

Homesteading, Ad Coelum, Owning Views and Forestalling

Walter Block

College of Business Administration, Loyola University New Orleans,
6363 St. Charles Avenue, Box 15, Miller 321, New Orleans, LA 70118

Abstract: Homesteading, not the ad coelum doctrine, is compatible with libertarianism. In the former case, one mixes his labor with unowned land and a means of establishing private property rights in it and what is owned is limited to just that which has undergone this process. In the latter case, homesteading a square mile of land enables the owner of it to extend his property rights in a pyramid shaped form from his holdings on the surface down into the core of the earth and up into the heavens, with no limit.

Key words: Homesteading, ad coelum, forestalling, property rights, views, slant drilling

INTRODUCTION

Why delve into the issue of the property rights in virgin land, when virtually all territory on the planet already falls under some sort of ownership? There are several reasons.

Not all of the earth's surface is presently accounted for in this manner. There are vast areas of the arctic, Antarctic, Sahara, northern Canada and Russia and the oceans, rivers, seas and lakes, which presently do not fall under private ownership (Hoppe's, 1998, 2001; Block, 1998a; Block and Callahan, 2003). Then, there is the interior of our world. There are untold riches just beneath the surface, possibly extending right down to the core of the planet. As well, there is the moon, Mars and other planets and, eventually available to us, additional solar systems just chock full of terrain to privatize.

True, we are a long time away from being pressed in terms of knowing who, in justice, should become the owners of these various and sundry items, especially the latter mentioned ones, but it never hurts to at least start to solve problems before we desperately require answers to them.

In addition, homesteading is required for privatization of things that never should have been publicly owned in the first place. Numerous examples immediately leap to mind: The factories and collectivized farms of the U.S.S.R., Petro Canada and the C.B.C. in Canada, parks, post offices, sports stadiums, roads, museums, schools, libraries the world over (Moor and Butler, 1987; Poole, 1976; Savas, 1987, 2000; Anderson *et al.*, 1996; Hanke, 1987; White, 1978). Some of these things have already been returned to the private sector. Here, the theory to be proposed below can help determine if the transaction was an appropriate one or not. Others still,

unfortunately, remain in government hands. In this case, the theory can both promote this long overdue occurrence and light the way in the direction of legitimizing it.

But before we begin, we must deal with two possible objections to the thesis that homesteading can ever properly be used to convert public property into private. First, based on libertarian punishment theory (Barnett and Hagel, 1977; Kinsella, 1992, 1996, 1997; Rothbard, 1978, 1998), illicit public property should always be returned to its rightful owners, not to those who merely utilize it. The latter, in any case, are mere squatters. The former are the people from whom wealth was taken from in the first place in order to develop the property in question.

But this objection, while not without some merit, is not fatal to our contention that homesteading is a viable solution for privatization efforts. First of all, it may not be possible to determine precisely who are the victims. If the governmental theft occurred a long time ago we may not know who they are, or the identity of their heirs. Another possibility is that at least some of the rightful owners may have died intestate, with no beneficiaries at all. It may be possible to trace their distant relatives, even unto 15th cousins, but, then again, it might not be possible to do so. We lack, after all, the God's eye viewpoint that might well be required for such determinations.

The second objection is that if I had but known that this park, road, library, farm, whatever, was going to be given to those who used, homesteaded, mixed their labor with it, then I would have done so. I knew no such thing. Therefore, I did no such thing. And this is patently unfair. There are problems with this line of reasoning:

First, this objection forces us to be hostage to the meanest intelligence. There are those who are unaware that their noses are placed on their faces. If public policy cannot proceed unless and until even the people at the bottom end of the IQ distribution can foresee something, then it will not take place at all.

Take a case to illustrate this point. A issues bonds in denominations of \$100 and then goes bankrupt. These bonds then sell for \$.10; that is, 10 cents. Unbeknownst to all market participants, A's son, B, is a man of honor and a rich one to boot. He offers to make good on his father's debt. He announces he will pay full value on these bonds, \$100 for \$100. Whereupon our "moron," one of the ex creditors, objects again. This time he says, Had I but known that B would have paid off these bonds in full no less, I would have kept them. Instead, I sold them for \$.10 on the \$100 and that speculator will earn \$99.90 for each bond I sold him. This is patently unfair. The mistake here, as with the view that homesteading government property is inherently unfair, is that it ignores the concept of entrepreneurship (Kirzner, 1973).

This objection is also problematic on ex post facto grounds. Nazi defendants at the Nuremberg trials quarreled with a finding of guilty for their actions, for even holding these proceedings, on the ground that if only I had known that what I did would later be declared illegal, I would not have done as I did.

We are now attempting a praxeological analysis of law (Reinach, 1913, 1998; Rothbard, 1982; Block, 2004). Because someone, somewhere, lacks knowledge of this fundamental law of property rights cannot logically be allowed to render it inoperative and invalid.

Yet another objection to homesteading must also be dealt with at this point. According to some writers (Stroup, 1988; Block, 1990), if everyone knows that the homesteading rule is the law of the land, there will be an over allocation of resources currently expended upon exploration and development. These activities will occur, not when they are economically needed, but beforehand. Economic actors will engage in such prior to optimal homesteading in an effort to beat out the competition for the seizure of natural resources (Kirzner, 1973; Rothbard, 1993).

But why should we define optimal time for homesteading in the absence of knowledge about the law pertaining to this process. Perhaps an analogy will make this point more clear. Kinsella (2001) defines the optimal expenditure on research and development as that amount which comes about, based upon market decision making, when property rights in ideas-there are no such things under proper libertarian law-are respected. Kinsella (2001) faced much the same situation vis a vis intellectual

property as we now do with regard to homesteading. His opponents charge that unless there were patent and copyright protection for R&D, its pace would slow to below optimal levels. Kinsella defined optimality in this regard in terms of investment in knowledge production in accord with the underlying precepts of justice. Since, there are and cannot be any legitimate property rights in information-since it is not scarce, once known-optimal allocation of resources can obtain only in such a properly legal milieu.

In like manner, we define the optimal time pattern of exploration and subsequent homesteading of natural resources as precisely that amount that occurs under the libertarian legal code of property; e.g., ownership through mixture of labor with land.

Nor is this merely matter of definition. If that were all there were to it, homesteading (Kinsella's opposition to intellectual property ownership) would be on no worse a standing than its alternative. In the Kinsella case, the alternative legal regime is one of copyrights and patents. For us, in the present case, there are several. We shall find all of them seriously wanting in operationalism, pragmatics, workability, to say nothing of logical coherence.

One alternative is "claim." A claims the sun, the moon and the stars and everything on earth he beholds. And viola!, he owns them all. But he did nothing to demonstrate (Rothbard, 1997) his ownership over these items. There is simply no connection between A and them. A transformed nothing at all. This would be a pragmatic nightmare to boot, since anyone can make such a claim at any time. As well, one person could own literally everything if somehow his claim to this extent could be upheld, surely a recipe for disaster of the human race. But is it right that such a person could stake a claim to all the heavenly bodies, for example, without following through with any action to back it up? It is difficult to see why this would be the case.

Similarly, with regard to viewing. B *sees* the mountains, valleys and rivers from his perch on high and on this basis claims not these things in themselves, but only his continued view of them. Related shortcomings apply here. As the "viewer" does not alter in any way that which he sees, there can be no reconciliation between this supposed mode of ownership and homesteading. Similar pragmatic objections apply. It is much more difficult to establish who was the first to observe something than who was the first to physically alter it. Then, too, the range of ownership is almost as bad; give someone a good telescope and his ownership of vast tracts is almost as all encompassing as that which would be justified through claim theory.

Under the libertarian perspective in contrast, the person who has first sight of a part of nature does not transform it in any way. He merely looks at it. But ownership implies not only the right to continue to view property, but also to prevent others from doing so. It is hard to see how this can be done, as a practical matter, in this case. Then, too, this type of “property” is heir to all the difficulties unearthed by Kinsella in his argument against ownership of information. For views, too, just like knowledge, are not scarce. A’s view of the far away mountain or idyllic scene in no way detracts from B’s observation of the same thing. But property rights are only needed and only sensible, when there is a scarcity of the thing in question. Here, there patently is not.

Another difficulty with the view theory of ownership is that if A owns X, he can legally prevent others, B, C, D,... from using it. This is no problem, as it is easy to envision a scenario why only one person owns a car or a suit of clothes. However, if ownership implies the right to exclude others, non owners and this can hardly be denied, then if A truly owns the view of X, say, a mountain, then he cannot only prevent B, C, D.... from trespassing on it, he can also legally insist that they not even observe it, either.

This would be a pragmatic nightmare. How, after all, does the owner prevent non owners from merely looking at a mountain over which he has “viewing” ownership rights. Another difficulty: children. Now, of course one cannot own human beings (Block, 2003; Nozick, 1974; Kinsella, 1992, 1996, 1997). However, one certain can own the right to raise them. Ordinarily, under traditional libertarian homesteading theory, the people with this right are the parents, who have “mixed their labor”; the result was the creation of the baby.

But suppose that the doctor who delivers the infant is the first one to look at it. Certainly, in the typical case, he precedes the mother in this regard. According to the “view” theory of ownership, it would be the physician, not the parents, who would obtain first rights to raise the child. Surely this constitutes a *reductio ad absurdum* from which this theory will not and should not recover.

HOMESTEADING THEORY

With these introductory remarks, we are now ready to launch into an analysis of homesteading theory (Hoppe, 1993; Locke, 1948; Rothbard, 1973). Let it first be said that this is not rocket science. Or, better yet, it is not Euclidian geometry nor yet algebra. There are many gray areas, gradations, continuum problems in homesteading theory, *vis a vis* these other callings.

For example, for how long and how extensively, must be the farming before the process can be said to be complete and full property rights vested in the homesteader. Must he place 1, 2, 5, 10, 100, 1000, 10,000 apple trees, corn plants, wheat stalks per square mile for it to be intensive enough? Must he do this for 1, 3, 5, 10 years? More? Less? Does cattle raising count? If so, with a discount factor? How about hunting? Walking? How often do these things have to occur? There are no definitive pinpoint answers to any of these questions. In this area of endeavor, custom, typical practice, tradition, can and must all play a part.

But this does not mean we are completely at sea without a rudder. Like pornography, we know homesteading when we see it. You get to own what you use, for a reasonable amount of time and reasonably intensively. When it comes to terrain for which we cannot rely on past tradition, practice and experience, we extrapolate.

More time spent on homesteading is better than less, *ceteris paribus*, in terms of the strength of establishing a property claim. Arid areas need not be as intensively farmed as fertile ones and one can claim more of the former than the latter given an otherwise equal amount of homesteading. For example, east of the Mississippi, it is necessary to plant more intensively than in the dryer areas west of this river. On the moon, or in the Sahara, or tundra, one need not plant at all. But one gets to own only what one has used, in some manner, shape or fashion. Were it not for the fact that it was merely a government employee who planted a flag and trod around on the moon for a bit, this would have otherwise entitled him to own, oh, say, an acre of this worldlet. What about two or three acres? Well, alright. Half the moon? A quarter of it? Certainly not. Ditto with Mars. Personal visits and homesteading are by no means required. Certainly, were private individuals responsible for the rock analysis that occurred on the surface of the Red Planet they would have the right to return there whenever they wanted, to continue their operations or even expand them, provided only that others had not in the meantime homesteaded contiguous areas. An acre or two or three or even ten? Sure. A square mile? That is pushing matters, but maybe not by much, given that it is hard, at least with present technology, to aim to arrive at any part of one of these heavenly bodies.

AD COELUM

The *ad coelum* doctrine has perhaps played more havoc with property rights than perhaps any other. According to it, whoever owns land on the earth’s surface

achieves property rights over a pyramid or cone shaped section of territory, stretching down to the exact center of the sphere and upward into the sky without end.

Can this doctrine be reconciled with homesteading? It cannot. For no one who has mixed his labor with land on the earth's surface has done so with territory located 400 miles downward (or upward). Did this doctrine apply in a heavenward direction, it would spell the death knell for airplane travel and rocketry, for all air carriers would first have to obtain the permission of the owners of the cones or pyramids stretching up from their land into the sky before they could traverse them. But that is mere pragmatism, unworthy, perhaps, of our notice, but for the fact that property rights theory must broadly speaking contribute to the well being of mankind, for that is one of its purposes and a key criterion of its success.

Let us focus our attention to the downward direction. When someone owns a parcel of land, how far down does his domain extend? This is hard to say, exactly, but, as per usual, there are principles involved that can guide us.

The key is, no one can properly claim land below the surface that in any way interferes with (e.g., causes a cave in to) the surface owners' (enjoyment of his) land. If the terrain is rock solid, then the underlyer can move with his mining operations within only a few yards of the surface owner's holdings without causing a property rights violation. On the other hand if the earth is soft and liable to cave-ins, then it may be that the underlyer cannot approach any closer than many yards below the surface.

Also of relevance is how deep goes the claim of the surface owner. If he plants vegetables with roots of only a few inches, he can claim less in a downward direction than if he plants trees with roots that extend down hundreds of feet. If the bottom of the basement of his house is 10 feet deep and the soil is solid, perhaps, his area of right extends downward to 50 feet below this point. That is, the underlyer cannot extend his base of operation closer than 60 feet from the surface. On the other hand, given a basement 100 feet deep and the same type of terrain, the upper bound of the sub surface owner would be 150 feet. With softer soil, the barrier or fence between the two would be deeper.

A basic principle of homesteading is first in time, first in right. Suppose, then, that the first homesteader was not the surface owner, but rather the underlyer. The latter, we may suppose, is an oil driller, or was working a vein of coal or gold under the ground and his operations extended in an upward direction to 200 feet below the surface. Continuing to assume that a 50 feet gap is necessary to protect either the over or underlyer from damaging each others' position, this means that the former is now the Johnny come lately to the scene, or, if

you will, the "comer to the nuisance." Now, it is he the surface owner who has to forebear. He can only extend his sphere of interest in a downward direction to the tune of 150 feet, in our numerical example. If he is thinking of planting a tree with a tap-root 160 feet deep, he cannot do it. He will have to select a species which extends downward only 150 feet or less.

Suppose the following. First upon the scene is the overlyer, A. He homesteads only 10 feet down. Second comes the underlyer, B, a respecter of property rights, but someone who wishes to claim all he can, consistent with libertarian homesteading theory. B builds, say, a wine cellar, under A's property, which extends right up to the 60 feet mark below the surface, thus leaving a buffer of 50 feet. A, the surface owner now wishes to plant a tree, or put in a bomb shelter, or dig for water, way below the 60 feet mark established by B. A's argument in that "traditionally, ownership of the surface contains the privilege of doing precisely this sort of thing. Second, if owning land on the surface does not entail, also, these rights to dig for such traditional purposes, then its value will be severely truncated.

We have above articulated a concern for respecting custom and tradition. And, yet, in this case, such concern would appear to be incompatible with homesteading, which is the basis for this stipulation in the first place. So, when these two are incompatible with one another, which do we favor?

The answer is, homesteading. For tradition and custom are only first approximations, hints as to the proper intensivity or extensivity of farming, duration, etc. When they conflict with the very principle of homesteading, they must be jettisoned.

Suttee was a practice with a long tradition. Yet there are few who would be so rash as to defend it against the right not to be murdered. Ditto for scalping parties, head hunting, cannibalism, all with impeccable historical credentials. We look at traditions through the eyeglasses of libertarian principle, not the other way around.

This idea that the surface owner can drill or build or plant as far down as he wants, even if there is someone else who has already beat him to the punch, is no more and no less than our old friend the ad coelum doctrine. In principle, there is no limit in a downward direction to which the surface owner cannot drill for, say, water and without H₂O the value of his surface rights will be severely restricted. But this means, at least in principle, an end to homesteading sub surface rights. In effect, this would be the crowning of the evil, vicious and misbegotten ad coelum doctrine.

Sturgis v. Bridgeman is apposite here (Coase, 1960). These two were neighbors in an early noise pollution

lawsuit. First out of the batters box was the doctor who needed absolute quiet, for his stethoscope. He located himself in his own apartment, far away from his neighbor. Then, second, the machinist, in his domicile abutting that of the physician, placed his noisy machine right near the border between the two. The latter wafted noise into the doctor's home, but did not reach his examination room, which was far away, at the other end of his suite. Then, third, the man of medicine moved his office from far away from the machinist to right next to him, still within his own domain and sued the machinist for noise pollution.

Homesteading theory has a clear implication for this lawsuit. The machinist is in the right, the doctor in the wrong. The latter "came to the nuisance" (Wittman, 1980) created first by the former.

FORESTALLING

A word about forestalling, an integral element of this story and at least a partial reconciliation between homesteading and the ad coelum doctrine, which allows surface owners drilling rights beneath their holdings, even if someone else had first homesteaded this subterranean area.

What is forestalling? Consider the surface of the earth first, as this concept is easier to illustrate in that context. Suppose someone homesteads all the area around a plot of land, but not the (inner) plot of land itself. This pattern can either take the shape of a bagel or a nut (from nuts and bolts). This homesteader, in other words, precludes for forestalls, everyone else from settling in the area in the middle. He does not own this center region, he does not claim it, he does not himself homestead it, but effectively prevents anyone else from so doing (Block and Block, 1996; Tullock, 1996; Block, 1998b).

There are problems here. Just as nature abhors a vacuum, homesteading theory is repulsed by, land that is not (privately) owned. And here we have an exception to the ideal of homesteading every last square inch of territory and accomplished in a way that is seemingly compatible with the essence of the theory. Quell horror! A veritable contradiction.

The solution I favor is a rule prohibiting such forestalling or precluding. This could be done either by an outright ban, or, a requirement that those who engage in this pattern of homesteading leave a clear path through "their" holdings, so that others can have access to the terrain inside (or outside) of the bagel shaped area, from which they would otherwise be barred.

Superficially, this requirement that a path be left open for would be homesteaders of land otherwise precluded to them, sounds similar to the familiar (Locke, 1948) proviso

that "as much and as good" land be left over for all comers if homesteading is to be justified in the first place. In both cases, some people are being stopped from "hogging it all up" before others can get anything.

The difficulty with this Lockean proviso is that not all potential property will be privatized. People necessarily select the best so far unowned land available to them for homesteading purposes (Mises, 1998). Thus, homesteading would be stopped dead in its tracks right at the outset, for the very first homesteader would fail to leave "as much and as good" for others, by selecting the choicest parcel of land for himself (Block and Whitehead, 2005).

But the similarity between the Lockean proviso and the prohibition of forestalling is more apparent than real (Anderson and Hill, 1997; Benson, 1989, 1990; Cuzan, 1979; Fielding, 1978; Friedman, 1989; Hoppe, 1993, 2001, 2003; Long, 2004; Murphy, 2002, 2005; Rothbard, 1973, 1978, 1982; Sechrest, 1999; Sneed, 1977; Spooner, 1870; Strigham and Edward, 1998, 1999; Tannehills and Linda, 1984; Tinsley, 1998, 1999; Woolridge, 1970). The former, as we have seen, is a barrier to the process of converting all unowned territory into private property. The latter, in contrast, is a support for this goal. By legally prohibiting forestalling, we make it more likely that all territory will be privatized.

Prohibition of land precluding cannot be limited, merely, to the horizontal direction. It is imperative that it be applied, also, to the vertical and there to both the upward and downward directions.

Let us consider the former first. In a Simpsons episode, Mr. Burns erects a gigantic barrier in the sky and perches it several hundred yards above the town of Springfield. Suppose that he did this before the era of airplane travel and was thus the first to claim, through homesteading, this area above the heads of the townsfolk. Posit, also, that the people below could make no valid claim that they were the first to utilize the sun's rays, in such manner that Mr. Burns had no right to cut the sunlight off from them. Or, suppose that the gigantic umbrella like structure in the sky was not opaque and did not interfere with their enjoyment of the sunlight. Perhaps it was made of translucent mesh and thus allowed the sun and also the rain, to pierce it and thus flow down to the people on the ground as it always had (Block and Block, 1996). Still, this (vestige of an) umbrella could serve, if it were placed over the entire earth and not just Springfield, to bar any air travel, as well as rocket ships, etc.

Would such an "umbrella" encircling the entire earth, be compatible with libertarian homesteading? No, it would not. Why not? This is because it would violate the libertarian stricture against forestalling. There is a lot of

“stuff” up out past that umbrella (stratosphere, moon, Mars, etc.) and this device would prevent anyone else from ever getting to any of it and homesteading it.

Now consider forestalling in a downward direction. Envision an “umbrella” built not a few hundred yards up into the sky, but a mile down under the earth, below any man made well, or underground pipeline, or tunnel. Ok, maybe 10 miles under the surface. Here, we do not have to observe the niceties of protecting sunlight, rain and wind rights, for there are no such things. Imagine, then, an impermeable barrier, 10 miles below the earth’s surface, blocking us from ever exploring and bringing the benefits of private property rights to anything between it and the core of the planet. This would be similar to the case where the Morlocks occupied the netherworld, as in Wells (1895), preventing anyone else from colonizing anything lying below this barrier, from 10 miles below the surface of the earth to its core.

SLANT DRILLING

Is it permissible for Mr. A to drill for oil under the surface of the property owned by Mr. B, his next door neighbor, the owner of a contiguous plot of land? Yes, as long as A reaches this area under B before B himself does. How far down below B’s holdings may A enter? As far below as is necessary so that A does not interfere with B’s enjoyment of his own property. How far down is that? It depends upon the context. If B is used as a farm and the roots of the wheat plants go down only a few inches, then property line demarcation is very close to the surface. It is if corn plants that burrow down a few feet, then the line is lower. If there is a building on B’s land with a deep basement, lower still. Also, the type of terrain must be taken into account. Solid rock raises the barrier (since not as much depth is needed for safety) while mud or a high water table lowers it. Also, custom must be taken into account, but, not to such an extent that *ad coelum* starts to kick in and homesteading to recede. For example, this would hold true if the “custom” was that the surface owner had rights stretching miles down, since in the future new technology might allow him, B, to go down that far.

This being said the only argument against slant drilling is *ad coelum*. But, as we have seen, the case in favor of B owning all the territory under his surface holdings, down to the core of the earth, is intolerable. There being no other logical stopping place-100 miles down, 10 miles down, the crust of the earth-we conclude that the only barrier to slant drilling is if it somehow interferes with, or at the very least constitutes a clear and

present danger to, B’s surface holdings. If this is not so, then slant drilling is entirely compatible with the libertarian legal code.

Suppose it is customary for the owner of surface land B to plant a tree which, eventually, will have roots extending 100 feet downward and that A has already put in place something under B’s land (a pipe line, a tunnel) that is incompatible with that tree. The first approximation of an answer to this conflict is that it is “tough” on B. In placing the tree in such a manner, he is interfering (in future, when the tree matures) with the private property rights of A. “Custom” must give way to homesteading. However, there is one phenomenon on which B may possibly rely: A cannot forestall him. A cannot entirely cut off B’s right to dig below A’s property which, it will be remembered, lies beneath B’s holdings, at the surface. This may not be of much help to B’s tree, however, since roots tend to spread out all over the place, in unpredictable ways.

B will be in a better legal position with regard to a water pipe, which is at once narrower than tree roots and more conducive to aiming. A cannot entirely forestall B’s access to *terra firma* underlying A’s installation underlying B’s land at the surface. Given this, then A must leave a portal, or a gate, or a path, in a downward direction so that B (or anyone else for that matter) may explore and homestead terrain further down. It is precisely through this opening that B may sink his water pipe or other such edifice.

B has one other remedy at law, if A is only starting to build under his property. B may engage in a race to put in his own construction, say, dig for water below. In baseball, if there is a dead heat between the ball to the first baseman and the batter’s arrival there, the tie goes to the hitter. In like manner, if A and B arrive at an area under B’s surface property at exactly the same time, the tie, here, goes to B. We are almost completely, but not entirely free, as can be seen, of the otherwise pernicious *ad coelum* doctrine.

Take another case. A first builds a wine cellar stretching in a vertical direction 100-200 feet below B’s land. Any closer in an upward direction and A would risk caving in B’s surface holdings. B now desires to put in a bomb shelter below his own land. Thanks to the concept of forestalling A cannot prevent B from constructing this bomb shelter 300-400 feet below his own surface property. But B is unhappy with that option. He prefers his bomb shelter to be cited precisely where A’s wine cellar is now located, 100-200 feet below his own land (or, in a position which interferes with A’s wine cellar, which lies below B’s surface holdings). In this case, there is no question of there being a tie that can be awarded to B. A was there

first, by a country mile. B asserts his “God given right” to build a bomb shelter under his own land, precisely where he wants it to be. He maintains that this is the right of the surface owner, from custom, since time immemorial. Say what you will about this claim, it is part and parcel of ad coelum and cannot be reconciled with libertarian private property theory.

CONCLUSION

Property rights are the pre-eminent way in which we determine who has a right to do what, with which land, capital or other property. The usual answer is in terms of whoever has the relevant property rights. He and only he can act upon the territory under his control and prevent others from so doing.

In this study, we have attempted to sketch out how property rights, grounded on homesteading principles, can be applied to areas above and below the surface of the earth. We have rejected the ad coelum doctrine, except in the very limited sense that people cannot be allowed to forestall, or preclude, others from homesteading unowned territory in any dimension.

REFERENCES

- Anderson, T. and P.J. Hill, 1979. An American Experiment in Anarcho-Capitalism: The Not So Wild, Wild West. *J. Libertarian Studies*, 3: 9-29.
- Anderson, Terry, L. and Peter J. Hill, 1996. *The Privatization Process: A worldwide Perspective*. Lanham, Md.: Rowman and Littlefield Publishers.
- Barnett, R. and J. Hagel, 1977. *Assessing the Criminal*. Cambridge MA: Ballinger.
- Benson, B.L., 1989. Enforcement of Private Property Rights in Primitive Societies: Law Without Government. *J. Libertarian Studies*, IX: 1-26.
- Benson, B.L., 1990. *The Enterprise of Law: Justice Without the State*. San Francisco: Pacific Research Institute for Public Policy.
- Block, W. and G. Callahan, 2003. Is There a Right to Immigration? A Libertarian Perspective. *Human Rights Rev.*, 5: 46-71.
- Block, W. and M. Block, 1996. Roads, Bridges, Sunlight and Private Property Rights. *J. Des Econ. Et Des Etudes Humaines*, http://141.164.133.3/faculty/Block/Blockarticles/roads1_vol7.htm, VII: 351-362.
- Block, W. and R. Whitehead, 2005. Compromising the Uncompromisable: A Private Property Rights. Approach to Resolving the Abortion Controversy, *Appalachian Law Rev.*, 4: 1-45.
- Block, W., 1990. Earning Happiness Through Homesteading Unowned Land: A comment on Buying Misery with Federal Land by Richard Stroup. *J. Soc. Political Econ. Studies*, 15: 237-253.
- Block, W., 1998a. A Libertarian Case for Free Immigration. *J. Libertarian Studies: An Interdisciplinary Rev.*, http://www.mises.org/journals/jls/13_2/13_2_4.pdf, 13: 167-186.
- Block, W., 1998b. Roads, Bridges, Sunlight and Private Property: Reply to Gordon Tullock. *J. des Economistes et des Etudes Humaines*, Vol. 8, No. 2/3, June-September, http://141.164.133.3/faculty/Block/Blockarticles/roads2_vol8.htm, pp: 315-326.
- Block, W., 2003. Toward a Libertarian Theory of Inalienability: A Critique of Rothbard, Barnett, Gordon, Smith, Kinsella and Epstein. *J. Libertarian Studies*, http://www.mises.org/journals/jls/17_2/17_2_3.pdf, 17: 39-85.
- Block, W., 2004. Austrian Law and Economics: The Contributions of Adolf Reinach and Murray Rothbard. *Quart. J. Aust. Econ.*, 7: 69-85.
- Coase, R.H., 1960. The Problem of Social Cost. *J. Law and Econ.*, <http://www.sfu.ca/~allen/Coase/JLE1960.pdf>, 3: 1-44.
- Cuzan, A.G., 1979. Do We Ever Really Get Out of Anarchy?. *J. Libertarian Studies*, 3: 151-158.
- Fielding, K.T., 1978, The role of personal justice in anarcho-capitalism. *J. Libertarian Studies*, 2: 239-242.
- Friedman, D., 1989. *The Machinery of Freedom: Guide to a Radical Capitalism*. La Salle, IL: Open Court, 2nd Edn.
- Hanke, S.H., 1987. *Privatization and Development*. San Francisco: Institute for Contemporary Studies.
- Hoppe, H.H., 1998. The Case for Free Trade and Restricted Immigration. *J. Libertarian Studies*, 13: 221-233.
- Hoppe, H.H., 1993. *The Economics and Ethics of Private Property: Studies in Political Economy and Philosophy*. Boston: Kluwer.
- Hoppe, H.H., 2001. *Democracy, the God that Failed: The Economics and Politics of Monarchy, Democracy and Natural Order*. New Brunswick, N.J. Transaction Publishers.
- Hoppe, H.H., 2001. *Democracy-The God That Failed: The Economics and Politics of Monarchy, Democracy and Natural Order*. Rutgers University, N.J. *Essays on the Theory and History of Security Production*, Hoppe, Hans-Hermann, (Ed.). Auburn: Mises Institute.
- Kinsella, N.S., 2001. Against Intellectual Property. *J. Libertarian Studies*, http://www.mises.org/journals/jls/15_2/15_2_1.pdf, 15: 1-53.

- Kinsella, S., 1992. Estoppel: A New Justification for Individual Rights. *Reason Papers*, 17: 61.
- Kinsella, S., 1996. Punishment and Proportionality: The Estoppel Approach. 12:1 *J. Libertarian Studies* 51, Spring; http://www.mises.org/journals/jls/12_1/12_1_3.pdf.
- Kinsella, S., 1997. A Libertarian Theory of Punishment and Rights. *Loy. L.A. L. Rev.*, 30: 607-645.
- Kirzner, I.M., 1973. *Competition and Entrepreneurship*, Chicago: University of Chicago Press.
- Locke, J., 1948. *An Essay Concerning the True Origin, Extent and End of Civil Government*. In: E. Barker (Ed.), *Social Contract*, New York: Oxford University Press, pp: 17-18.
- Long, R., 2004. *Libertarian Anarchism: Responses to Ten Objections*. <http://www.lewrockwell.com/long/long11.html>.
- Mises, L., 1998. *Human Action*, Scholars' Edition. Auburn: Mises Institute. <http://www.mises.org/humanaction.asp>.
- Moore, S. and S. Butler, 1987. *Privatization*, Washington: Heritage Foundation.
- Murphy, R., 2005. *But Wouldn't Warlords Take Over?* <http://www.mises.org/story/1855>.
- Murphy, R.P., 2002. *Chaos Theory: Two Essays on Market Anarchy*. New York: RJ Communications LLC.
- Nozick, R., 1974. *Anarchy, State and Utopia*. New York: Basic Books.
- Pirie, M., 1986. *Privatization in Theory and Practice*. London: Adam Smith Institute.
- Poole, R., 1976. *Cutting Back City Hall*. New York: Reason Press.
- Reinach, 1913. *The Apriori Foundations of the Civil Law*. John F. Crosby, trans.
- Reinach, 1998. *On the Concept of Causality in the Criminal Code*, Criminal Law. Berit Brogaard, trans.
- Rothbard, M.N., 1973. *For a New Liberty*. Macmillan, New York.
- Rothbard, M.N., 1978. *For a New Liberty*. New York: Macmillan; <http://www.mises.org/rothbard/ethics/ethics.asp>.
- Rothbard, M.N., 1978. *Society Without a State*. J.R. Pennock and J.W. Chapman (Eds.). *Anarchism: Nomos XIX*. New York: New York University Press, pp: 191-207.
- Rothbard, M.N., 1982, *The Ethics of Liberty*. Humanities Press, Atlantic Highlands, N.J.
- Rothbard, M.N., 1982. *Law, Property Rights and Air Pollution*. Cato J. Spring; reprinted in *Economics and the Environment: A Reconciliation*, Walter Block, Ed., Vancouver: The Fraser Institute, <http://www.mises.org/rothbard/lawproperty.pdf>, 2: 233-279.
- Rothbard, M.N., 1993. *Man, Economy and State*. Auburn AL: Ludwig von Mises Institute.
- Rothbard, M.N., 1997. *Toward a Reconstruction of Utility and Welfare Economics*. Reprinted in the *Logic of Action*. Lyme, NH: Edward Elgar, I: 225-227.
- Rothbard, M.N., 1998. *The Ethics of Liberty*. New York: New York University Press.
- Savas, E.S., 1987. *Privatization*. Chatham, N.J.: Chatham House Publishers.
- Savas, E.S., 2000. *Privatization and Public-Private Partnerships*. Chatham, N.J.: Chatham House Publishers.
- Sechrest, L.J., 1999. *Rand, anarchy and taxes*. *J. Ayn Rand Studies* 1, 1: 87-105.
- Sneed, J.D., 1977. *Order without law: where will anarchists keep the madmen?* *J. Libertarian Studies*, 1: 117-124.
- Spooner, L., 1870. 1966. *No Treason*, Larkspur, Colorado: Ralph Myles. <http://www.lysanderspooner.org/notreason.htm>.
- Stringham, E., 1998-1999. *Justice Without Government*. *Journal of Libertarian Studies*, 14: 53-77.
- Stroup, R., 1988. *Buying misery with federal land*. *Public Choice*, 57: 69-77.
- Tannehill, M. and Linda, 1984. *The Market for Liberty*. New York: Laissez Faire Books.
- Tinsley, P., 1998-1999. *With Liberty and Justice for All: A Case for Private Police*. *J. Libertarian Studies*, 14: 95-100.
- Tullock, G., 1996. *Comment on 'Roads, Bridges, Sunlight and Private Property'*, by Walter Block and Matthew Block. *J. des Economistes et des Etudes Humaines*, 7: 589-592.
- Wells, H.G., 1895. *The Time Machine*. <http://www.marxists.org/reference/archive/hgwells/works/1890s/time/>.
- White, L.H., 1978. *Privatization of municipally-provided services*. *J. Libertarian Studies*, 2: 187-197.
- Wittman, D., 1980. *1st Come, 1st Served-An Economic Analysis of Coming to the Nuisance*. *J. Legal Studies*, 9: 557-568.
- Woolridge, W.C., 1970. *Uncle Sam the Monopoly Man*. New Rochelle, N.Y.: Arlington House.