hypothesis* of Coase's theorem (Medema and Zerbe, 2000, 838).

To support his theorem, Coase (1960, 97–104) used the example of an economic conflict between a cattle raiser and a wheat farmer about the rights to use land. More concretely, the example refers to the case of straying cattle, which destroy crops growing on neighboring land. It is assumed that there is no fencing between the neighboring properties and an increase in the size of the cattle-raiser's herd increases the total damage to the farmer's crops. There is no way that the farmer himself can prevent the damage to his crop. Suppose, further, that the cattle-raiser's profits and the value of damages to the farmer's crops associated with various quantities of cattle are as given in Table 1 (see next page).

Table 1 is an extension of Coase's original table (1960, 97). The first, fourth and filth columns are the same as those in Coase's table, while the others will help us to understand the "theorem" more fully. The last column represents net social benefit as the sum of cattle-raiser's profit and farmer's profit (for simplicity we assume that farmer's profit is constant and equals 8), minus the annual crop loss. The Pareto optimum point, where the net social benefit is maximized, is at 3 steers. Therefore, the efficient allocation of resources is achieved when the cattle-raiser has 3 steers in his herd.

Coase's example assumes that a cattleman grazes his cattle next to crops owned by a farmer on neighboring land. Using the pricing system (which is without cost), any damage to the crops would be paid by the cattle owner. Specifically, costs could be represented as in Table 1. Also, the cost of fencing the farmer's property is $9 and the price of the crop is $1 per ton. The options available if the cattle owner is

TABLE 1

Number in Herd (Steers)	Cattle Raiser's Profit	Cattle Raiser's Profit per Additional Steer	Annual Crop Loss	Crop Loss per Additional Steer	Net Social Benefit
1	10	10	1	1	17
2	18	8	3	2	23
3	**24**	**6**	**6**	**3**	**26**
4	26	2	10	4	24

held liable for property damage are the following: If the cattle owner chooses to increase his herd from 2 to 3 steers, then the cost imposed would be $3 to pay for the additional crops damaged. The cattle owner will not add additional steers unless the return for that steer is more than $3. If the cattle owner wants to have a herd of 4 steers, it would be cheaper (than the total of $10 for crop loss) for him to pay for fencing the farmer's field. Coase argues that if the presence of the cattle owner has any effect on the amount of crops planted, it would be that the farmer would plant less. It may get to a point that the receipts from the undamaged crops would be less than the cost of planting. Therefore, the final outcome will be the efficient point of 3 steers. However, Coase shows in his example that the same outcome would occur if the cattle owner was not held liable for crop damage. Therefore, the farmer would have to pay the cattle owner for not adding steers to his herd (or having fewer steers), pay for the fencing, or quit planting crops. He states "it is necessary to know whether the damaging business is liable or not for the damage caused, since without the establishment of this initial delimitation of rights there can be no market transactions to transfer and recombine them. But the ultimate result (which maximizes the value of production) is independent of the legal position if the pricing system is assumed to work without cost" (Coase, 104).

The Coase Theorem states that irrespective of the initial allocation of rights (*i.e.*, whether the damage is liable to the cattle-raiser, which means that the farmer has the right to "clear" crops, or the cattle-raiser has no liability for the damage and hence has the right to "damage") the externalities (the damage caused by the straying cattle on neighboring land) will be internalized. This means that the efficient allocation of resources between the cattle-raiser and the farmer will not depend on the initial allocation of property rights:

> It is necessary to know whether the damaging business is liable or not for damage caused, since without the establishment of this initial delimitation of rights there can be no market transactions to transfer and recombine them. But the ultimate result (which maximizes the value of production) is independent of the legal position if the pricing system is assumed to work without cost. (Coase, 1960, 104.)

This is the *invariance hypothesis* of the Coase Theorem (Medema and Zerbe, 2000, 838).

The conclusion is that in a situation of zero transaction costs, the two agents can resolve their conflict by trading their rights. When rights become tradable they enjoy a market value and a market price will be paid. Such a rearrangement of rights, however, will *only* be undertaken when the increase in the value of production consequent upon the reallocation of rights is greater than the costs, which would be involved in bringing it about; *i.e.*, there is bargaining room for the affected parties to negotiate a level of payment (a price in the special case of a market) that internalizes the externalities and hence leads to an efficient allocation of resources.

4. *An "Immanent" Critique of Coase's Theorem*

The purpose of this section is to provide an "immanent" or "inside" critique of Coase's theorem. In other words, our attempt is to question and challenge the analytical validity of the theorem on its own terms. In this vein, the analytical substance and strength of the theorem even in a frictionless world of zero transaction cots is brought into question on grounds of its tautological nature, the existence of important theoretical lacunae from a game-theoretic perspective, and its logically and empirically false premises with regard to the separation of the issues of efficiency and distribution.

i. *The Tautological Character of Coase's Theorem.* The Coase Theorem triggered an endless debate among mainstream economists. A voluminous literature is the result, much of it devoted to attacking or defending the Theorem.[3] The stickiest issue in the debate is the

3 For example, Wellisz (1964) argues that the Theorem under perfectly competitive conditions in the long run presupposes rents that may not exist. Similarly, Regan (1972) and Veljanovski (1982) point out that even if the Coase reasoning is valid in the short run, there will be changes in allocation of resources in the long run. On the other hand, Calabresi (1968) notes that in the presence of determined conditions Coase's conclusions remain as true in the short run as in the long run. Much of this literature is discussed in Medema and Zerbe (2000).

precise meaning given to the assumption of zero transaction costs. Just what counts as a transaction cost?

Elsewhere we have tried to lay bare the vague and ill-defined nature of the concept of transaction costs (see Meramveliotakis and Milonakis, 2010). For Coase (1937, 38–9; 1960, 114) transaction costs explicitly encompass all of the *ex ante* and *ex post* costs of accomplishing a contract. These include the negotiation and bargaining costs of concluding a mutually beneficial arrangement as well as enforcement and policing costs.

On closer inspection, it turns out that in this all-encompassing definition, anything that prevents reaching a mutually advantageous bargain is a transaction cost. If so, the absence of transaction costs means that no such obstacle to reaching a bargain exists, and the parties involved would then be able to negotiate an efficient solution to the problem. The Coase Theorem can, then, be restated as follows: "Individuals will make efficient bargains if no obstacle of any kind to such bargaining exists." Presumably, if individuals do not reach a mutually advantageous bargain, some obstacle has prevented them from doing so. A mutually beneficial outcome will be achieved in the absence of transaction costs, where the latter are interpreted to be any hindrances to bargaining, whether literally costs of bargaining, or other obstacles, such as asymmetries of information between bargaining parties. Granted this, the strength and appeal of the Coase Theorem is based on an overextension of the transaction costs concept to the point of absurdity.

If transaction costs thus defined are zero, the beneficial outcome is assured *ex hypothesi.* This, however, reduces the theorem to a mere tautology. This is because the notion of transaction costs is defined so that the absence of transaction costs assures the efficient outcome, in the sense that if there are gains from trading rights and trading is completely costless, then trading will take place to everyone's advantage. But, if transaction costs are zero, no externalities would ever occur, since they will be dealt with instantaneously as soon as they emerge. As Usher (1998, 9) concludes: the idea

> that resources will be employed efficiently in the absence of transaction cost is almost a tautology. What does it mean to say that transaction costs are zero? It means that people can bargain costlessly, and will, presumably, do so as long as bargains are mutually advantageous. But the absence of mutually advantageous bargains is precisely what one means by efficiency, a state of affairs such that no change can make one person better off without making somebody else worse off. The strictly-correct version of the Coase Theorem

boils down to the proposition that if people can agree upon an efficient outcome, then there will be an efficient outcome.

To costless bargaining should be added the timeless nature of the world of Coase's theorem.

ii. *A Critique from a Game-Theoretic Perspective.* Coase's theorem implies — assuming zero transaction costs and fully delineated and alienable property rights — that the externality problem is resolved through a bilateral bargaining process between the affected parties which leads to an efficient outcome. The *a priori* nature of this argument is obvious. Coase assumes that *in all cases* the agents agree a price for the externality and for the right that maximizes the net social benefit.[4] At this point Coase commits an error. He presupposes that the agents will inevitably reach an agreement as the result of the bargaining process, in order to justify the efficient outcome that maximizes the value of production. But this cannot just be taken for granted; it has to be explicitly shown. In fact, from a game-theoretic perspective, Coase's theorem is a tautology and as such true by definition, only if a pure coordination game is assumed. In the case of a strategic game, the theorem loses its tautological character and the agreement is no longer necessarily the outcome of the bargaining process, even in the absence of transaction costs.

The first to notice this weakness was Samuelson (1967), quoted in Coase (1988c). Samuelson explicitly questioned Coase's idea that bilateral bargaining *a priori* leads to a mutually satisfactory agreement, even under the assumption of a frictionless world. In his reply to Samuelson, Coase (1988c, 160) first argues that Edgeworth's classic analysis provided the underlying logic of his own:

> Edgeworth has argued in *Mathematical Psychics* (1881) that two individuals engaged in exchanging goods would end on the "contract curve" because if they did not, there would remain positions to which they could move by exchange which would make both of them better off. Edgeworth implicitly assumed that there was costless "contracting" and "recontracting"; and I have often thought that a subconscious memory of the argument in *Mathematical Psychics,* which I studied more than fifty years ago may have played a part in leading me to formulate the proposition which has come to be termed the "Coase Theorem."

4 In the Coase Theorem, however, this price remains unspecified. Different prices correspond to different allocations of the exchange surplus.

Following this, Coase asserts that it is natural to believe that rational agents will end up with a mutual agreement because it is in their common interests to do so: "I would not expect the parties to choose terms which make both of them worse off than they need to be" (161).

However, the argument Coase invokes to justify the efficiency outcome of the negotiation process can be refuted from a game-theoretic bargaining perspective. First, it fails to take into account that the agents act *strategically* in the game, *i.e.*, their behavior takes into account the expected behavior of the other player and the mutual recognition of interdependence. This means that the interaction between the cattle-raiser and the farmer is one of strategic interdependence, and hence that one's rewards are positively correlated with the other's losses. Following this, Cooter (1982, 23) argues that the possibility of strategic behavior disproves the Coase Theorem because this behavior can prevent efficient bargains despite the absence of transaction costs:

> The error in the bargaining version of the Coase Theorem is to suppose that the obstacle to cooperation is the cost of communicating, rather than the strategic nature of this situation. Bargainers remain uncertain about what their opponents will do not because it costs too much to broadcast one's intention, but because strategy requires that true intentions be disguised.

Thus, Coase seems to overlook the case where individuals have the incentive to cover their real intentions, thus raising the possibility of non-cooperation.

Second, each individual, as a rational self-interested actor, tries to maximize his/her *own* utility with regard to the exchange surplus and not the entire social surplus. These observations lead us to formulate a different game, which is characterized by a *mixture of coordination and conflict.* Knight (1992, 52) pinpoints that

> these mixed-motive cases . . . have multiple equilibria that, unlike the pure coordination cases, differ in their payoffs for the various players. Because of these distributional differences, the actors differ in their preference ranking of the available equilibria. For example, player A prefers outcome 4,2 to 2,4, whereas player B's preferences are just the opposite. Although both prefer coordination on one of the two equilibria, as opposed to the nonequilibrium alternatives, they disagree on which outcome should be achieved. Therefore, there is no assurance that the rational pursuit of self-interest will lead to

an agreement, and hence there is the possibility of a situation in which no equilibrium outcome exists.[5]

In contrast to Coase's assumption concerning the efficiency of the negotiations, the conclusion drawn from the above is that the parties *may not contract* in a mutually beneficial manner, because either bargaining scenarios will not necessarily induce the parties to reveal their true preferences or because each of them wants to achieve social outcomes that give them distributional advantage, which means that bargains may not be optimal even in the context of a frictionless world. Thus, only given the existence of an authority or institutional mechanism to force individuals to achieve an agreement, they might adopt reciprocal hostile positions like those envisaged by Hobbes (threats, attacks, etc.) rather than cooperative behavior (Regan, 1972; Cooter, 1982).

Coase (1998b, 161) seems to concede the possibility of an inefficient outcome of the bargaining process, arguing that "it is certainly true that we cannot rule out such an outcome if the parties are unable to agree on the terms of exchange, and it is therefore impossible to argue that two individuals negotiating an exchange *must* end up on the contract curve, *even in a world of zero transaction costs*" (emphasis added). Nevertheless, he insists on the truth of his Theorem by invoking its empirical relevance. Specifically, Coase believes that inefficient bargaining outcomes are too rare to have much significance: ". . . there is good reason to suppose that the proportion of cases in which no agreement is reached will be small." But simply supposing that many bargains occur does not in itself provide any information about what possible bargains fail to occur. In any case, recourse to pragmatism is no substitute for theoretical argument.

Coase's argument has been subjected to both empirical and experimental tests.[6] However, it is highly questionable if such exercises have any validity, given the unrealistic assumption of zero transaction costs. In other words, the Coase theorem *per se* is incapable of being tested given the unrealistic nature of zero transaction costs. This can explain the inconsistency between experimental results and empirical

5 For a different perspective see Farrell, 1987.

6 See, for example, Hoffman and Spitzer, 1982; Ellickson, 1986; and Donohue, 1989, among others. For a review of the experimental and empirical studies of the Coase Theorem see Medema and Zerbe, 2000, 858–873.

findings. For instance, both Ellickson's (1986) and Donohue's (1989) findings are inconsistent with Coase's theorem, while Hoffman and Spitzer's (1982) experiments do confirm Coase's predictions in large measure.

iii. *The Issue of Distribution.* One underlying presupposition of the Coase Theorem is that distribution does not matter for efficient outcomes. The world of the Coase Theorem is distributionally blind. Coasean analysis only looks at the net benefits (total social benefits minus total social costs) to the entire community but not at the distribution of these benefits. Thus, a central proposition of Coase's analysis is that issues of distribution and efficiency can be separated, and the efficiency of the market outcome does not depend on the distribution of wealth, so long as there are well-defined property rights.

Although the initial assignment of rights is neutral with respect to the pursuit of optimal resource use, it is not neutral with respect to the distribution of wealth between the two parties. This should be clear from the nature of the bargaining between the farmer and the rancher under the two assignments described above. For example, when the farmer initially had the right to prevent the cattle straying, it was the rancher who paid the farmer for the right to increase his herd up to the efficiency point. In contrast, when the rancher initially had the right, the farmer paid the rancher to reduce his herd down to the efficient point. In both cases, the herd size ended up being the same, but the distribution of wealth favored the party who held the initial right. Thus, whoever receives the right first is better off.

In other words, the issue of efficiency is totally separated from distributional questions; *i.e.*, how the pie is cut is different from how it grows, so that the market is believed to be able to generate efficient outcomes independent of "who gets what." But although the solution reached is not affected by the initial distribution of property rights, the same is not true for the resulting distribution of wealth between the parties involved.

It should be noted that in Coase's analysis efficiency is defined in general terms, as the attainment of the greatest aggregate social value. Throughout his article, Coase never uses the term Pareto efficiency. Indeed it seems that Coasean efficiency refers chiefly to the notion of Kaldor–Hicks efficiency, which is not concerned with whether or not a reallocation of resources makes certain individuals worse off, but rather with whether or not society's aggregate utility has been maximized.[7] This suggests that an exchange is efficient if it makes at least one person better off, and the person who benefits is capable of compensating any disadvantage to others. Thus, Kaldor–Hicks efficiency might seem to be more compatible with Coase's analysis than the Pareto concept. But if this is so, then the issue of distribution is not without significance, since Kaldor–Hicks efficiency introduces a principle of distribution and this is a critical concession. Kaldor–Hicks efficiency, by definition, is not distributionally blind.

It follows that frictionless bargaining does not necessarily lead to maximization of social welfare if wealth is not distributed in a socially desirable way. Suppose, for instance, that a party does not possess wealth sufficient to pay for a socially desirable change in another party's behavior. Take the example of a multinational firm that makes a profitable chemical product, but in so doing, dumps noxious waste into a common-access lake used for subsistence fishing by local residents of a developing country. If the multinational has been granted property rights to pollute, it may be impossible for local residents to purchase rights to the lake from the multinational if they are poor. Hence, even from a Coasean, positive perspective, an efficient solution to the problem cannot be reached due to wealth and income considerations.

It follows further that distribution matters and not just for who gets what, but also for how much there is to be got. This implies that issues of distribution cannot be separated from issues of efficiency, since the size of the cake depends, among other things, on how it is cut. It is therefore fallacious to pursue social policy simply in terms of efficiency considerations.[8]

5. *Law and Property Rights*

In the second part of his article, Coase relaxes the unrealistic assumption of zero transaction costs and begins to tackle liability law from a more pragmatic perspective:

7 On Kaldor–Hicks efficiency, see Kaldor, 1939; Hicks, 1939.

8 The separation of the issues of efficiency and distribution has also been subject to critical scrutiny from a new information-theoretic perspective by Joseph Stiglitz (1994). According to Stiglitz (1994, 45–50), whether or not the economy is Pareto efficient can depend on the distribution of income, implying that one cannot ignore the distributional consequences of policy.

> The argument has proceeded up to this point on the assumption that there were no costs involved in carrying out market transactions. This is, of course, a very unrealistic assumption. In order to carry out a market transaction, it is necessary to discover who it is that one wishes to deal with, to inform people that one wishes to deal and on what terms, to conduct negotiations leading up to a bargain, to draw up the contract, to undertake the inspection needed to make sure that the terms of the contract are being observed, and so on. These operations are often extremely costly, sufficiently costly at any rate to prevent many transactions that would be carried out in a world in which the pricing system worked without cost. (1960, 114.)

So, once Coase recognizes this important aspect of how the real world works, he attempts to provide a supplementary analysis in order to take into account the existence of positive transaction costs. Initially, he points out that when the costs of carrying out market transactions are taken into account, it is clear that the rearrangements of rights through the market may not lead to a Pareto efficient outcome: "the costs of reaching the same result by altering and combining rights through the market may be so great that this optimal arrangement of rights, and the great value of production which it would bring, may never be achieved" (115).

The rearrangement of rights will only be undertaken when the increase in the value of production consequent upon the rearrangement is greater than the costs involved in bringing it about. When it is less — affected parties cannot proceed with negotiations that will lead to an economically "efficient" state of affairs and the private solution becomes impossible — Coase states explicitly that, under these conditions, the initial delimitation of rights over externalities does have an effect on the efficiency with which the economic system operates.[9] This means that in a situation where a production activity generates negative externalities, the internalization of these externalities is strictly subject to the initial allocation of property rights (*i.e.*, which of the parties "owns" the right), since severe transaction costs block the affected parties from entering into a bargaining process.

At this point, Coase begins to tackle an issue that is at the core of the analysis of the New Institutional Economics. He suggests an approach to the problem of the efficient allocation of property rights:

9 We use the term "rights over externalities" in order to define two distinct cases. First is the case where the victimizer "has the right" to produce the externalities, and, second is the case where the victim "has the right" to be free of them.

the situation is quite different when market transactions are so costly as to make it difficult to change the arrangement of rights established by the law. In such cases, the courts directly influence economic activity. (1960, 119.)

Here, Coase stresses the role of law in defining and establishing property arrangements over externalities. It follows that courts should assign property rights (or legal entitlements) directly to the most efficient users in a way that minimizes the costs associated with the externality in order to achieve an efficient allocation of resources.

Coase thus lays the foundations of the economic analysis of law. He offers a criterion whereby disputes over externalities can be adjudicated through an efficient assignment of property rights. Justice itself should be subordinated to efficiency. He thus began to colonize a new field by injecting into the field of law the economist's method of cost–benefit analysis, thus opening the ground for a new subfield known as "law and economics." Coase's economic theory of law could be considered as one of the first instances of economics imperialism (see also Fine and Milonakis, 2009, 99–106).[10]

Coase lists numerous examples from court decisions arising out of the common law relating to nuisance. His endeavor is to illuminate his theory by recording a number of cases, while simultaneously clarifying his opposition to the Pigovian tradition. For instance, he cites a case from English legal history, *Sturges v. Bridgman* (1879) (1960, 105–7). A confectioner's machinery disturbs a neighboring doctor. Hence, a negative externality is present, while high transaction costs restrain the affected parties from solving the dispute through a free trade of rights. Thus, the court's decision to assign the property rights is crucial to ensure economic efficiency. According to Coase (106), the court's decision depends "essentially on whether the continued use of the machinery adds more to the confectioner's income than it subtracts from the doctor's." If it adds more income to the confectioner, then the court has to assign the right to continue to operate the machine. On the other hand, if the doctor's income would have fallen more through the use of this machinery than it added to the income of the confectioner, then the court should give the right to the doctor to prevent the confectioner from using his machinery.

10 The logic of economics imperialism is to expand economic analysis to other social sciences. In other words, economic analysis is used for the investigation of social phenomena. For a critical discussion of economics imperialism, see Fine and Milonakis, 2009.

> The problem which we face in dealing with actions which have harmful effects is not simply one of restraining those responsible for them. What has to be decided is whether the gain from preventing the harm is greater than the loss which would be suffered elsewhere as a result of stopping the action which produced the harm. (132.)

The Coasean logic in the assignment of rights stresses the reciprocal nature of the externality problem and is opposed to the unidimensional notion of causation prevalent in the Pigovian approach to externalities. Following the latter, the court would act to protect the victim–doctor and restrain the harm-causing confectioner by providing the right to the doctor.

Summarizing, Coase points out that in the presence of positive transaction costs, the way property rights are enacted affects the allocation of resources. Consequently, the role of law is to allocate property rights in a way that ensures economic efficiency, hence distancing himself from the legal notion of justice, the moral principle that makes the victim whole and punishes the victimizer. The common-law adjudication and judicial control of property should, according to Coase, be inherently associated with the efficiency principle.

6. *A Critique of Coase's Economic Theory of Law*

In Coase's opinion, the goal of the judge is *not* to provide justice in the legal sense (*i.e.*, make the victim whole and punish the victimizer), but rather to maximize social wealth. This view of law, based on utilitarian morality, which Coase envisioned, renders to the legal decision-makers the authority to assign rights in ways that maximize the value of society's output (efficiency principle). Because the Coasean approach is embedded in the tradition of positive economics, it demonstrates a lack of interest in notions of fairness and justice. Its sole concern is with instrumental market efficiency (optimum productive uses of resources, those that maximize social welfare or social utility). In Coase's world the role of law resembles the role of the market. The task of the former is not to prevent the harm afflicted in cases of property disputes, but rather to assign rights over externalities to the party which has more to gain either by their presence or their absence, in the same way that a free market would. When judges distribute rights in the way that an ideal market would, they, like the market, are maximizing total social wealth. As such, Coase offers an "as if market" utilitarian type of argument as the (novel) basis of law.

In what follows, however, we point out that Coase's proposal for an "as if market" analysis of law in the delimitation of rights over externalities, based on utilitarian morality, contradicts the very nature of rights over capitalist property, hence undermining some fundamental principles of the bourgeois juridical system. Specifically, Coase's whole argument is based on an infringement of basic rights and legal entitlements over property that are normally associated with the institution of property.[11]

Let us return to the classic example, the dispute between the cattle-raiser and the farmer. We assume that transaction costs block any negotiations between the parties and, hence, a judge has to decide if the cattle-raiser is liable or not for the damage. Coase proposes that the judge should decide his verdict by using a strictly economic criterion (market efficiency). If, for example, the cattle-raiser produces an extra 100, while the farmer loses because of the presence of externalities only 50, so the net social benefit is raised by 50, then the judge should decide that the cattle-raiser is not liable for the damage. If the reverse happens, the cattle raiser is liable for the damage and, hence, must compensate the farmer.

This comes into direct contradiction with the (usual but not absolute) legal connection between causality and responsibility.

> Coase appears simply not to accept the common law notion of causation as a means of assigning responsibility. That someone "causes" a nuisance (as determined by common law principles) does not, in his view, imply the efficiency of holding this person responsible. (Duxbury, 1998, 187; see also Simpson, 1996, 60.)

Indeed Coase (1960, 112) is explicit about this lack of connection between the two: "If we are to discuss," he says, "the problem in terms of causation, both parties cause the damage." This is a corollary of Coase's treatment of such questions on an "as if market" basis. Again he is explicit:

11 As Cooter observes, "besides the ownership of resources, the law creates many other entitlements, such as the right to use one's land in a certain way, the right to be free from nuisance, the right to compensation for tortuous accidents, or the right to performance on a contract" (1987, 64).

> If we are to attain an optimum allocation of resources, it is therefore desirable that both parties should take the harmful effect (the nuisance) into account in deciding their course of action. It is one of the beauties of a smoothly operating pricing system that . . . the fall in the value of production due to the harmful effect would be a cost for both parties.

Out goes legal (and ethical) reasoning, in comes the efficiency logic as a basis of solving disputes over tort and rights.

Such a perspective, however, based on a cost–benefit criterion of gains and losses, *neglects the fact that an institutionalized (legally enacted) structure of private rights over an asset is already in existence.* Particularly, in the case where the cattle-raiser is not liable for the damage caused, the farmer's (legal) rights over his property are severely violated, since Coase's "as if market" approach to law does not provide any reaction mechanism (*e.g.*, some form of compensation) for the trespassing of the farmer's property.[12] Coase, in other words, denies "Pigou's claim that the common law concept of causality is a useful guide to assigning responsibility" (Cooter, 1987, 69). For the farmer's rights to be *real,* however, any violation of these rights must somehow be accounted for (*e.g.*, compensated). If not, then these rights may just as well be taken as non-existent. A right is a right if it is acted upon as such. If not, it loses its legal basis as a right.

Hence, in the Coasean "as if market" argument, use of the criterion of economic efficiency as the driving principle for the allocation of rights over the externalities infringes the victim's (in our example, the farmer's) rights over his property. Following Coase's proposal, the judge's decision based solely on an efficiency criterion does not take into account the farmer's (legal) rights and entitlements over his property. The farmer's rights over his property are not recognized *as such,* but simply as an *ex post* derivative of the judge's decision, and *only* in the case where the production of externalities reduces net social wealth. Only in this case the cattle-raiser is liable for the damage and

12 In discussing a real case of a dispute between a railroad company, whose coal-fired engine emits sparks, and a farmer whose field may be set on fire by these sparks, Coase (1960, 138) explicitly states that "it is not necessarily desirable that the railway should be required to compensate those who suffer damage by fires caused by railway engines." In Coase's legal world, the farmer's refusal to allow the railroad company to set fire to his crops is seen as imposing economic damage on the railroad company, a damage which may be greater than the damage imposed on the farmer by the engine that spews out sparks, hence leading to reduced social utility.

the farmer has the right to receive compensation. On the contrary, if the production of externalities does not reduce social wealth, then the cattle-raiser is not liable and hence the victim of the violation is not compensated.

The conclusion is that while Coase tries to erect an economic theory of law in situations of property rights disputes, the result is that his proposed theory drives out the legal basis of property rights. In Coase's legal world, these rights simply lose their *de jure* status. Not only that. Coase's theory is also in direct contradiction with the very essence and nature of the notion of capitalist *private* property right itself, since it violates the idea of "exclusivity" as the *prima facie* condition for the operationalization of private property in practice. In Coase's theory, the "right to exclude," to use North's terminology (1981, 21), is not a (legal) right exercised by the owner (or even attenuated by the state for purposes of public interest) but, on the contrary, it is infringed due to the fact that it is not enforced in practice. The farmer has no *ex ante* (*de jure*) right to exclude the cattle-raiser from his property, other than when, following the court's decision, this exclusion leads to an efficient result! In other words, in the Coasean world, (exclusive) capitalist private property rights are not so "private" after all, and certainly not "exclusive."

Another drawback of Coase's economic (cost–benefit) approach to law is that even with such a restricted view of rights, which are simply a function of changes in total social wealth, his valuation of social welfare is synonymous to market (monetary) valuation. Hence, all factors of value to the individual other than monetary ones are not taken into account. Assuming, for instance, that in the position of the "victim" is not a farmer who cultivates crops, but an individual who cultivates flowers in his garden with purely aesthetic value for him. This means that there is no market value for these flowers. Cows from a neighboring field trespass the agent's property and destroy the flowers. The judge, following the Coasean logic, will always decide in the cattle-raiser's favor, since there is no market value for the flowers raised for purely aesthetic purposes; hence, the production of externalities increases social wealth measured purely in monetary terms. The implication is that the "as if market" approach of law accepts only market values in the delimitation of property rights over externalities, a very crude basis for a legal system to operate on.

7. *Towards a More Radical Perspective: A Marxist Critique*

So far, the endeavor has been to reveal the internal methodological problems and theoretical drawbacks of Coase's analysis in both parts of his work. For a more radical critique, however, we need to move beyond Coase's own framework. Built as it is on the premises of marginalism, methodological individualism and micro-rationality, Coase provides an analytical framework that fails to incorporate in a comprehensive manner any reference to social structures and relations, power and conflict. Thus, the impact of property rights on the behavior of economic actors, is causally associated with cost–benefit calculations of (more or less) rationally acting individuals. In this vein, any attempt to explain institutional formations suffers from the substantial problems that Coase has inherited from the asocial approach of neoclassical economics.

Granted these problems, an alternative theoretical framework for the analysis of institutions in general, and of (capitalist) property rights in particular, seems necessary. Such a framework should be built on different methodological and theoretical premises. In order to construct such a theoretical framework, the social should be taken as the point of departure in the form of social relations, structures, interests, power and conflict. It is, thus, argued that the aforementioned social factors are a *sine qua non* condition of a comprehensive analysis of institutions and property rights.

i. *Methodological Individualism and Social Structure.* One basic methodological foundation of Coase's analysis is the principle of methodological individualism, that is, the perception that the individual (and his/her choices) has analytical priority over social structure and other social processes. In this vein, all social phenomena (including property rights, their structure and their change) are explicable by recourse to individuals, their traits, goals, convictions and actions (Elster, 1982, 48). In this conception, social structure has no objective existence, independently of the social consciousness and acts of individuals. Individuals (bodies, organisms, and their associated cognitive and behavioral capacities) are real, while society, social structures and collectivities are not real at all, but are simply considered as gatherings of individuals.

However, a social structure constitutes the set of relations in which people participate, whether they wish to or not, because of the centrality of these relations to the production and reproduction of social life. These social relations can be acknowledged or unacknowledged by the individuals involved, but do not depend on the identity of the particular agents (individual traits and attitudes), and they appear as "external" to any given human action, although not external to all the individuals involved (Hodgson, 2004, 12; Callinicos, 2004, 38; Giddens, 1984, 16; Fine and Milonakis, 2009, 154). Social structure as a concept is used to capture the objectively identified properties exhibited by social entities and to specify the objectively identified positions among their component elements. "Objectively identified" refers to the idea that a structural property does not depend on the ideas or actions of any single individual (Fine and Milonakis, 2009, 154). Seen from this perspective, social structure is described as a set of empty places, the terrain in which social relations and practices in the form of actual activities of individuals fill the slots (Wright, 1979, 21).

In such a framework, social structure acquires analytical primacy over individual action, since the latter should be considered in the context of social relations in which people participate in a given social structure. The fact that human beings act with aim and purpose does not mean that history represents an exclusive fulfillment of that will. Instead, historical change may come about behind the backs of human actors, often with unintended consequences. As Marx (1904 [1858], 11–12) has famously argued:

> In the social production which men carry on they enter into definite relations, that are indispensable and independent of their will. . . . It is not the consciousness of men that determines their existence, but, on the contrary, their social existence determines their consciousness.

Basic to the argument here is that, appearances to the contrary, property is not defined as a relation between an individual and a thing, itself a nonsensical conception, but rather as a social relation between people. As such, it is an emphatically historically determined category. As Sayer (1987, 60) puts it,

> in previous forms of society, neither individuals as owners, nor their property, had their modern exclusivity or simplicity. Property did not even appear as a simple relation of person and thing. Who owned what, or even what it meant to be an owner, were by no means clear-cut; the very terms at issue are anachronistic.

All this changes with capitalism when capitalist ownership becomes a *de jure* well-defined property. Talking about capitalist ownership rather than private property also points directly to the social character of this ownership, involving chiefly relations between classes. In this way capitalist ownership assumes its real substance as a bearer of antagonistc class relations, an issue to which we now turn our attention.

ii. *Social Relations and Social Conflict.* Coase's analysis overlooks the fundamental social relations involved in any property arrangement. The totality of social relations is reduced to the level of contractual exchange relationships among individuals governed by the universal law of the minimization of transaction costs. Thus, social relations are reduced to exchange relations, which are in turn reduced to the same underlying principle governing the actions of individuals. They all attempt to minimize transaction costs, irrespective of their social position.

What is missing from this approach is the fact that the individual is always part of a social whole and is molded by the underlying social relations according to the social position the individual occupies. As Marx (1993 [1857], 264–265) argues,

> society does not consist of individuals, but expresses the sum of inter-relations, the relations within which these individuals stand. . . . To be a slave, to be a citizen, are social characteristics, relations between human beings, A and B. Human being A as such, is not a slave. He is a slave in and through society.

Property involves social-structural properties, and as such an alternative theoretical framework must fully integrate the totality of social relations. For this we have to move away from the Coasean conceptions of social relations formed exclusively at the level of individual exchange towards a deeper analysis of the structural elements of the societal whole as an essential starting point for the analysis of capitalist property rights.

Further, Coase conceives society as a network of voluntary contractual relations and analyzes the economy in particular in terms of contractual agreements among atomized individuals. In particular, the emergence and evolution of institutions and property rights are elucidated on the grounds of the deliberate and voluntary personal decisions taken by individuals. Hence, institutional formation is explained in terms of voluntary contractual agreements based on the transaction costs minimization principle. Under these theoretical givens, the underlying assumption is that society embodies a fundamental level of "harmony of interests" that always eventually leads to beneficial "mutual agreements" between the contracted parties.[13]

Such a premise, however, is a violent (unreal) abstraction, since in society in general, and in the economy in particular, interests cannot in principle be conceived as homogeneous or identical, but rather should be conceptualized as structural, conflictual and antagonistic interests between classes. As Marx (2001 [1847], 109) argues, social conflict is not vested primarily at the individual level, but is, at bottom, a structural class conflict, since

> social relations are based on class antagonism. These relations are not relations between individual to individual, but of workman to capitalist, of farmer to landlord, etc. Wipe out these relations and you annihilate all society.

In this vein, social conflict is a pervasive phenomenon and one of the most important catalysts of social change. Hence, an alternative theoretical framework has to move beyond the underlying idea of "harmony of interests," according to which institutional formation is brought about through a process of repeated harmonious voluntary contracts between individuals. This suggests that the issue of social conflict is a *prima facie* ontological condition for a coherent analysis of (capitalist) property rights.

iv. *Power and Power Relations.* In Coase's work the issue of power and power relations is totally absent. In the liberal camp, as already seen, the notion of power is conceptualized and treated analytically in an exclusively individualistic fashion. This individualistic notion of power also flourishes in the game-theoretic approaches, describing situations involving interactions between two or more agents with conflicting goals and with the ability to influence each other. In such a context, power analysis is restricted exclusively to the level of the individual in a bargaining context (bargaining power), *i.e.*, to the capacity of an

13 The idea of "harmony of interests" was developed also by Carey (1868), whom Marx described as "the most banal and therefore the most successful representative of the vulgar-economic apologetic." Carey tries to demonstrate the presence in capitalist society of a complete harmony of real and genuine interests. The foundation of his theory of the "identity of interests" was built on the (very questionable) assumption that wages increase in accordance with the increase in labor productivity.

agent to achieve his/her goals relative to somebody else. This notion is contained at the level of micro theory, where the notion of power concerns the economic agents' aspiration to maximize their individual utility function by subordinating other agents' behavior and resources controlled by them (Bartlett, 1989, 5).

However, even this form of power at the level of individual agents cannot be understood simply by considering their atomistic relations without reference to the wider social context in which they interact. The individualistic conception of power, while an important aspect for a theory of social institutions and property rights, is nevertheless too restrictive, since it is the asymmetrical distribution of power at the social level that lies behind the relations of power at an interpersonal level. Consequently, although an agent may have power (this form of power may imply direct physical power or greater income power or even power to influence an opinion) within an interaction situation or "game" (*e.g.*, greater ability than others to select a preferred outcome or to realize his/her will over others within that social structural context), s/he may or may not have the power to alter the "type of game" the actors play, the rules and institutions and related conditions governing interactions or exchanges among the actors involved.

It therefore becomes apparent that one has to move beyond the "individualistic" conception of power to something more embracing. This calls for a systemic notion of power, referring to a socially structured capacity enabling actions by individuals, groups and classes by virtue of their location within the web of social relations. In this way, the analysis of power is not restricted exclusively to the level of the individual, but takes into account the way in which society is organized and expresses itself in relationships of domination and exploitation. Seen from this angle, each social formation (feudalism, capitalism, etc.) comprises a level of systemic power and forms a certain nexus of power relations among classes, groups and individuals. In this perspective, social relations embody power relations expressed as a structure of domination and subordination that is never static but always subject to contestation and struggle.

Moreover, systemic power does not merely operate within structural settings but also organizes and reproduces the settings themselves. Consequently, systemic power shapes the framework of social relations and influences (or modifies) property relations.

8. Concluding Remarks

In this article we have brought to the fore a number of important lacunae and drawbacks of Coase's theory. In the context of "immanent critique," we pointed out its tautological character stemming from the all-encompassing meaning given to the assumption of zero transaction costs. Furthermore, arguing from a game-theoretical perspective, we pointed out the existence of important theoretical lacunae, since Coase never proves the efficient outcome of the bargaining process but simply asserts it. Last, we questioned the underlying premise of Coase's theorem, *i.e.*, the separation of the issues of efficiency and distribution, arguing that this is not possible since changes in the latter affect the former both logically and empirically.

Regarding his economic analysis of law, we have argued that Coase envisioned an "as if market" approach in the delimitation of (legally enacted) rights over externalities, which is inconsistent with and contradicts the very nature of institutionalized rights over property, because it violates the *de jure* basis of these rights, as well as their *private* nature. Coase's economic analysis of law is riddled with a constant and pervasive tension between his wish, on the one hand, to define everything in terms of individual property rights, while, on the other, making no individual property (legally) sacrosanct, as its legal basis should be sacrificed to superior output (principle of efficiency).

Turning to a more radical critique we argued that property rights must be conceptualized within their proper social and historical context. This means that an alternative theory must fully and consciously incorporate the social and historical from the outset. Individuals do not act in a social vacuum, but in a context of historically specific social relations and structured social positions. In such a framework the issue of power relations and social conflict forms an internal part of the analysis. The social and the systemic are genuinely taken as the starting point in the form of social relations, structures, stratifications and classes involving power and conflict.

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