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Disagreement over the emergence of private property rights: alternative meanings, alternative explanations

Scott A. Beaulier · David L. Prychitko

Abstract This paper is an exercise in the history of thought, which compares Austrian and neoclassical theories of the emergence of private property rights, and examines, in part, the extent to which Austrians can be said to offer a commonly-agreed upon explanation that parallels Carl Menger's exemplary story of the emergence of money. We address the sources of disagreement (and apparent conflict) among emergence theorists in both schools. We try to show that some of the disagreement hinges on an unclear meaning of the term "emergence," which is resolvable, while other sources of disagreement are fundamental at the methodological level.

Keywords Property rights · Emergence · Evolution · Instrumentalism · Functionalism · Praxeology

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Introduction

Sometimes disagreement among economists is only apparent. Other times it's downright fundamental. What are we to make of the following claims regarding the emergence of private property rights?

> Political economy starts with the fact of private property, but it does not explain it to us.
> Karl Marx (1964 [1844]: 106)

S. A. Beaulier (✉)
Assistant Professor of Economics, Stetson School of Business and Economics, Mercer University
e-mail: beaulier_sa@mercer.edu

D. L. Prychitko
Professor, Department of Economics, Northern Michigan University and Faculty Affiliate, Program on Markets and Institutions, James M. Buchanan Center for Political Economy, George Mason University
e-mail: dprychit@nmu.edu

> Socialism might have contented itself with denying the use of maintaining the institution of ownership any longer, without denying at the same time the usefulness of this ownership in the past. Marxism indeed does this by representing the epochs of simple and of capitalistic production as necessary stages in the development of society. But on the other hand it joins with other socialist doctrines in condemning with a strong display of moral indignation all private property that has appeared in the course of history. Once upon a time there were good times when private property did not exist; good times will come again when private property will not exist.
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> From these heights of newly-won historical knowledge it was possible to look down with compassionate amusement of liberal social philosophy. People were convinced that private property had been proved a historical-legal category *only*. It had not existed *always*, it was nothing more than a not particularly desirable outgrowth of culture, and therefore it could be abolished. Socialists of all kinds, but especially Marxists, were zealous in propagating these ideas.
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> Ludwig von Mises (1981 [1922]: 42-43; emphasis in original)

> It is tempting to try to trace the pattern of property rights holding that exists today back to its origins to figure out how and why it came about. Such an effort, however, would be futile. . . . In order to gain a toehold on the evolution of property rights, one must start in a world where some rights are already in place, resorting to something less dramatic than, but similar to, the physicists' "Big Bang." Given that some rights already exist, it is possible to explore the evolution of such rights with respect to changes in economic conditions and legal constraints. Yoram Barzel (1997: 85)

> The extension and refinement of the concept of property were . . . necessarily gradual processes that are hardly even completed today. Such a concept cannot . . . have been of much significance in the roving bands of hunters and gatherers among whom the discoverer of a source of food or place of shelter was obliged to reveal his find to his fellows. . . . Separate ownership of perishable goods, on the other hand, may have appeared only later as the solidarity of the group weakened and individuals became responsible for more limited groups such as the family. Probably the need to keep a workable holding intact gradually led from group ownership to individual property in land.
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> There is however little use in speculating about the particular sequence of these developments, for they probably varied considerably among the peoples who progressed through nomadic herding and those who developed agriculture. The crucial point is that the prior development of several property is indispensable for the development of trading, and thereby for the formation of larger coherent and cooperating structures, and for the appearance of those signals we call prices.
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> We can hardly say when tribes first appeared as preservers of shared traditions, and cultural evolution began. Yet somehow, however slowly, however marked by setbacks, orderly cooperation was extended, and common concrete ends were replaced by general, end-independent abstract rules of conduct.
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> F.A. Hayek (1988: 30-31)

Marx argued that the political economists of his time offered no theory to explain the emergence of private property rights. (He seems to have overlooked Hume.) As ideologists, they simply considered such rights to be given, and worked off of them to explain (and defend) the capitalistic market economy.

Mises's reply is more surprising. He argues that private property rights (in the *de facto* sense) have *always existed.* With this empirical claim, he could justify the earlier classical approach, and condemn Marxism to factual error about the past, present, and future.

Barzel's more recent statement amounts to a throwing up of one's hands, as he admits that it is impossible to develop an explanation of the initial emergence of private property rights. He uses the word *futile*. His statement undermines Marx. From Barzel's view, Marx was asking us to do the impossible. Barzel disagrees with Mises on a point of fact. Barzel uses the Big Bang analogy to emphasize that we do not know when private property rights originally emerged. On this point Barzel, unlike Mises, is agnostic. But, for all practical purposes, his position is similar to Mises in that Barzel, too, proceeds by taking private property rights as a given fact.

Hayek takes up the Marxian challenge. Against Mises, he does not claim that private property has, as a matter of fact, always existed. Unlike Barzel, he does not resort to a "Big Bang" (or is it "black box"?) device, but instead tries to develop a conjectural theory about the first origins of private property. Hayek, apparently, doesn't believe the project to be futile.

At the same time, he admits that he cannot trace the particular sequences of events that led to the emergence of property rights.

Economists disagree, and they do so even within the same school of thought, as we see with Mises and Hayek. This paper focuses on the sources of disagreement and the alternative explanations for the emergence of private property rights. Since Menger's theory of money is often taken as an exemplary story of an evolutionary institution, we begin by examining his work. We are interested in the extent to which other Austrian economists offer a similar evolutionary account of property rights emergence. We shall argue that Mises offers a problematic combination of a praxeological explanation of the existence of property rights and a black box explanation regarding their diffusion. On the surface, he can be interpreted to imply that actors are aware of the need for property rights and then go about creating them. Yet, he does not seem to be saying that property rights—as an overall institution—were originally designed, teleologically, in a systemic sense. His case seems to rest on the view that private property rights—at least *de facto* private property rights—have always existed, rather than being a "historical category." Hayek, by contrast, relies on an evolutionary explanation that might not even require individual rationality. But *both* Mises and Hayek depart, in very different ways, from the kind of evolutionary account provided by Menger's story of the origin of money. A historian of thought naturally wonders why.

More recent efforts by property rights economists have also attempted to provide a more evolutionary account of the property rights process. Yet, when we look closely at the evolutionary arguments made by neoclassical economists, we see that their arguments are being made on instrumental grounds. Hayek's evolutionary argument, by contrast, is an attempt to offer an empirically conjectural (albeit somewhat functionalist) account of property rights emergence.

Hayek's argument has not been free from criticism. His approach suggests not only a factual disagreement with Mises, but also a methodological disagreement with both Menger and Mises. Moreover, his evolutionary argument is a departure from his neoclassical fellow travelers, and this departure has itself unleashed debate over the past twenty years. We shall discuss some of the criticisms of Hayek's conception of property rights and their relationship to methodological individualism and Mengerian analysis. Given the limitations of neoclassical accounts of property rights emergence, we conclude by: (1) suggesting that Hayek's account is a satisfactory account of property rights emergence; and (2) making an appeal to reconsider Hayek's story against his critics.

On the meaning of emergence: institutional origination and Diffusion

The notion of *emergence* can be a source of confusion in the property rights literature because it seems to have two rather different meanings. Clarifying these meanings sheds some light on the nature of disagreement about the emergence of property rights: some of the disagreement is actually semantic, and therefore not fundamental. Specifically, "emergence" seems to refer to both the original development of a social institution *and* its further spread and diffusion.

Consider something that we are relatively acquainted with. The euro, for example, has emerged as a new form of money in the EEC. A theory about the emergence of the euro may differ remarkably, however, from the theory about the emergence of money *per se,* that is, a conjectural theory about the first origins of money as a social institution. Or consider the contemporary emergence of private property rights in the means of production in Eastern Europe. These rights had already existed outside Eastern Europe (and inside Eastern Europe before the communist revolution, and even inside Eastern Europe during the communist era, in a *de* *facto* sense). But a theory about the emergence of private property *per se*, about its first origins in human history, is bound to be as conjectural as the theory of the first emergence of money.

In either of the contemporary examples—the euro and privatization in Eastern Europe—we are speaking of the further diffusion or spread of an already-existing social institution. Barzel argues that this is how we *must* proceed: we should take it for granted (or, as a convenient point of departure) that these institutions already exist, and go about examining how they spread and change in response to changes in legal and economic conditions. But economists also use the term "emergence" when discussing the historical origination of the institution itself. It is likely that the processes of change differ between the two cases and, if so, the way we explain these processes of change may differ, too.

With that in mind, we shall refer to the emergence of a practice or institution *per se* (the original dawn of some social practice in human history, such as the use of money or property) as *institutional origination.* Once a practice or institution has already emerged somewhere in human history, it can continue to spread through time and space; it might continue to emerge by taking on a larger scope within a given society (we are on the verge of using money, for example, to allocate human organs), or by spreading across different cultures or societies (the globalization of the dollar) or by taking on a different symbolic form (the German mark has been replaced by the euro), and so on. We shall refer to this further spread and adjustment in response to changes in economic and legal circumstances as *institutional diffusion.* We hope that, by offering some clarification on the two meanings of emergence in this way, some of the disagreement in the literature can be shown to be largely semantic and, at least in principle, resolvable. We also hope to expose those sources of disagreement which are more fundamental.

Carl Menger's appeal to evolutionary theory

For Menger, "[t]he problem that science must solve is . . . the explanation of human behavior that is *general* and whose motives do not lie clearly upon the surface" (Menger 1994 [1871]: 315; emphasis in the original). In order to solve this problem, he distinguished between two different explanations of the origination of social institutions. The first is a "pragmatic" explanation:

> There are a number of social phenomena which are products of the agreement of members of society, or of positive legislation, results of the purposeful common activity of society thought of as a separate active subject. . . Here the interpretation appropriate to the real state of affairs is the *pragmatic* one—the explanation of the nature and origin of social phenomena from the intentions, opinions, and available instrumentalities of human social unions or their rulers.
>
> (1963 [1883]: 145; emphasis in the original)

He stresses that this is not the result of an economic process, but is rather "*the result of human calculation which makes a multiplicity of means serve one end*" (p. 132; emphasis in the original). An example of this would be a "social contract" explanation to the origin of property. Establishing property rights, in that approach, is the goal of the participants.

It is clear that Menger's "pragmatic" explanation is, in more contemporary language, a *teleological* explanation, so throughout the paper we shall stick with the more contemporary term "teleological" as opposed to Menger's "pragmatic" label. All human action is teological, or goal-oriented. But to say that an *institution* has originated teleologically is to say, in this context, that it has been planned at the group or system level.[1] While careful planning can

[1] We thank an anonymous referee for recommending that we clearly distinguish between individual and system level teleology.

occur within the market process, this overall process is not teleological because there is no rational planning at the system level. (That's one reason why Fourier and Marx referred to the market process as "anarchic.")

The second type of explanation attempts to explain social practices not as the result of some "common will"—a conscious, teleological effort—but, rather, as a product of "the unintended results of historical development." Or, to use Adam Ferguson's familiar phrase, "the result of human action, but not the execution of any human design" (Ferguson 1966 [1767]: 187). Menger labels these institutions, which arise in this spontaneous fashion, "organic":

> The social phenomena of "organic" origin are characterized by the fact that they present themselves to us as the unintended result of individual efforts of members of society, in other words, of efforts in pursuit of individual interests ... *they are, to be sure, the unintended social result of individually teleological factors.* (Menger 1963 [1883]: 158; emphasis added)

Rather than a deliberate plan serving a single hierarchy of ends, institutions of "organic" origin are essentially spontaneous or unplanned ... serving no single hierarchy of ends, but, rather, a multiplicity of individual, competing ends. That is, the institution develops gradually over time as a result of unintended consequences of purposively acting individuals. In this way, the evolution and the organic, or spontaneous, formation of an institution are "twin conceptions" (Hayek 1973: 23). Throughout the rest of the paper we shall use the more common term "evolutionary," as opposed to Menger's "organic" label, for the theoretical explanation of institutions that emerge as unintended consequences of deliberative individual action.

It helps to understand here that the distinction between evolutionary and teleological emergence does not have to be mutually exclusive. "It allows for 'intermediate' cases, combining elements of both kinds of processes." (Vanberg 1986: 79 [5]) As Menger acknowledged:

> The present-day system of money and markets, present-day law, the modern state, etc., offer just as many examples of institutions which are presented to us as the result of the combined effectiveness of individually and socially teleological powers, or, in other words, of "organic" and "positive" origin. (1963 [1883]: 158)[2]

The individualistic evolutionary theory developed by Menger is composed of the interaction of two processes (Vanberg 1986: 81). The first is a "process of variation" in which new ways of behavior are generated by means of separate individual choices. In other words, new practices become adopted as the result of the self-interest of one person or a few people. The second process—the "process of selection"—explains how a practice will spread within society due to (self-interested) individual imitation. That is, along with the traditional practices come new, competing practices ... some of which become "systematically selected by individual imitation" and will spread, over time, throughout the society (Alchian 1950: 211-21). As demonstrated by Menger (1994 [1871]: 257–62), and commonly agreed upon as a valid explanation by virtually all Austrians, a fine example of an institution of spontaneous, evolutionary origin is money.[3]

[2] For more on the non-mutually exclusive nature of the distinction, see Samuels (1999, 2000). This point is quite relevant when theorizing about the *diffusion* of social practices, as we shall soon see below.

[3] Menger (1963 [1883]: 223–34) also illustrates the "organic", evolutionary nature of law on behalf of self-interested decision-making of individuals. He does not discuss the evolution of property rights. He instead illustrates that property arises out of scarcity (1994 [1871]: 94–101), which does form the basis for Mises's later account.

Outside of the Austrian School, David Hume's (1985 [1739–40]) understanding of the emergence of property rights was clearly an evolutionary one. For Hume, property rights were similar to other useful conventions that are adopted spontaneously. For example, when:

The evolution of money

Menger's story about the evolution of money—its original emergence—is widely known, so we shall provide merely a synoptic account.[4]

Consider three traders, Leon, William, and Carl, in a barter economy with three goods, X, Y, and Z. The table below depicts their current endowments, and their preferred outcomes (notice that we take their property rights as given!):

	Leon	William	Carl
Has	X	Y	Z
Wants	Y	Z	X

It is clear in this situation that a direct barter among any of the traders is impossible, as (by construction) none of the traders has a double coincidence of wants. Direct barter cannot improve the wealth of any of the traders. The Mengerian story supposes, essentially, that one of the traders strikes out on a new path of personal wealth creation by attempting to engage in indirect barter. Let Carl be that innovative-entrepreneurial trader. He trades his own Z for William's Y. Clearly William's wealth has increased, as he gains more of what he prefers. Now armed with Y, Carl trades that directly with Leon. Leon's wealth has also increased (gaining more of what he prefers) and so, too, has Carl's. In the end, Carl's break from the traditional, time-honored practice of direct barter allowed him to enjoy more wealth, along with his trading partners.

Carl's effort is entrepreneurial. (This is Menger's first process—variation.) He has discovered a more effective way of increasing his personal wealth through indirect exchange. It is also teleological; it is goal-driven behavior, like all human action. Menger suggests, as the story unfolds, that the Carls of the community, enjoying the rewards of indirect barter, will tend to continue engaging in that type of innovative activity. But not only that. Successful (wealth-enhancing) exchanges of this kind will also tend to breed imitators. (This is Menger's second process—selection.) When faced with a lack of double coincidence of wants, others will try their hand at indirect exchange as well. Over time, as the practice of indirect exchange continues, and its scope increases, some goods will become more marketable than others. That is, some goods (cattle, pigs, what have you) will become more desired (and therefore demanded) not merely for the direct utility that they provide, but more importantly, for their exchangeability in the indirect trade setting. Each series of trades is still explained by individually teleological factors, but eventually, over the long haul, a commodity emerges (gold, silver, whatever) as a most-marketable good that eventually serves as a general medium of exchange. In other words, some type of money emerges as a social institution. This is clearly an evolutionary account of *institutional origination.*

Menger argues that although the series of individual trades is teleological at the individual level, these activities systematically launch the development of an overall institution that was not the product of anybody's foresight or deliberate creation. The origination of money, in

> [t]wo men pull the oars of a boat, [they] do it by an agreement or convention, though they have never given promises to each other. Nor is the rule concerning the stability of possession the less derived from human conventions, that it arises gradually, and acquires force by a slow progression, and by our repeated experience of the inconveniences of transgressing it. . . In like manner are languages gradually establish'd by human conventions without any promise. In like manner do gold and silver become the common manner of exchange. (1985 [1739-40]: 542)

[4] We borrow a convenient approach used by Jack High in his graduate lectures at George Mason University in the mid 1980s.

this story, is an unintended consequence of all the Carls throughout the group (and then all other imitators) striving to increase their own wealth. Each was merely striving to improve his own welfare, but, in the process, the institution of money has evolved and barter—direct or indirect—vanished. Clearly money is a historical category. It did not always exist. Menger's conjecture provides some clues to its actual emergence, and has gained a general acceptance in the Austrian and neoclassical literature.

Menger's key to explaining the institutional origination of money, then, is through an evolutionary theory. The evolutionary explanation does not deny the role played by individual teleological (end- or goal-driven) action. Instead, it suggests that the original emergence of the institutional practice itself is an unintended consequence of self-interested activities, and many institutions in society have originated in Menger's evolutionary sense.

Before money, property

Curiously, however, Menger does not provide an evolutionary explanation of the institutional origination of private property rights, which, historically, must have preceded the origination of money. In our example above, we assumed, with Menger, that the traders already enjoyed *de facto* private property rights. But how did *those* rights originate? After all, money is a general medium used to exchange property rights. A money would not arise if people did not enjoy at least *de facto* rights to property.

Menger instead leaves that account for others. There is some limited evidence suggesting that Boehm-Bawerk provided a teleological (as opposed to evolutionary) explanation of property rights emergence. But Boehm-Bawerk does not try to explain the *institutional origination* of private property rights. He focuses instead on the nature and characteristics of a bundle of rights protected by the State. Boehm-Bawerk (1982 [1881]: 60) suggests that the law itself is an evolved process, but he then suggests that "the economic function of legal rights very closely parallels that of objective control and physical possession of a good" (p. 60). For Boehm-Bawerk, property rights are like any other good: they can be improved and delineated through individual action. His is therefore a discussion of institutional diffusion, rather than institutional origination. Since it focuses on the *intermediate* case that often combines both evolutionary and teleological (at the group or system level) explanations, it could be reconciled with Mengerian theory. At the same time it would also be subject to the ongoing Marxian charge: Boehm-Bawerk, too, offers no explanation of the institutional origination of private property rights. In the mean time, Marxists could continue to argue that economists merely start with the fact of private property without offering an explanation.

Mises: a praxeological explanation?

Mises's strategy was to dismiss the Marxist critique by claiming that private property rights had *always* existed (his emphasis). Of course, the disagreement between Marxism and the Austrian school is fundamental on matters of both methodology and theory. This is already well known. What we find more interesting is that Mises and Menger would appear to be in fundamental disagreement. Menger writes:

> Meaningless is ... the theory ... that recognizes in social institutions something original, that is, not something that has developed, but an original product of the life of the people. This theory ... indeed avoids the error of those who reduce all institutions to acts of common will. Still, it obviously offers

> us no solution of the problem ... but evades it. The origin of a phenomenon is by no means explained by the assertion that it was present from the very beginning, or that it developed originally.
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> (1963 {1883}: 149)

Would Menger therefore dismiss Mises's theory as meaningless? How could Mises claim, as a matter of fact, that *de facto* private property rights have always existed throughout human history? Recall that Barzel remains agnostic. How could Mises be so sure, without having any greater access to the human record than Barzel?

Mises's position, however, is understandable if he thought that *de facto* private property was a praxeological category. That is, if he believed that private property rights are a *category of the acting mind*. In other words, human action must presuppose *de facto* property rights, or it cannot be undertaken. If that is true, then the rest of the story unfolds: because all of history is the history of human actions, all of history must entail *de facto* property rights.

Mises clearly accepts the institution of money as a historical category, rather than a praxeological fact. So, while Mises relies upon the Mengerian story to explain the institutional origination of money, Mises has no need to use Mengerian evolutionary theory to explain the origination of property. We suggest that he deduces *de facto* private property rights as an aspect of the universal human condition.

But there's a problem with our interpretation. Mises says nothing *explicit* about *de facto* ownership being a necessary condition for acting, in *any* of his works that address the scope of praxeology (1969, 1978, 1996). One would think he would do so if he retained the belief. So that's a strike against our interpretation.

Mises *does*, however, employ praxeology to deduce the concepts of means and ends (1996: 92–94), which seems to build off of Menger's own analysis (1994 [1871]: 94–101). A person can act only if he expects that the means he uses can causally lead to the end that he hopes to achieve. Now, in order to *use* a means, the actor must be able to acquire and *have* the means. He must enjoy the power to use economic goods. And Mises says just this in his discussion on "The Nature of Ownership" (Mises 1981: 27–32), which is one of the earliest and clearest discussions of the distinction between *de jure* and *de facto* property rights. "From the sociological and economic point of view, ownership is the *having* of the goods which the economic aims of men require" (p. 27). This is the focus on *de facto* control over property, as opposed to the legal or *de jure* concept. He continues:

> The Law recognizes owners and possessors who lack this natural *having*, owners who do not have, but ought to have. In the eyes of the Law "he from whom has been stolen" remains owner, while the thief can never acquire ownership. Economically, however, the natural *having* alone is relevant, and the economic significance of the legal *should have* lies only in the support it lends to the acquisition, the maintenance, and the regaining of the natural *having*. (p. 27).

Mises goes on to stress that this notion of "natural having" holds for goods of the first order—i.e., consumption goods—and cannot be commonly owned:

> In the case of consumption goods the *having* which leads to the satisfaction of wants by the goods cannot be further divided than can the uses which arise from the goods. This means that with goods to be used up, natural ownership by one individual completely excludes ownership by all others, while with durable goods ownership is exclusive at least at a given point of time and even in regard to the smallest use arising from it. For consumption goods, any economically significant relationship other than that of the natural *having* by individuals is unthinkable. As goods to be used up absolutely and as durable goods, at least to the extent of the smallest use arising from them, they can be in the natural ownership of one person only. Ownership here is *private* ownership, in the sense that it deprives others of the advantages which depend upon the right of disposing of the goods.
>
> For this reason, also, it would be quite absurd to think of removing or even of reforming ownership of consumption goods. It is impossible in any way to alter the fact than an apple which is enjoyed is

> used and that a coat is worn out in the wearing. In the natural sense consumption goods cannot be the joint property of several or the common property of all. (p. 29)[5]

Mises does maintain, however, that the *having* (or *de facto* ownership) of higher-order production goods *can* be divided. (p. 30). Thus, private property rights in the *means of production* had not always existed. But *de facto* private property rights over consumer goods *must* exist in order for human action (the selecting of scarce means to attain sought-after ends) to occur. This, it appears to us, is indeed an *a priori*, praxeological argument, precisely the kind that would allow Mises to claim that private property (in his *de facto* sense of "natural having") is not an historical category, as the Marxists argued, but instead has *always* existed as a necessary feature of the human condition.

The Mises-Demsetz theory of property rights and cost internalization

In later work Mises does discuss the topic of the emergence of private property rights by considering the case of "no-man's property" (Mises 1996 [1949]: 654-657). In particular, commonly owned land "is utilized without any regard to the disadvantages resulting":

> Those who are in a position to appropriate to themselves the returns—lumber and game of the forests, fish of the water areas, and mineral deposits of the subsoil—do not bother about the later effects of their mode of exploitation. For them the erosion of the soil, the depletion of the exhaustible resources and other impairments of the future utilization are external costs not entering into their calculation of input and output. (p. 656)

Certainly, if property rights were "carried through consistently," the owner would claim all the benefits which the uses of a good would provide, while at the same time it would "burden him with all the disadvantages resulting from its employment" (p. 655). But under commonly owned land such incentives are not initially present:

> It was only when a country was more densely settled and unoccupied first class land was no longer available for appropriation, that people began to consider such predatory methods wasteful. At that time they consolidated the institution of private property in land. (p. 656)

Notice the emphasis on a group of people "consolidating" private property, which seems to suggest a system-level teleological explanation. We see no deployment of the processes of variation and selection that are fundamental to the Mengerian explanation. Mises seems to emphasize the deliberate and systematic creation of private property rights, whose benefits can be foreseen and anticipated in advance.

Although his is a story of the "emergence" of private property rights, the emergence he addresses is one of *institutional diffusion* rather than institutional origination. *De facto* private property rights in at least *some* goods—particularly, consumption goods—are already taken as given in Mises's approach. He is not addressing their origination. Those are *a priori* givens.

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[5] Cf. Menger (1994 [1871]: 97):

> [N]othing is more certain than that the needs of some members of society will be satisfied either not at all or, at any rate, only in incomplete fashion. Here human self-interest finds an incentive to make itself felt, and where the available quantity does not suffice for all, every individual will attempt to secure his own requirements as completely as possible to the exclusion of others.
>
> These persons will therefore have interests opposed to those of the present possessors with respect to each portion of the available quantity of goods. But with this opposition of interest, it becomes necessary for society to protect the various individuals in the possession of goods subject to this relationship against all possible acts of force. In this way, then, we arrive at the economic origin of our present legal order, and especially of the so-called *protection of ownership*, the basis of property.

Rather, he's trying to explain their further diffusion into uncharted territory. In this case, the privatization of formerly communally owned land, a higher order good.

Mises's explanation of the diffusion of property rights clearly anticipated Demsetz's seminal work (Demsetz 1967: 347-59), which also set forth to investigate the "no-man's property" type of setting.[6] For Demsetz, "the primary function of property rights is that of guiding incentives to achieve greater internalization of externalities" (p. 348). Thus, he believed that "the emergence of property rights can be understood best by their association with the emergence of new or different beneficial and harmful effects" (p. 350). Consequently,

> property rights develop to internalize externalities when the gains of internalization become larger than the cost of internalization. Increased internalization ... results from changes in economic values, changes which stem from the development of new technology and the opening of new markets, changes to which old property rights are poorly attuned. (p. 350)

Demsetz offers his now classic example of the move from communal to private property rights among the Montagnais Indians of the Labrador Peninsula as a result of an increase in fur trade (pp. 351–53). The establishment of the fur trade increased the value of furs, and therefore promoted more hunting. Consequently, this "increased considerably the importance of the externalities associated with free hunting." Hence, "[t]he property right system began to change, and it changed specifically in the direction required to take account of the economic effects made important by the fur trade" (p. 352).

Mises and Demsetz seem to succeed in pointing out that scarcity of particular resources and technology are the primary determinants of the extent to which a good will be privatized, albeit with very little detail over how the privatization process actually takes place. For Mises and Demsetz, individuals directly affected by the change in resource scarcity are responsible for redefining or improving the property rights structure. The actors feel a need for property rights and proceed to establish them in one way or another.[7]

Furthermore, Demsetz and following him, Pejovich (1972), relies on a discussion of costs and benefits, which, to some extent, seem measurable. Consider Pejovich:

> Man's compulsive desire for more utility combined with the cost-benefit calculus provides a rational explanation for both the creation as well as endogenously determined changes in the content of property rights assignments over scarce resources ... [suggesting that] ... the prevailing property rights assignments in the community reflect the costs and benefits of specifying property rights over scarce resources, and *changes in the property rights assignments are endogenously determined by changes in the cost-benefit ratio* *(Pejovich 1972: 315; emphasis added).*

In this view, the establishment of private property rights is directly the product of at least partial economic calculation. Again, we have here a story about intentionally designing property rights. Pejovich's work has been considered the most generalized discussion of the origin of property rights—at least among the modern property rights economists through the 1970s and 1980s (Buchanan 1975: 182 [7]). In these three accounts, Mises, Demsetz, and Pejovich suggest that individuals respond to the resource scarcity because they are aware of the need for property rights and want to rationally do something about it. More recent efforts remain in the teleological framework provided by game theory.

[6] We have not found any discussion in the property rights literature that acknowledges Mises's anticipation of Demsetz. It appears that we are the first to do so.

[7] Elinor Ostrom's work (1990) is a more recent example of teleological explanations of property rights emergence. As Ostrom has illustrated, individuals respond to the tragedy of the commons by more carefully rationing the scarce good. Her research suggests that there is no reason to expect well-defined private property rights to be the necessary outcome of resource scarcity. Throughout this large body of work, Ostrom does make the sometimes-implicit presupposition that individuals are aware of the increased resource scarcity and the need to consider ways to more efficiently allocate the resource.

Our point is not to criticize these accounts. Game theory, for example, offers a strong instrumentalist explanation of property.[8] The game theoretic explanation of property rights emergence can show how property rights came about from the maximizing behavior of every agent involved in the process. While this assumption might be a descriptively depart from reality, it is a convenient, instrumental one that allows the game theorist's model to be reliable and predictive.

But Austrians such as Mises—or, should we say, *especially* Mises—have traditionally been more concerned with the truth of their theory's assumptions, and its deductive validity. One wonders why Mises would resort to an instrumental explanation when it comes to the emergence of private property rights in the means of production. It may be that he is forced to, in light of his earlier claim that property rights have always existed for consumption goods. His explanation, then, would be one of explaining the *further diffusion* of property rights into new domains, rather than an explanation of the initial origins of property *per se*.

In his own way, Mises's work anticipates some core contributions of the contemporary property rights literature. Without the jargon, he explains the diffusion of property rights in the means of production as an internalization of externalities. We believe Mises was perhaps the first economist to study property rights in this way. But Austrians tend to be uncomfortable with exclusively instrumentalist methodologies: they wish instead to provide analytically universal and empirically realistic accounts of economic phenomena. They are less concerned with the mere predictability of a theory.

The black box problem

The contemporary property rights literature has been successful in providing the profession with a much-needed explanation of how property rights will ideally emerge in response to changing values of a resource. However, the story to this point has largely been one that merely takes account of a starting point, namely the scarcity of a resource, and an endpoint—the emergence of a particular bundle of rights. As Foss and Foss note:

> While property rights theorists have done much to clarify the meanings and ramifications of property they have done comparatively little to clarify *why* systems of property rights change over time, although some historical evidence has been brought to bear on this issue (Demsetz 1964, North 1990). *How* systems of property rights change have [sic] also been a neglected issue, because of the underlying comparative-static method in the property rights approach (2002: 303).

Foss and Foss (p. 309, [11]) suggest that "Demsetz's (1967) famous example of how property rights changed among … indians" is a "black box explanation," which fails to account for the internal workings of property rights emergence. By implication, then, so would Mises's account. Black box explanations clearly fit under the umbrella of instrumentalism: the "results" of black box explanations are dependent on the starting assumptions. While his story suffices in that it is an acceptable account of how property rights came about, it does not square well with Austrian praxeology.

The property rights framework offered by New Institutional economists and other neoclassical economists has been seriously lacking in an area where Austrian economists should be

[8] By *instrumentalism*, we mean an explanation that is concerned chiefly with prediction as opposed to working with descriptively true assumptions. A theory or model is considered an instrument that yields potentially accurate predictions (Rosenberg 1995: 83–87). The mainstream "positivist" notion that the test of a theory is its predictive power, rather than the realism of its assumptions is, at heart, instrumentalist. The use of instrumentalist methodology among neoclassicals such as Demsetz and Pejovich (and Barzel) is understandable.

quite interested in exploring: it has hardly any theory of the process by which the movement from here (scarcity of a resource) to there (the establishment of property rights) takes place.[9]

Fresh traces of an evolutionary theory

That is not to say that all efforts in the property rights literature are guilty of this charge. In particular, some recent works have engaged in the kind of research a process-based approach would likely take up. Process theorists can likely imagine a prolonged period of haggling over the establishment of property rights in which extensive rounds of trial and error occur.[10] During these periods it is possible that many individuals, communities, or tribes erroneously respond to the signals being sent. When this occurs, possibilities of underproduction of property rights, production of more costly institutional regimes (e.g., communal rights or state rights), and/or overproduction of rights can present themselves.

Richard Posner (1980) offered an early source of discontent with Demsetz's explanation of the emergence of property rights. He responded to Demsetz's work with a theory that claimed, in many situations, common property could be the *optimal* outcome for people responding to increased resource scarcity. Posner explained that as a result of "ignorance and uncertainty" on the one hand and "efficiency gains" on the other (1980: 5), communal rights formation could indeed be the norm in primitive societies rather than the exception.

Posner (pp. 10–19) argues that most of these communal arrangements will involve small kinship groups. Among these different groups, a whole range of social institutions will emerge in response to resource scarcity. Some of these institutions could very well be communal responses, such as gift giving, the sharing of bountiful harvests, reciprocal exchange, and interest-free loans. Posner argues that in primitive societies many of these arrangements are more efficient since communal property provides more insurance against hunger. While his explanation remains a largely pragmatic account in arguing that communal rights will emerge out of individual desires for greater *insurance against hunger*, he does demonstrate that private property is not the necessary outcome resulting from the increased scarcity of a common resource.

Anderson and Hill (1990, 1983) provide another effort that places even more of an emphasis on the messy evolutionary process of property rights diffusion.[11] They offer an overshooting type of model related to the establishment of property rights during the "first privatization movement" in the American West. Depending precisely on how the privatization

[9] Eggertsson (1990: 250) calls these early contributions in property rights economics the "*naïve theory of property rights*." For Eggertsson, however, the lack of an explanation of process is not the primary problem with the early work in property rights economics. The problem for Eggertsson is that "these early explanations sought to explain the development of exclusive property rights without explicitly modeling social and political institutions."

[10] Or, as Warren Samuels (2000: 396) describes the legal-economic nexus, we can imagine the emergence of property rights being a "messy process of working things out" where factors like economic power, culture, and history matter.

[11] Interestingly, Eggertson (1990: 253–4) chides Anderson and Hill's (1975) discussion of property emergence in the West:

> The Anderson-Hill model is characteristic of the naïve theory: The formation of decision making with regard to property rights is solely in terms of private benefits and private costs. The theory does not deal with the free-riding problems that plague group decision, nor is there an attempt to model political processes.

The later of work of Anderon and Hill clearly attempts to incorporate political processes.

process worked itself out—whether land was sold off, awarded to squatters, or granted to certain productive activities—the “premature development of land” was a potential outcome (Anderson and Hill 1990: 191). In addition, if the U.S. government required certain investments in the land (e.g., fencing or livestock) before assigning private ownership, the effort to establish property rights could potentially lead to a degree of “rent dissipation” that “leaves the efficiency gains from privatization in question” (p. 177).

This implies that if the race for these rights is subject to error or miscalculation by the rent-seeking parties (in the Anderson and Hill story, individuals looking to gain ownership of land), the optimal response to the scarce resource will not immediately result. Anderson and Hill (1983: 441) suggest that, under certain conditions, the amount of rent-seeking that occurred for land rights exceeded the actual value of the rent. The Anderson-Hill account suggests that the privatization process should be understood as a prolonged process in which individuals (in this particular case: homesteaders, speculators, and squatters) adjust to the market signals by reducing the amount they allocate to privatization efforts, or, alternatively, increasing their allocation if they have underestimated the market value. By introducing miscalculation and error into the story of privatization, they provide us with a much more dynamic understanding of the diffusion processes actually at work.

While Anderson and Hill illustrated that the privatization process has the potential to produce sub-optimal outcomes, Bailey (1992) argued against the notion that *private* property rights can be expected to be the only response to increased scarcity among a common resource. In criticizing Demsetz for drawing a generalization from the specific case of the Montagnais Indians, Bailey goes on to suggest that the rights which emerge are a result not only of a resource’s scarcity; they also depend on the usefulness of the resources involved and the efficiency with which the rights can best be managed (pp. 184–89). Bailey shows that based on economies of scale, “the minimum efficient size of the enterprise could vary according to the specific hunting or gathering activity, and the allocation of rights could, and usually did, vary accordingly” (p. 186). Bailey’s analysis of more than 50 aboriginal tribes supports an evolutionary theory in which the property rights that result are dependent on an extensive trial and error process at the group level.[12] Some rights can best be allocated privately; others may be most efficiently provided and protected in a communal organization. For Bailey, the specific bundle of rights that emerges in primitive societies—whether it be private property, common property, or some combination—is not something that can be known or predicted *a priori*. This would therefore constitute a fundamental disagreement. Bailey’s analysis instead provides empirical support for a variety of forms of property rights to be possible outcomes of increased resource scarcity.

These contributions in large part adhere to mainstream notions of optimality, efficiency, and uncertainty—again, pursuing an instrumentalist philosophy of science. They do succeed in making strides in the direction of a more evolutionary theory of the diffusion of property rights. But they appear to have little parallel to Menger’s story of the emergence of money. We have found also that Mises himself, fully accepting Menger’s theory regarding the evolution of money, does not even attempt to provide a similar evolutionary account of property. He

[12] For Bailey, Demsetz’s analysis has the problem of n=1. When we look at other tribes with different experiences and costs of coordination, different results can be expected. McManus (1972) goes further in suggesting that Demsetz’s Montagnais Indians privatization example was ineffective over time. He notes (p. 39) that nearly every “historian in the fur trade [agrees] that beaver populations were sharply reduced after the introduction of the fur trade into an area.” According to McManus, resource scarcity did not lead to a more efficient allocation of resources. While prices remained fairly stable, beaver rights were only “nominally exclusive” (p. 43). Of course, McManus does not provide any discussion of relative price changes.

offers an *a priori* account grounded in individual rationality that says little about the process by which property rights in the means of production come about.[13]

This leaves us with Hayek, who does attempt to recover the Mengerian dimension. Though his evolutionary theory seldom is applied to the specific case of property rights origination and diffusion, Hayek gives us enough in the way of a social theory to make conjectures of just how the evolution of property rights might have occurred. In addition, there are a few explicit occasions in which Hayek addresses the particular issue of property rights emergence. We now turn to a discussion of these efforts.

Property rights and cultural selection: Hayek's conjectures, and his critics

In analyzing the origination of social institutions, Hayek has emphasized the difference between the rules of purposively acting individuals and the cultural rules of a society. The former are innate behavioral regularities all humans possess ("genetic rules"), while the latter are rules of conduct generally recognized by specific groups ("cultural rules").[14] For Hayek,

> The chief points on which the comparative study of behavior has thrown such important light on the evolution of law are, first, that it has made clear that individuals had learned to observe (and enforce) rules of conduct long before such rules could be expressed in words; and second, that these rules had evolved because they led to the formation of an order of the activities of the group as a whole which, *although they are the results of the regularities of the actions of the individuals, must be clearly distinguished from them, since it is the efficiency of the resulting order of actions which will determine whether groups whose members observe certain rules of conduct will prevail*
>
> (Hayek 1973: 74; emphasis added).

More specifically, with regards to the origination of private property, Hayek writes:

> I think the first member of the small group who exchanged something with an outsider, the first man who pursued his own ends, not approved and decided by the head, or by the common emotions of the group, the first man above all who claimed private property for himself, particularly private property in land, the first man who, instead of giving his surplus product to his neighbours, traded elsewhere . . . contributed to the development of an ethics that made the worldwide exchange society possible.
>
> All of this developed . . . in a competition among groups, each imitating those who adopted a somewhat advanced . . . system of practices, and in consequence, increased more rapidly in population, both by procreation and by attracting people from other groups (Hayek 1983: 31–2).

Hayek also stresses that individuals never understood why they accepted the morals of private property . . . "[m]an was never intelligent enough to design his own society" (pp. 46–7). That is, "[p]rivate property . . . was never 'invented' in the sense that people foresaw what its benefits would be" (p. 47), but spread "because those groups who by accident accepted them prospered and multiplied more than others" (p. 47). This claim rubs against the more deliberative, rationalist, or maximizing accounts of Mises, Demsetz, and Pejovich. Hayek calls his a process of "cultural selection," which allows certain groups and practices to withstand the duration of time.

[13] An anonymous referee suggested that Mises does not actually discuss the emergence of property rights because his discussion is always "praxeological" in the sense that it is not concerned with the process of how property rights emerged historically. According to the referee, Mises's only concern is with how various property arrangements affect the pure logic of choice. In the passage we cite above related to "no-man's property," Mises's discussion of property rights diffusion (1996 [1949]: 656-57) is clearly stepping outside of praxeology as he uses his notion of "consolidated property" to explain the emergence of property rights in the United States and continental Europe.

[14] For more on innate rules, see Ridley (1996). For more on "cultural rules," see Taylor (1982).

Consequently, we find that Hayek *does* have an evolutionary theory of the origin of property rights. But several problems exist. First, the empirical support for theories of group selection has been rather mixed and inconclusive. Zywicki (2000: 81) argues that the Sober and Wilson model of biological group selection helps to make group selection theories "more plausible than traditionally thought." Yet, both the biological and social science audience remains largely unsympathetic to group selection accounts where behaviors, norms, and institutions emerge that cannot be traced back to individual or kin benefits.

Robert Frank (1988) notes the unsustainable nature of a norm that evolves via group selection without concomitant advantages to the individuals in the group when he inquires as to whether altruism could have evolved via group selection. Frank writes:

> For this to have happened, altruistic groups would have had to prosper at the expense of less altruistic groups in the competition for scarce resources. This requirement, by itself, is not problematic. After all, altruism *is* efficient at the group level (recall that pairs of cooperators in the prisoner's dilemma do better than pairs of defectors), and we can imagine ways that altruistic groups might avoid being taken advantage of by less altruistic groups.
>
> But even if we suppose that the superior performance of the altruistic group enables it to triumph over all other groups, the group selection story still faces a formidable hurdle. The conventional definition, again, is that nonaltruistic behavior is *advantageous to the individual*. Even in an altruistic group, not every individual will be equally altruistic. When individuals differ, there will bee selection pressure in favor of the least altruistic members. And as long as these individuals get higher payoffs, they will comprise an ever-larger share of the altruistic group. (1988: 38; emphasis in the original)

This difficulty with the group selection story leads Frank to conclude that "even in the event that a purely altruistic group triumphs over all other groups, the logic of selection at the individual level appears to spell ultimate doom for genuinely altruistic behavior" (p. 38).

In addition, Hayek seems to be facing an insurmountable methodological problem. Although Hayek has an individualistic process of variation (for example, the tribesman who pursued his self-interests, without any intention of establishing an ethic of private property), his process of selection may be defective. Mises himself had questioned such an account. For Mises, "We can 'explain' the birth and development of social institutions by saying that those who accepted and best developed them were better equipped against the dangers of life than were those who were backward in this respect," but "[t]o point out how unsatisfactory is such an explanation nowadays would be to bring the owls back to Athens" (Mises 1981 [1936]: 33). Apparently, then, Mises would fundamentally disagree with Hayek's approach.

Viktor Vanberg has advanced perhaps the most sustained criticism of Hayek's effort:

> [t]o refer to *group advantage* rather than to *individual benefits* and to argue that the cultural heritage into which man is born consists of a complex of practices or rules of conduct which have prevailed because they made a group of men successful, is, of course, fundamentally different from providing an "invisible-hand explanation." It rather sounds like the *functionalist* argument [in which] the "maintenance" of a social system explains the existence of a social pattern or institution.
> (Vanberg 1986: 83; emphasis in the original)

Hence, Vanberg (p. 85) considers Hayek's efforts to be inconsistent with Menger's evolutionary understanding of social institutions, and contradicts his own classic case for methodological individualism. Hayek's idea of a group selection process apparently "doubt[s] that an individualistic evolutionary conception cannot [sic] adequately account for the evolution of certain rules which appear to be advantageous to the group, without rendering direct benefits to the individual practicing them" (p. 87). Vanberg continues:

> What a theory explaining the emergence of such group-beneficial behavioral regularities would have to show is how these conditions are actually brought about. It would have to show either how they emerge spontaneously in the process of interaction among individuals separately pursuing their own ends, or, how they are brought about as a result of organized, group action. That is, rather than to resort to the vague notion of group selection, one would have to engage in a systematic theoretical analysis

> of the two kinds of processes distinguished above: the process of spontaneous generation and change of rules, on which an individualistic, invisible-hand notion of cultural evolution properly focuses, and the process of deliberate changes in and enforcement of rules by organized, collective choices.
> (p. 88)

Therefore, it should explain how institutions emerge through individuals pursuing competing ends, or through deliberate decision-making on behalf of Menger's "socially teleological factors."[15]

If Frank is correct that group selection theories fail to overcome "the logic of selection at the individual level" and Vanberg is correct in his functionalist charge, Hayek's theory apparently fails to provide a *systematic, causal* explanation of the process of selection specifically rooted in methodological individualism. That is, he fails to explain just why, through individual imitation, an institution such as private property will arise with characteristics that are conducive to the successful functioning of the group as a whole. He makes an illegitimate shift from individualism to functionalism.

Toward a pluralistic defense of Mises and Hayek, with the help of fellow travelers

We began this paper by asking if Austrians have a common account of the origination of property rights—an institution that necessarily emerged prior to both money and market prices. We have found that Mises seems to be pursuing an approach grounded in individual rationality—what Menger called a "pragmatic" account—and that Hayek pursued an evolutionary account—something somewhat like Menger's "organic" explanation of social institutions. Each has chosen a different fork in the road.

To the extent he's *not* trapped in a black box, Mises's explanation can be considered generally Mengerian. Mises accepted Menger's evolutionary story of money's initial emergence, so why doesn't he tell a process-based story of a much earlier institution upon which money is dependent—property?[16]

[15] There is tremendous general disagreement among scholars regarding functionalist versus methodological individualistic explanations. The literature on Hayek's theory of cultural evolution is also vast. Whitman (1998), for example, suggests that a false dichotomy exists between the group selection and individualistic alternatives. Hodgson (1991), by contrast, is sympathetic to Hayek's theory of group selection, but disagrees with Hayek's free market conclusions. Our discussion of Vanberg's functionalist critique is an immanent one. We are trying to engage with Vanberg's criticism by assuming that there is some support for the view that Hayek is a functionalist and that the functionalist-individualist dichotomy is a real one.

[16] Boettke, Coyne and Leeson (2003) and Boettke (2001 [1996]) have argued for generalizing Mises's regression theorem. They argue that Mises's regression theorem implies that:

> indigenous institutions [including, presumably, early property rights structures] institutions are like social memories—they are intricate evolved solutions to complex social problems. As such, for institutions to be successful, they must emerge spontaneously from social processes endogenous to the indigenous societal participants. Customary rules and institutions emerge through time and serve as coordination mechanisms through which individuals interact, exchange and settle disputes
> (Boettke, Coyne, and Leeson 2003: 13)

Yet, Mises does not make the claim that property should be understood as a spontaneously evolved institution similar to money. In addition, his argument for the emergence of social cooperation under the division of labor is the result of individuals *recognizing* the benefits that cooperation confers upon them (1985 [1962]: 33). Unlike the emergence of money, Mises's account of the emergence of property and social cooperation involves actor intentionality and awareness (i.e. teleology) of the institutions they are developing. It is unclear whether the kind of calculative rationality present in Mises's account of social cooperation can be reconciled with his regression theorem.

Menger certainly recognizes that not all institutions are the unintended consequence of people's actions. (Even contemporary *forms* of money: The euro, for example, was teleologically created at the group level.) The *diffusion* of institutions and practices can represent the *intermediate* case of working things out teleologically (at the group or systems level) and entail evolutionary processes.

Hayek, on the other hand, attempts an evolutionary explanation—one quite different from Anderson and Hill and others in the contemporary property rights literature—one that instead tries to be more closely wedded to the Mengerian tradition. Given Vanberg's criticisms, we have found that Hayek himself actually departs from Menger's emphasis on methodological individualism. Recall, in Menger's money story, the advantage of embarking upon indirect exchange goes to the *individuals* who choose to do so, rather than directly to the group of individuals as a whole. As more individuals gain, so, too, does the group. But the causal link runs from the individual to the group. In Hayek's property-emergence story, the group as a whole enjoys the advantage of property formation. Hayek suggests that individuals within the group merely stumble upon practices that form property rights. Those groups that stumble upon such practices, and unintentionally transmit them to future generations, tend to enjoy greater power to survive and grow in numbers, while those groups that failed to stumble upon such practices, and/or failed to transmit them, perished. But there is no causal explanation that leads from individual wealth-creation to overall group improvement. Instead, the development of property is explained by its function. Functionalism replaces strict methodological individualism.

We wish to suggest, by way of conclusion, that Hayek's approach may be defended once we recognize the conjectural and methodological nature of Hayek's story. We shall sketch a defense by considering the following points:

(1) *Hayek is engaged in conjectural history.*
Hayek's discussion of the emergence of property is not meant to explain the emergence (diffusion) of contemporary property rights arrangements. For example, it is not meant to explain, say, the privatization process that is taking place under post-communism. Nor is it intended to explain the diffusion of property rights in the seventeenth and eighteenth centuries. Both Mises's story and especially later game theoretic accounts, with their assumptions of participants engaged in strategic, calculative rationality, might very well be appropriate for explaining and predicting outcomes in these domains. Their efforts might be successful in explaining the diffusion processes. Hayek focuses instead on the earliest possible emergence of something like private or separate property. He is engaged in conjectural history that explains the emergence of civilization itself, the gradual and slow movement away from face-to-face nomadic tribes toward early civilization, which apparently emerged some twenty to thirty thousand years ago. It is not some purely praxeological exercise. *Like Menger*, Hayek is necessarily engaged in conjecture. *Unlike Menger*, Hayek is attempting to understand the emergence of the institution that long preceded the emergence of money. Menger had the comfort of taking private property and civilization as a given. Hayek is attempting to explain the emergence of what Menger already assumed to exist.

Once we acknowledge that Hayek is really discussing the origination of the institutions—such as property rights—that support early civilization itself, it would be appropriate to acknowledge Hayek's—and Mises's—stance on human rationality:

(2) *Hayek and Mises articulate a non-calculative alternative.*
Consider Mises's argument: "There is no history of acting; there is no evolution which would lead from nonaction to action; there is no transitory stages between action and nonaction. There is only acting and nonacting" (Mises 1996 [1949]: 198). Now this might look like

it contradicts our claim above. It doesn't. Yes, even primitive hunters and gatherers were actors. But they did not have the capacity to systematically engage in *calculative action* prior to the emergence of private property. Systematic calculative action is a product of human history—of appropriate human institutions. This is Mises's own argument, with which we fully agree. As Mises puts it:

> It was cognition of what is going on within a world in which action is computable and calculable that led men to the elaboration of the sciences of praxeology and economics. Economics is essentially a theory of that scope of action in which calculation is applied or can be applied if certain conditions are realized. No other distinction is of greater significance, both for human life and for the study of human action, than that between calculable action and noncalculable action. Modern civilization is above all characterized by the fact that it has elaborated a method which makes use of arithmetic possible in a broad field of activities. This is what people have in mind when attributing to it the—not very expedient and often misleading—epithet of rationality (p. 199).

Mises understands that while all action is necessarily rational, in the sense of being means-ends driven, all action is surely not necessarily calculative.

When we turn to neoclassical explanations of property rights emergence, it is clear that game-theoretic matrices are capable of representing individual rationality and strategic behavior in the absence of money and prices (and property) as maximizing behavior. Though, the assumptions involved in telling a game-theoretic story of rational property rights emergence attribute too much cognitive ability to participants and drain all experience out of the interaction (Sugden 1989: 88-89). If action in primitive societies can be easily summarized as maximizing behavior, why would individuals ever bother to adopt conventions? As Sugden (p. 89) notes, doing so would be redundant.

For a convention to emerge, individuals need to believe that other people are following the same convention.[17] A rule, such as the right of first possession, can be adopted for no other reason than the fact that it is popular. According to Sugden (p. 97), then, the property rights that have emerged are neither the result of collective choice, nor are they the result of abstract rational analysis by participants.[18] Game-theoretic explanations give the participants involved too much credit *if* these accounts depart from a mere instrumental defense and instead claim to be accurate descriptions of processes. For Sugden (and Hayek), the existence of property rights is simply the result of a long trial-and-error process in which some conventions have won out over others. There is no need for extreme assumptions about individual rationality to tell a story of property rights emergence.

Hirshleifer (1980) also recognizes the tension involved in a rational-choice explanation of property rights emergence and attempts to develop an evolutionary alternative. The socio-biological model that he constructs to explain cooperation and institutional emergence does not depend on calculative rationality of individuals. According to Hirshleifer, the emergence of property rights might simply be due to a "privacy ethic." This ethic is the result of an evolution that

> ... might have 'hard-wired' defensive belligerence into proprietors together with the complementary traits of reluctance to intrude and willingness to retreat on the part of potential challengers—the two together comprising what I have called the privacy ethic. (p. 657)

The individuals who, therefore, were the first to adopt the institution of private property were unaware of their contribution. Property was the residual of a long evolutionary

[17] Much earlier, Hume made a similar point regarding why conventions are adopted. Like Sugden, Hume's account did not require any kind of cost-benefit story on the part of the actors.

[18] One further conclusion that Sugden reaches (1989: 97) is that conventions do not necessarily favor rules that are Pareto efficient.

process brought about by a privacy ethic that was never rationally chosen by any group of individuals.

We concur with Hirshleifer's (and Sugden's) analysis. We would like to suggest that many norms present—including ones responsible for the early emergence of property rights—are simply the result of rules of thumb, tradition, or custom that do not necessarily have any direct individual benefit.

This explanation should not be problematic. After all, economists of all stripes recognize that some behavior cannot be easily summarized as individual maximization. Altruism is a case in point. It appears that atavistic norms, which are not individually rational, might have been rampant in primitive society.[19] This kind of behavior is usually summarized as rational because altruism is in the individual's utility function, but the tautological problems of this explanation are obvious and well-documented.[20] Behavioral and experimental economists have argued that in the case of altruism we should shift our understanding away from individual maximization towards some kind of norm-based explanation. Our reading of the emergence of property rights literature suggests that there might be room for a similar shift in our understanding. If, indeed, we do experience a shift away from a rational-choice explanation to a story of some kind of natural selection or cultural evolution explanation, then Hayek and Mises deserve a prominent place in this account.

In fact, Mises's critique of economic explanations of exchange in non-market settings goes even further than Hayek's: he chides economists of his time for assuming that any agents under any historical conditions can successfully engage in economic calculation.[21] Of course, we know how he criticized socialism for such an assumption. But Mises had a much broader issue in mind. Institutions make a difference. Why assume the existence of institutions which do not exist when studying history? It would obviously be mistaken to assume that a face-to-face barter community has a general medium of exchange. It is also a mistake to assume calculative rationality on behalf of people who have no established institutions to encourage and support calculative rationality—property, markets, and money prices. The socialist calculation debate is the most obvious example.

Mises's criticism can also be applied to those contemporary economists who, like Vanberg, wish to employ game theory as an alternative to Hayek's "functionalist" story when explaining the early emergence of property:

> They were prone to take economic calculation as a matter of course; they did not see that it is not an ultimate given, but a derivative requiring reduction to more elementary phenomena. They misconstrued economic calculation. They took it for a category of all human action and ignored the fact that it is only a category inherent in acting under special conditions. They were fully aware of the fact that interpersonal exchange, and consequently market exchange effected by the intermediary of a common medium of exchange—money, and therefore prices, are special features of a certain state of society's economic organization which did not exist in primitive civilizations and could possibly disappear in the further course of historical change. But they did not comprehend that money prices are the only

[19] The experimental findings of Hoffman, McCabe, and Smith (1996) and McCabe, Rigdon, and Smith (2002) support this point. In trust and dictator games, for example, a level of cooperation—among anonymous agents—far exceeds the expected (i.e., "rational") level of cooperation. The reciprocity norm seems to be a historical artifact passed down to us from an earlier age when many individual actions were not governed by calculative rationality.

[20] See Sen (1977), for example. Hoffman, McCabe, and Smith (1996: 658) argue that in laboratory experiments, high levels of fairness cannot be explained by a preference for altruism in one's utility function. Instead, high levels of fairness can be attributed to a reciprocity norm that has emerged from experience outside of the laboratory.

[21] Karl Polanyi (1971) was also critical of the application of extending economic analysis to societies lacking markets.

> vehicle of economic calculation. Thus most of their studies are of little use. Even the writings of the most eminent economists are vitiated to some extent by the fallacies implied in their ideas of about economic calculation. (Mises 1996 [1949]: 201, 229)

We do depart from Mises's argument that most contemporary game theory studies are of little use in explaining the emergence (diffusion) of property rights. Game theory models—such as Vanberg's in his own criticism of Hayek—*can* be defended on instrumental grounds. They can certainly be appropriate when modeling *contemporary* property rights issues and disputes. If they offer some efficient degree of predictability about the early emergence (origination) of property (though it is questionable what predictions can be drawn about the pre-civilized peoples that Hayek is focused upon), then they might meet the criteria of an instrumentalist philosophy of science. That is for *their* users to decide. But Mises does persuade us that, for a more descriptive account of human interaction, an understanding of history does matter in the theorist's choice of which institutions are to be treated as given and which have yet to emerge. Here, Hayek's understanding of the nature of the problem—the story of the early origination and diffusion of property rights—is fully in line with Mises's concerns.

(3) *So what if Hayek is more like a functionalist?*

Therefore we are led to the above conclusion—Hayek, on this historical topic, seems more like a functionalist than an individualist. Hayek is departing from a strict interpretation of methodological individualism in his emergence of property story. Using Mises's distinctions between economics—as a science of calculative action—and praxeology as the broader science of human action in general—we find that Menger's story of the evolution of money moves from the broadly praxeological to the economic. Hayek's account is necessarily in the non-calculative, non-economic, but broadly "praxeological" dimension.[22] We should therefore expect that Hayek's account of the emergence of property must differ from Menger's account of the evolution of money. Hayek's starting assumptions are quite different—his agents are necessarily in a thoroughly pre-calculative setting, without the benefits of *any* of civilization's institutions. His agents have yet to *learn* thoroughly strategic ways of social interaction. Surely none of us model the earliest emergence of language in a strictly Mengerian evolutionary sense; surely nobody argues that an individual found that she could increase her wealth by teleologically establishing "words" with the *strategy* of increasing her own wealth, akin to establishing indirect exchanges in order to profit.[23]

In short, while methodological individualism is fully appropriate for the study of perhaps all of civilized human history, something more like functionalism might offer us more insight on sketchy, pre-civilized history. Some choose instrumentalism—which might have the virtue of remaining rooted in methodological individualism, albeit of a very narrow and atomistic variety—but at the cost of descriptive realism. Social contract theories, for example, might be instrumentally useful as predictive devices, but they come at the cost of historically accurate descriptions. A Hayekian functionalism attempts a more realistic description of admittedly obscure historical episodes, at the cost of the kinds of methodological individualism evident in economic phenomena properly understood.

Disagreement here is indeed fundamental at the methodological level. Is it too radical of a proposal to suggest, in light of this, that different theorists weigh those costs and benefits, and pursue those methods that they believe are most productive?

[22] "Praxeological" in the sense of examining the non-calculative sphere of human action, rather than a purely deductive analysis of human action.

[23] Vernon Smith (2001: 21) recently offered a succinct critique of anthropomorphic tendencies among economists. As Smith notes:

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> Most of our operating knowledge we do not remember learning because the learning was autonomic, imitative and formed by practice. By age four we were accomplished in a native language, capable of algorithmic inflection and syntactical construction. For English we added ed to convert verbs into their past tense form and s to obtain the plural of nouns, with some of the irregular exceptions yet to be memorized. Such learning required no instructions from mom or teachers; only listening, to initialize the circuitry with which we were born. A peculiarity of the mind is its penchant for anthropomorphizing the order it sees in society. If human structures [such as property] are well designed someone in the distant past must have designed them. Individuals, committees, and legislatures make rules and laws, and the mind sees designers at work. But what is unseen is the process that ignores, alters in use, and/or substitutes emergent norms for portions of the rules, a process that no one monitors because such detailed histories are not recorded. If something is functioning, the mind sees it as an invention of a comprehending mind, not the cumulative state of countless trial-and-error modifications of countless myopic minds.

Our understanding of the earliest emergence of property rights is consistent with Vernon Smith's "trial-and-error" account of other human structures. Surely, all action can be instrumentally modeled as the deliberate assessment of non-monetary costs and benefits, but which is the more accurate account when looking at experiences like a child learning to talk?

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