# The Property System in Austrian Economics: Ronald Coase's Contribution

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Abstract. This paper argues that contrary to Roy Cordato's claim, Ronald Coase's work on the "problem of social cost" is an important contribution to Austrian economics. Coase identified a criterion that can be used to establish initial legal rights to control actions that have external effects. In other words, he discovered a criterion that, in some cases, can be directly applied to help establish a property system when there is none. The criterion also helps a government adapt, or maintain, a property system in light of continuing changes that are characteristic of the entrepreneur economy. Cordato's anti-state ethical economics, which he used to criticize Coase, is a deviation from the century-old tradition of Austrian economics. Menger, Mises and Hayek saw economics as a body of logical knowledge that is value free. In addition they recognized a role for government in defining legal rights and in maintaining the property system in light of changing conditions. Accordingly, it is wrong to invoke "Austrian economics," properly understood, to criticize this aspect of Coase's work. In this paper, I argue that Cordato has followed a deviant and troubling path by trying to construct an Austrian economics based on ethics, that he has failed to understand that a changeable property system is a prerequisite for the market economy, and that he has correspondingly failed to recognize Coase's contribution to the problem of how to maintain the property system in light of continuing change.

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For those interested in advancing Austrian economics, Roy Cordato's acrimonious reply to my discussion of his critique of Ronald Coase is unfortunate. The problem I face in responding is to avoid spinning wheels about details that are significant neither to the chief points at issue nor to the reader. In the first place, I must avoid being drawn into a tedious discussion of whether I interpreted the arguments in his book correctly. Undoubtedly some of my interpretations were accurate and some were not. It is never possible to be completely accurate in a discussion of someone else's work. My paper was not intended to be a summary of his book but to deal with what I regard as the sum of the conclusions he reaches. I can only surmise that if I had grossly misinterpreted his meaning, as he claims, the reviewers of this journal would have rejected my paper on the first reading. In any case, I regret any misleading impressions I might have given about his book.

Second, there is no reason to be concerned with arguments that were exclusively made by Coaseans but were not made by Ronald Coase himself. My paper dealt with Cordato's 1992 critique of Coase's views and writings. If Cordato now claims that his aim was to criticize Coaseans and not Coase himself, then this aspect of my criticism turns out to have been misdirected. If he continues to maintain that Coase deserves to be criticized, then I stand by my original argument that Coase's writings are more consistent with the Austrian tradition than Cordato's.

Third, I will not deal with the issue of whose interpretation of Coase is correct. I documented my interpretation carefully. Anyone interested in this issue can sort through the various comments in my paper, Cordato's book, the work of Coase himself, and the work of the "Coaseans." Finally, I will not dignify Cordato's claims that I do not understand what it means for costs to be subjective. I will simply invite him to look at two recent published papers on this subject (Gunning 1997, 1998). My goal is to deal with what I take to be the main issues raised by Cordato's reply.

Since one of my goals in discussing Cordato's book was to absolve Coase of the charges leveled by him against Coase the person, I am not moved by Cordato's remarks in the conclusion of his reply about what one would have to do to "refute the Austrian case against Coasean analysis..." I am moved, however, by his effort to claim support for his own ideas from the "Austrian tradition." On this, he rightly asserts that his views are consistent with those of Rothbard (1978). But Rothbard's views are often not representative of the Austrian tradition. In this case, they appear diametrically opposed. I regard this as crucial to the issue raised by both his book and my paper. What we have is a debate over the past and future of Austrian economics, which is an apt subject for this journal.

There was more than a little mischief intended in the title of my paper: "Roy Cordato's 'Austrian' Critique of Coase on Social Cost." I placed the term Austrian in parentheses, as one might have guessed, in order to cast doubt upon the notion that Coase can be criticized on the basis of the "Austrian tradition." Since I did not develop this theme at any length, it is not surprising that Cordato would overlook it. Still I did write quite a bit about this. I pointed out the similarity between Coase's definition of a factor of production and that of Menger. I also showed the similarity between Coase's method of criticizing A.C. Pigou and Ludwig von Mises's method of criticizing various arguments made in economics and in the popular literature. In addition, I showed that Coase acknowledged Hayek's arguments on collectivist planning. However, I did not address the broader issue of the status of an ethics-based economics in light of the Austrian tradition. I shall address that issue here.

This paper has two main goals. The first is to question Cordato's claim that his ethicsbased economics is supported by the Austrian tradition. The second is to show that the problem with which Coase was concerned—that of deciding who should have initial legal rights to control actions relating to external effects—is worthy of treatment. Cordato argues that this decision cannot be made effectively because of a calculation problem and implies that it is not a serious problem in the first place. I aim to show that it is a serious problem for the entrepreneur economy and that, as a result, not only is Coase's concern with it reasonable but also his treatment of the problem is a valuable amendment to Austrian economics. In the entrepreneur economy, the property system cannot be maintained unless there is a government mechanism for assigning initial legal rights. The property system, rightly understood, is a continually evolving structure that is enforced largely by the coercive power of the state. Because it is evolving, it needs maintenance in the form of an authoritative institution (a judicial system) that assigns initial legal rights in light of the emergence of new and changed resources and goods. Coase's definition of a resource as a legal right to control actions that have external effects is a consistent and valuable extension of the Austrian theory of value and cost.

#### 1. Austrian Economics or Ethics

The classical liberal economists, as well as the early Austrians, used the logic of economics to deduce that a private property system is in the general interest. Their reasoning went like this. Imagine a system without private property. Next construct an image of exchange and specialization under a private property system by putting oneself into the shoes of the various functional actors in the system. By comparing the two images with regard to what one believes individuals would regard as being in their interests, one deduces that the private property system is in the general interest.

Classical liberal economics was criticized as value-laden ideology by historicists. Marxists went further to assert that it was apologetics that served the interests of the "capitalist class" to the detriment of the "laboring class." The early Austrians reacted by separating a system of logical analysis—deductions based on assumptions, or exact laws—from the process of putting oneself into the shoes of the actors in order to determine whether the property system would benefit them. The Austrians argued that the ability to conduct a logical analysis was universal and could not be dismissed as class specific or as ideology without declaring that a science of society is impossible. Consistent with this, they did not maintain that one could use economic logic to demonstrate that, under all conditions, the property system would be beneficial.

This separation of economics as logic (praxeology or theory) from the application of the logic to particular cases (history and policy) reached its highest level in Mises's "pure logic of choice, or action." In Mises, one uses the pure logic to evaluate the policy proposals *made by others* from the viewpoint of whether they are likely to achieve the goals that the proposers want them to achieve.<sup>1</sup>

Cordato's project is to create an economics that is based on ethical principles. To my knowledge, the first prominent Austrian proponent of an ethical economics along liberal lines was Rothbard (1956, 1976). Another prominent Austrian, Kirzner (1992), dabbled in this enterprise, but he has also acknowledged the value-free economics of Mises (Kirzner 1994). One reason for these ethical exercises, one surmises, is the rise of modern welfare economics in the mainstream economics literature in the 1930s and 1940s. This scholarly endeavor also sought to separate logic from values. However, its definition of economics, and therefore of the logic that it represents, is quite different from that of Austrian economics.

Modern Welfare Economics: The Proper Austrian Response

Modern welfare economics is not a pure logic of choice or action; it is a mathematical logic. It does not provide a framework from which to make judgments about how real people would act in real situations, which individuals must discover. Rather it is an attempt to represent the consequences of individual maximizing behavior under strictly specified conditions. As a result, even if a social welfare function is posited, the whole framework is irrelevant to the task of judging whether a property system, under realistic conditions, is in the general interest. It is similarly not suited to evaluating policy proposals under realistic conditions.

If the assumptions that form the basis for modern welfare economics were to actually prevail in the world, the world would stagnate. Everyone would maximize but no one would discover new products or methods of production. Worse than that, the model of an economy used in welfare economics assumes that the conditions of the natural world are fixed. They do not have to be predicted and adjusted to. Since the real natural world is continually changing, if real actors only maximized according the assumptions of a constant natural world, the repetitive equilibrium actions of the maximizers would, in fact, lose their maximizing character.<sup>2</sup>

The proper Austrian response to the development of welfare economics is that the models it uses are inappropriate for analyzing the real world. And that is that.<sup>3</sup>

But Austrians like Rothbard and Cordato have been dissatisfied with this response. They have accepted the relevance of the claim from modern welfare economics that we need a social welfare function in order to make judgments about what serves the general interest. Then they have tried to build a social welfare function based on some kind of libertarian philosophy. Such an ethical economics is certainly a new development among Austrian economists. However, whether it is really consistent with what Austrian economists have done traditionally is open to question. There is no reason I know to say that it is consistent with the work of Menger, Mises and Hayek. Kirzner (1987) recognizes these exercises as part of a proliferation of post-Mises-Hayek ideas and wisely labels them "neoAustrian."

Carl Menger, Eugen Bohm Bawerk, Hayek, and Mises conceived of a pure economic theory that could be applied without regard to ethical predispositions. When one masters this theory, he becomes libertarian-minded in the sense that he develops strong reservations about central planning and government intervention. These reservations are not based on some inherent belief in natural rights. The Mises-Hayek Austrian economist, as a human being, may believe in natural rights or he may not. In either case, the conclusions he draws from economic theory are not based on such beliefs. They are based on the pure logic of the theory as applied to particular situations through judgments of relevance.

When the pure economic theorist reaches the conclusion that a minimum wage is contrary to the interests of consumers in general, he does not refer to liberty or natural rights. He asks his audience to put themselves in the shoes of the producers, consumers, and resource suppliers, each acting as entrepreneurs. He asks the audience to judge the effects on these people, in light of the "market process." (Mises 1996:883) He recognizes that the minimum wage may, under certain conditions, benefit some workers at the expense of others. If one has the interests of these workers in mind, he may well conclude that the minimum wage is beneficial.

An ethics-based Austrian economics would change this. In its view, setting a minimum wage would be wrong because no government intervention can ever increase social utility (Rothbard 1956:252) or because it violates, in some complex way, one's natural rights to property. (Cordato) Would this be a good thing? It depends on one's goal. If one's goal as an Austrian economist is to produce an ideology that can be used for persuasion, the answer is yes. However, if one's goal is to change minds through the use of reason, by revealing what is evident if one would only think clearly and learn about the world, the answer is no.

## 2. The Property System

In Cordato's view, Coase, the Coaseans, and I aim to use cost-benefit analysis to identify public policies that reassign existing legal rights to property. Our efforts are in vain, as he sees it, because the achievement of this goal requires detailed knowledge that no one could discover. This is certainly not true of me, it is probably not true of Coase, and it may or may not be true of the Coaseans, depending on which writers he is referring to. Cordato seems to have missed the fact that my defense of Coase was based on the notion that in the entrepreneur society, a mechanism is needed not to reassign existing legal rights but to assign initial legal rights. (My paper: 2–3) I stated that the problem of assigning initial legal rights, with which Coase and I were concerned, *could not be avoided*.

My concern with this problem derived from the image of the entrepreneur economy I presented. I wrote that in the entrepreneurial society, new unanticipatable factors of production emerge continuously. The question is not whether one can find an objective basis for assigning new rights. It is how to assign them. In this part, I describe the property system in terms of legal rights to control actions and then discuss the importance of a system to establish initial property rights in an entrepreneur economy.

It is possible that my use of the term "right" confused Cordato. I used the term to refer to *legal right*, which means an expectation on the part of actors that the government will act in some way if the right is violated. Furthermore I assumed, following standard practice in mainstream economics (see Furubotn and Pejovich 1972), that the term "property rights" includes legal rights to control actions. When we begin to think deeply about what we mean by a property system (i.e., what is called the system of property rights), we realize that the term "property" obscures the essential phenomena with which we have to deal. The reason is that in common speech, people think first, and sometimes only, of rights relating to tangible items. However, the proper economic conception of a property system is a set of expectations on the part of actors that they will be rewarded for the beneficial effects they cause by their actions and punished for the harmful effects they cause. In a modern society consisting of diverse individuals, this requires the demarcation of legal rights to control actions that have external effects. Both Mises and Hayek appreciated this.

Mises and Hayek on the Property System

In a section entitled "The Limits of Property Rights and the Problems of External Costs and External Economies," Mises wrote:

Carried through consistently, the right of property would entitle the proprietor to claim all the advantages which the good's employment may generate on the one hand and would burden him with all the disadvantages resulting from its employment on the other hand. . . In dealing with his property he would take into account all the expected results of his action, those considered favorable as well as those considered unfavorable. But if some of the consequences of his action are outside the sphere of the benefits he is entitled to reap and of the drawbacks that are put to his debit, he will not bother in

his planning about *all* the effects of his action. He will disregard those benefits which do not increase his own satisfaction and those costs which do not burden him. (1966: 655)

This statement is Mises's most abstract treatment of the subject of property in relation to external effects. Here he states clearly that incomplete property rights and the problem of external effects arise from the fact that an individual is unable to gain the full benefits of his actions and/or is not responsible for the full harm due to his actions. (Unfortunately, he does not always emphasize the non-materiality of property so that a casual reader of his discussions of property might form a different opinion.)

Hayek does not deal at any length with the problem of external effects as an economic problem to my knowledge. However, he does deal with issue in the context of a discussion of judges, who he argues have the function of making laws that promote particular sets of expectations. He writes that the "distinctive attitude of the judge...is... with what private persons have 'legitimate' reasons to expect, where 'legitimate' refers to the kind of expectations on which generally his actions in that society have been based." (1973:98) He recognizes that judges will often be called upon to "find rules which have never been stated and perhaps never been acted upon before." (ibid.: 97) And he points out that the "aim of jurisdiction is the maintenance of an ongoing order of actions..." (ibid.: 98) He claims that success in this endeavor requires that the rules that judges make "not only do not unnecessarily interfere with one another, but also that in those respects in which the success of the action of the individuals depends on some matching action by others, there will be at least a good chance that this correspondence will actually occur." (ibid.: 99) As in other aspects of his work, Hayek stresses the evolution of such rules and notes that such rules develop and survive because "the groups which happen to have adopted rules conducive to a more effective order of actions will tend to prevail over other groups with a less effective order." (ibid.) In the evolutionary process, judges have a crucial role. Hayek focuses on cases "in which a judge has not merely to apply and articulate already firmly established practices, but where there exists genuine doubt about what is required by established custom, and where in consequence the litigants may differ in good faith." (ibid.: 100) He writes that the gradual perfection of rules of just conduct "will require the deliberate efforts of judges... who will improve the existing system by laying down new rules." (ibid.)<sup>5</sup>

Later in a discussion of the concept of property rights, he points out that "the aim of the rules of law is merely to prevent as much as possible, by drawing boundaries, the actions of different individuals from interfering with each other; they cannot alone determine, and also therefore cannot be concerned with, what the result for different individuals will be." (ibid.: 108) He recognizes that "[p]recisely where those boundaries are most effectively drawn is a very difficult question to which we certainly have not yet found all the final answers." (ibid.: 109) Next he turns to a discussion of change. He writes:

If new problems arise as a result of changes in circumstances and raise, for example, problems of demarcation, where in the past the question as to who had a certain right was irrelevant, and the right in consequence was neither claimed nor assigned, the task will be to find a solution which serves the same general aim as the other rules which

we take for granted. The rationale of the existing system may for instance clearly require that electric power be included in the concept of property, though established rules may confine it to tangible objects. Sometimes, as in the case of electro-magnetic waves, no sort of spatial boundaries will provide a working solution and altogether new conceptions of how to allocate control over such things may have to be found. Only where, as in the case of moveable objects (the 'chattles' of the law), it was approximately true that the effects of what the owner did with his property in general affected only him and nobody else, could ownership include the right to use or abuse the object in any manner he liked. But only where both the benefit and the harm caused by the particular use were confined to the domain in which the owner was interested did the conception of exclusive control provide a sufficient answer to the problem. The situation is very different as soon as we turn from chattels to real estate, where the 'neighborhood' effects' and the like make the problem of drawing appropriate 'boundaries' much more difficult. (ibid.)

To my knowledge, Hayek does not explicitly state that the role of the judge is, in the most abstract sense, to determine legal rights to control actions that have external effects. In the passage just quoted, he refers only to the benefit and the harm caused by *a particular use* of property. Nevertheless, I conclude from his brief remarks on this issue in the above-cited paragraph that, if he had considered the issue more thoroughly, he would recognize that these two categories are identical for the purpose of economic analysis. In short, there appears to be little difference between Mises and Hayek on the nature of a property system. Hayek goes further than Mises in describing an ongoing need for a judicial process to define initial rights.

## Extension

Since neither Mises nor Hayek fully developed the theme that the property system is a system of rights to control actions that have external effects, it is worthwhile to briefly give an indication of how such a theme could be developed. Insofar as the effects of an action are personal—that is, insofar as they are felt entirely by the actor—there is no problem. We need no positive legal rights to encourage a person to act in his own interest. However, when the action affects others, the ideal of a complete property system requires such incentives. If a person's action has positive effects, then legal rights to control the action must be assigned to someone. If they are assigned to the actor himself, then he will have an incentive to perform the action if he can trade the legal right to control its performance, or the products that its performance causes to be produced, for something that he wants. If an action has harmful effects, the responsibility for the action must be assigned to someone as well. If the legal right to control the action is assigned to the actor, whether he bears responsibility depends on whether the person or persons harmed can offer to pay him not to perform it or not to produce the products that result in the harmful effects.

A property system means a system in which the legal rights to control the actions of others that have external effects are defined and enforced. The problem of assigning initial legal rights to "natural" air, "natural" water, the ocean, the electromagnetic spectrum, the ozone

layer, etc. can be correctly pondered only by considering legal rights to control actions that cause beneficial or harmful external effects. It is in dealing with problems of this sort that Coase's definition of a factor of production as a legal right to control actions that have external effects achieves significance. Indeed, in my view, it is precisely this definition that enables us today to integrate the theory of external effects with the traditional theory of prices. In my paper, I pointed out that such an integration can be regarded as an extension of the economics conceived by Carl Menger. I recalled that Menger had defined a good to include "such things as claims to future goods and money, good will, patent rights, and franchise rights..." (My paper: 10)

I conclude that a complete property system has the characteristic of providing incentives for individuals to take full account of the benefits and harm due to actions that have external effects. Since such a complete system is impractical, the problem faced by judges in tort cases is to determine which rights to control actions that have external effects should be defined and enforced.

## 3. The Function of the Judiciary

In the entrepreneur economy, individuals are continually faced with incentives to produce new property, including new material items and new rights to control actions that have external effects. Even if a complete set of property rights were to exist at some point in time, entrepreneurship would quickly render it incomplete. This would occur in several ways, including the following. First, entrepreneurs produce new goods and the effects of their production or use lie outside the scope of existing property rights. Second, entrepreneurs conceive of production actions that have external effects and that would result in market-evaluated goods if complete ownership rights were established. Yet such rights do not now exist. Third, entrepreneurs discover new characteristics of their environment that lead them to change their appraisals of actions that have external effects. In some cases, these actions were not covered under the existing property system.

Given these characteristics of an entrepreneur economy, a continuing system is required to assign new rights to control actions that have external effects. One of the distinct functions of a government—the holder of the monopoly over coercion—would be to assign and preside over the enforcement of such rights. Absent the performance of this function, conflict would occur.<sup>7</sup>

The function of government, or the judiciary, in this context is not merely reactive. It is also proactive. For example, initial property rights must often be established *before* an inventor would regard it as profitable to produce a new good or resource. If a person anticipates that she will own the exclusive right to benefit from her use of a newly invented method of production or product, she has a greater incentive to invent it. Recognizing this, we can conceive of a possible government role in establishing a system for assigning patents and copyrights.

## 4. Coase and Initial Rights

It is precisely the task of identifying a set of principles upon which to base initial assignments of legal rights that Coase (1960) was concerned with in his "Social Cost" paper.<sup>8</sup>

When I wrote in my paper that Coase was interested in institutional structure and not in day-to-day micro-management, this is what I meant. (My paper: 2) He argued that in assigning such rights, a judge should try to determine who, if there was a zero-transactions costs auction, would eventually end up with them. In my paper I defended this aspect of Coase's project and I criticized Cordato for failing to appreciate the importance of this task in the entrepreneur economy. I write this again now because it appears that Cordato did not realize the significance of my statement in the section where I criticized the materiality of his property ethic. I wrote: "More fundamentally, Cordato's error appears due to his neglect of the issue of assigning initial entitlements to non-material factors of production—i.e., to rights to control actions. In the continually changing entrepreneur society, new unanticipatable factors of production are continually created." (My paper:, 8) Cordato included no reference to this in his reply.

It is beside the point to claim that judges could never possess the amount of information needed to make precise cost-benefit calculations. Regardless of the information, the government would still have to assign the initial legal rights. Neither Coase nor I argued that judges could have perfect or even adequate information about preferences and opportunities to make optimal decisions with complete certainty. We argued only that the government function would be performed better than otherwise if the judges followed a rule of assigning the initial legal rights to the person or persons they believe would end up with (or would have ended up with) the rights after a hypothetical zero-transactions costs exchange. To make this decision requires judgments about the consequences of interaction to be sure. However, as Hayek (1973:119) pointed out, such judgments need not require detailed knowledge of everyone's subjective utility.

The judges must make decisions, for it is their duty as appointees of the government to perform the function of assigning initial legal rights. And the assignment of initial legal rights is essential to maintain the entrepreneur economy in the face of its inevitable change. Accordingly, the project of finding a criterion on which to base the initial assignment of rights, in the face of uncertainty, is worthwhile. It follows that Cordato's claim that I fail to appreciate the Austrian subjectivity of costs is irrelevant; the issue is elsewhere.

To avoid misunderstanding, nothing in my discussion warrants the view that I advocate an active and interventionist government. I have argued only that the assignment of initial legal rights is a function of government in light of the goal of maintaining a property system in the entrepreneur economy. Parts of the property system need no government at all. Individuals can buy locks, surveil their property, and build walls. But in the complex, specialized, and diverse entrepreneur economy; government action is also needed.

## 5. Micromanagement, Subjective Costs, Efficiency, and Welfare Economics

A theme among some neo-Austrian critiques of Coase is the idea that Coase's analysis is based on a concept of efficiency that has no meaning in a purely subjective economic analysis. <sup>10</sup> Cordato's concern with Coase's statement about maximizing net social product is basically the same critique. It is true enough that one can find statements about efficiency and their equivalent throughout Coase's writings. It would be wrong, however, to infer from this that Coase was using the term in the sense that it is used in modern, mathematical welfare economics. One can speak loosely of the efficiency of a judicial system in the entrepreneur

economy without contradicting oneself. Suppose that a judge aims to assign a legal right for the first time and that she is successful in identifying who would be the owner of the right in the hypothetical situation of zero transactions costs. By assigning that person the right, the judge enables actors either to avoid the transactions costs that would otherwise have to be incurred in order to transfer the right to the ultimate owner or to achieve an outcome that actors themselves would prefer to achieve but for the presence of transactions costs. We can say loosely that a judge who succeeds in this would make the entrepreneur economy more efficient than otherwise, *from the standpoint of actors*. This, I believe, is what a thoughtful Coase had in mind when he wrote about the subject. This definition of efficiency seems fully consistent with the ideas of Hayek.

One could charge that such an analysis assumes the presence of a social welfare function. In other words, one could claim that the idea of the efficiency of the entrepreneur economy used here implies that we are making some value judgment. This is true. *Our judgment is derived from what we take to be the goal of economics*. We take it that this goal is to study the growth of what we believe ordinary people regard as wealth. We have learned from the subjective theory of value and cost to interpret this to mean that our goal is to study what we believe to be the satisfaction of consumers wants through the "market process"—i.e., through the entrepreneur economy. Thus, the assumed social welfare function derives from our definition of the subject matter of economics.

This makes it very different from the usual idea of a social welfare function in theoretical welfare economics. The latter posits a semblance of an economy populated by robots. Accordingly, it needs a social welfare function to inform what is "best" for the robots. It is thus completely outside the realm of a truly subjectivist economics. If one wishes to make progress in Austrian economics, the best approach is to ignore it. To maintain that Austrian economics needs a welfare function of this type demonstrates either (1) an unwillingness to accept the traditional definition of economics or (2) a misunderstanding of the difference between a subjectivist economics and the "mechanical economics" described in the mathematical models of human behavior. All that is needed by Austrian economics is a desire to study wealth creation in the traditional sense of political economy before it was mathematicized and sterilized. This was the approach of Mises and Hayek. Those who follow Rothbard and Cordato travel down a different path.

#### Conclusion

The conclusion of this discussion is that, contrary to Cordato's claim, Ronald Coase's search for and discovery of a criterion that could be used to establish initial legal rights to control actions that have external effects falls squarely within the traditional boundaries of Austrian economics. It helps to solve the problem of how the property system can be adapted, or maintained, in light of continuing changes that are characteristics of the entrepreneur economy. Cordato's critique of Coase, based on his notion of an ethical economics, represents one direction that Austrian economics has taken following the Mises-Hayek era. However, to claim that this direction is more in the Austrian tradition than a direction based on Coase's work, given a reasonable interpretation of such, is questionable. The burden of this paper and my previous one has been partly to show that Cordato misinterpreted Coase and partly

to show that a correct interpretation could easily lead to the conclusion that his work may help to stimulate progress in Austrian economics.

#### **Notes**

- 1. Kirzner (1976, 1994) and Boettke (1995) recognize this aspect of Mises's work.
- 2. This is not to say that mathematical models cannot simulate a history of change, discovery and uncertainty. They can do this. What they cannot do is to accurately represent future change or the products and methods of production that individuals will discover in the future. Nor, under present knowledge, can they represent the mental process that precedes the discoveries.
- 3. Mises writes about the mathematical economists that they "formulate equations and draw curves which are supposed to describe reality. In fact they describe only a hypothetical and unrealizable state of affairs, in no way similar to the catallactic problems in question." (1966:353) He goes on to write about mathematical models that "[a] superficial analogy is spun out too long, that is all." (ibid.: 355) Referring to Hayek's paper "The Use of Knowledge in Society" (1945), Kirzner writes that "welfare economics, in discussing efficiency at the aggregate level, is compelled to make the illegitimate assumption that the bits of information scattered throughout society concerning individual tastes (and everything else) can somehow be spontaneously integrated and fed into a single mind in order for the notion of aggregate welfare maximization to be meaningful." (Kirzner 1976:85)
- 4. I prefer now to use the term "entrepreneur economy" rather than "entrepreneur society" because it is more specific. It corresponds roughly to what most Austrians seem to mean by the "market process."
- 5. This argument seems very similar to that which Cordato reports was made by George Priest (Cordato 1992:98–99) In his report, Cordato assumes that the notion of long run efficiency of law implies a conception of an equilibrium end state. However, Hayek certainly did not have in mind an equilibrium of the standard maximization sort. Nor did he have in mind a particular market outcome. He conceived of a process that would facilitate exchange under continually changing conditions. The emphasis was on the making of rules and on their application to previously unencountered situations. The argument was that judge made law would aid individuals in their action. Neither Coase by my interpretation, Hayek, nor I believe that some equilibrium will actually be established. Yet we conceive of a judicial process of defining legal rights that will enable individuals to employ their environments to their advantage to a greater extent than if such a process were not in effect.
- 6. I am referring to here to what is commonly called the Austrian (subjective) theory of value and cost.
- As quoted above, Hayek writes that the "aim of jurisdiction is the maintenance of an ongoing order of actions." (1973:98–103) Also see his discussion at ibid.: 118–119.
- 8. It would be wrong, however, to say that this was his main purpose or that he was cognizant of its significance in the entrepreneur economy.
- 9. This is the point that I aimed to get at in my discussion of sudden, unexpected event that leads the sparks from train wheels to cause crop fires.
- 10. See Cordato (Reply: 6), Rothbard (1982:59), and North (1992: Ch. 4).

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