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ROADS, BRIDGES, SUNLIGHT AND PRIVATE PROPERTY RIGHTS

by

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## Roads, Bridges, Sunlight, and Private Property Rights

### I. Introduction

Suppose there to be a system of private roads and highways<sup>2</sup>. Suppose, further, that a single firm were to own a highway stretching from Boston to Los Angeles. One objection to such a state of affairs is that it would effectively cut off the northern and southern parts of the United States from one another, something that even the Civil War was unable to accomplish<sup>3</sup>.

Upon first glance, this is a silly objection. Certainly, any firm rich and powerful enough to have obtained ownership rights to a facility of such gigantic proportions<sup>4</sup>, would never act in so arbitrary and capricious a manner. How could it make any profits whatsoever, much less maximize them, if it refused to allow people to use their road to travel in any direction they wished? If it didn't allow, nay, encourage, other road companies to provide north south transit corridors bisecting its own holdings<sup>5</sup>, it would vastly reduce the value of its own property. A road with no entries and no exits except for terminal points in Boston and L.A. would have a far lower capital value than an ordinary limited access highway. This objection takes a good thing -- limited access, high speed corridors -- and escalates it beyond comprehension. Presumably, this firm didn't come to occupy so exalted an economic position by acting in this way, and will soon return to the economic obscurity from which it once sprang if it did so now. Surely, any president who organized the business in this way would be quickly shown the door by the board of directors. And any board of directors that failed to uphold such fiduciary responsibility would soon feel the wrath of the stockholders<sup>6</sup>.

But on further reflection, it can be charitably interpreted as something far more profound. For the critic can readily admit to the unlikelihood of such a scenario eventuating<sup>7</sup>. Instead, he can posit a situation where it would occur, given a specific concatenation of events. For example accept for moment road privatization<sup>8</sup>, and assume that an heir has come into possession of such a radically limited access highway. Suppose further that the firm is owned in the form of a single proprietorship, and that this beneficiary cares not one whit for preserving capital values, let alone expanding them. Is this, then, a *reductio absurdum* of road privatization?

Again, there are problems. How was it possible, in the first place, to amass the wherewithal necessary to put together a highway with no entrances or exits for 3,000 plus miles?<sup>9</sup> It is not within the realm of reality, even one so heavily contrived. After all, an objection, even a theoretical one, must have some connection to a real state of affairs if it is to be relevant to it. Alternatively, if the road was a normal one when owned by the benefactor, it would be extremely difficult for the beneficiary to unilaterally cut off transversing roads. (Presumably, these are overpasses, otherwise the limited access nature of the highway would be obviated.) There would likely be long term contracts, even permanent ones, which stipulate that the owner of the overpass has a right to continue to maintain his amenity.

Nevertheless, we pass over these criticisms to Tullock's<sup>10</sup> objection, if only for the sake of argument. That is, we take it as a given that there is a road owner of a zero access highway stretching across the entire country, who absolutely refuses to contractually arrange for exit

and entry points, or for overpasses bisecting his property. Moreover, we assume that either there are no taxes which would force him into bankruptcy, or if there are he has sufficient funds to enable him to stay in business for the foreseeable future. It is under these more challenging conditions that we still deny the claim that private enterprise highways can drive a wedge through an entire country.

## II. Ad coelum

How, then, can we maintain the viability of private property rights in this context? Simple. All that need be done is apply the Lockean (1955 1960) and Rothbardian (1973, 1982) homesteading theory of property rights. On this basis, another road entrepreneur can build an overpass above this limited access highway, or a tunnel, burrowing underneath it. This will nip in the bud any incipient fear that private property rights in roads is so impractical, so untenable, that it can rip the nation into two parts.

Upon mention of this "modest proposal," a criticism will immediately leap to mind. What about the private property rights of the road owner? According to the critics of homesteading theory, any attempt to breach his "airspace" or "underground space" is a violation of property rights. Therefore, we can have only one of two things: either full respect for private property rights or the existence of privately owned highways and national inviolability. That is, if the road owner's private property rights are fully protected, no one will be able to build and under or over pass, since this would interfere with his use of his holdings.

This criticism is predicated on interpreting Locke, Rothbard, and the libertarians as favoring the ad coelum doctrine. In this view, if a

person owns an acre of land on the surface of the earth, he possess a narrowing cone extending down to the very center of the planet, and a widening cone extending upward into the heavens.

But this is a travesty of property rights, and no advocate of this system defends it. On the contrary, it is offered by the enemies of private property rights, as an example of how such law would operate, were we ever so foolish as to put it in place. The Friedmans, father and son, have long dismissed homesteading private property rights on this basis as a libertarian fetish, or mantra.

Says David Friedman (1992, p. 58):

"A court in settling disputes involving property, or a legislature in writing a law code to be applied to such disputes, must decide just which of the rights associated with land are included in the bundle we call 'ownership.' Does the owner have the right to prohibit airplanes from crossing his land a mile up? How about a hundred feet? How about people extracting oil from a mile under the land? What rights does he have against neighbors whose use of their land interfere with his use of his? ... It seems simple to say that we should have private property in land, but ownership of land is not a simple thing.... There is no general legal rule that will always assign it to the right (person)."

Says Milton Friedman (1991, pp. 18-20):

"How many times have you heard someone say that the answer to a problem is that you simply have to make it private property? But is private property such an obvious notion? Does it come out of the soul?

"I have a house. It belongs to me. You fly an airplane over my house, 20,000 feet up. Are you violating my private property? You fly over at 50 feet. You might give a different answer.... Are you violating my private property? Those are questions to which you can't get answers by introspection.... They are practical questions that require answers based on experience. Before there were airplanes, nobody thought of the problem of trespass through air. So simply saying 'private property' is a mantra, not an answer. Simply saying 'use the market' is not an answer."

But this is the classical straw man ploy: assign an argument to your opponent, refute it, and then declare victory. Yes, if the ad coelum doctrine were the position of those who advocate property rights and road privatization, then their view would be untenable. For how could anyone

justify building a bridge over someone else's highway, against his will, on these grounds? Not only would the firm own the airspace over the highway, it would own it all the way up to the heavens. The enterprise would have the right to forbid airplanes from flying overhead. Surely, it could legally prevent an over (or under) pass from being built.

As it happens, however, this is not at all the perspective of the libertarian advocate of private property rights. Instead, he takes a position based on the homesteading principle. In this view, one starts off with ownership of one's own person. Then, when one is the first to "mix one's labor" with hitherto unowned virgin territory, one can legitimately claim ownership rights over the latter. A person can own land, but not an extended cone from the heavens to the core of the earth -- because by stipulation, he has only mixed his labor with property on the surface of the earth.

How far up, then, do the surface owner's rights extend? Where is the boundary between his domain and that of an airplane or overpass builder? This cannot be pinpointed precisely. It is impossible to defend any arbitrary answer, such as "100 feet up into the air." The obvious retort to that, as the Friedmans never tire of reminding us, is, "Why not 99 or 101 feet?" Instead, the Lockean homesteader offers a principle, and asks in cases of dispute that the courts determine the precise height in any given case. But there is a principle under which such determinations may be made: property boundaries are to be placed where homesteading, and local custom, and common enjoyment, and the context, indicate. For example, how low can the plane fly? If it is over wheat fields, very very low indeed (five feet? ten feet?), since the crops cannot be damaged by

such activity, and the only admixture of labor to the land was in the form of such plantings.

On the other hand, if the landowner put in a three story house, he also owns a "penumbra" of air above it, enough so as to enjoy the ordinary amenities of home ownership. This might be defined both in terms of height and number of flights of airplanes per day. The answer to the puzzle in this case would be in the thousands of feet<sup>12</sup>.

A crucial element for the homesteading philosophy is chronological order<sup>13</sup>. If the airport was already in operation when the farmer homesteaded the ground, then the latter cannot do anything which would interfere with the use which was prior in time. Here, we assume that the airport claimed only the physical rights to the land on which the runways are located, but also the surrounding egress routes. That is, such a farmer would be forever precluded from erecting a large building in the flight path of the airplanes, without the permission of the airport owner.

On the other hand, if the settler were there first, and constructed a skyscraper, then the airline would not only have to tailor its flight paths to accord with the existing buildings, but would also not be allowed to create a level of noise incompatible with the ordinary quiet enjoyment of such real estate.

Well, how high must the overpass be so as to not interfere with the road owners amenities? According to homesteading theory, it can be as low as the builder desires, provided only that it does not interfere with the rights homesteaded by the highway company, namely, the ability to provide its clients, the motorists, with a traffic lane. Since the tallest of the trucks that use the highway are no more than 30 feet high, as at least a

first approximation we may say that the bottom of the overpass can be as low as, say, 35 feet off the ground.

### 3. The umbrella

We have thus far answered the objection of Tullock. The main highway bisecting the country cannot be used to cut off one section from the other. Any tendency to do that would be met by other road firms who would erect overpasses, or tunnels, allowing north south traffic.

But we cannot conclude at this point since there are many other criticisms to our position. Here is a simple one. Not only do trucks use the highway, but sometimes, rarely it is true but sometimes, the highways are used to transport far larger objects, such as oil drilling rigs, houses, barns, ferris wheels, etc. Often they are of course broken down into smaller pieces. This facilitates conveyancing, but only at a price. However, at other times these are carried from one point to another as they are, in their entirety. Then, the capacity of the highway to service them requires a height of, say, 100 feet or more.

The response to this is relatively easy. Either the bottom of the overpass must be 110 feet or so from the ground, or it must be in the form of a drawbridge which can accommodate such traffic, however rare. For the highway owner may be said to have homesteaded such a right. An overpass which did not allow for this would thus limit his control over his property.

A more complex objection is the following: If it is alright for a bridge to be built over a highway, against the objections of the road owner, why is it not legitimate for a person to create a very large umbrella over an entire city, blocking rain, snow, sunlight, and a view of



the sky. For this is exactly what is being done to the highway owner, only on a vastly smaller scale.

With this objection, the position of the private road advocate is seemingly rendered precarious. For he must now either renounce highway privatization, or embrace a situation where living in cities<sup>14</sup> -- any city -- would become well nigh untenable. Are there any replies open to him? Fortunately for his position, there are.

First, he could put forth the de minimis argument: that blocking out the sun and rain for a small patch of highway is significantly and thus relevantly different from doing this for an entire city. He could maintain that the pain and suffering undergone by a motorist travelling from Boston to L.A., forced to travel under several scores of overpasses during the 3,000 mile trip, would be as nothing compared to rendering an entire city all but uninhabitable. He could insist, furthermore, that there is more than a scale difference involved. Or, alternatively, that the sheer divergence in scope renders an otherwise similar situation dissimilar.

But for all this, however, there is still the nagging doubt that the analogy is a good one. That if someone may erect a bridge over a patch of highway, he would, on this principle, be justified in building an umbrella over an entire city.

This charge is further buttressed by the claim that under free enterprise views can be owned. If so, the would-be builder of the bridge cannot be allowed to engage in this activity for an entirely separate reason: not only because he is infringing on the property right of the "monopoly" road owner, but because he is cutting off his view.

Based upon a superficial analysis, there is some coherence in this position. After all, if views cannot be owned, much of the property value of "view properties" will be lost. For example, if the owner of the ocean<sup>15</sup> can erect a large fence preventing shore line property owners from looking out upon it, their property will be worth far less than it is now under present institutional arrangements. As against that, it is not so much that this system will imply a loss of value as much as a transfer. For if the ocean owner can threaten to build a fence, he can also charge for not erecting it as well<sup>16</sup>. In this case the homeowner's loss ought to be offset by the ocean owner's gain.

But a stronger defence for the impossibility of view ownership is that it would over determine property rights. A well functioning system would not allow for any intrinsic conflicts. That is to say, property rights must be specified in such a way as to prevent two different people from each owning the same right. But this is precisely the flaw in the concept of view ownership. If A owns a view, he should be able to alter it in any way that suits him, and prevent anyone from changing it without his permission; this, after all, is the essence of ownership. But if this view includes B's house, A may dictate the color, shape, size, etc., of this dwelling. That, however, would play havoc with the idea of B owning his own abode. Not only could A prevent B from creating this building, he could also preclude him from tearing it down, as that, too, would change his view.

Even if views cannot be owned by the very nature of things, this still rescues private ownership only partially. This doctrine can now deflect the charge about the bridge obstructing the view, but is still

vulnerable to the one about it interfering with the sunlight, rain, etc., and other accouterments of property ownership.

One possible defense against the Tullock position is the claim that sunlight, rain, wind, etc., cannot be owned. If so, there is one less objection to the erection of the overpass. Is it possible to maintain that even these things cannot be owned? No. One practical implication of this admission would be that no farming could take place; at least not if a malevolent person wished to erect a gigantic umbrella above the fields, cutting off the necessary wind, rain and sunlight. But we need not resort to mere pragmatism -- which is unworthy of us -- to make our case. Homesteading of these weather amenities is very much in keeping with the Lockean homesteading tradition. For if the farmer "mixes his labor with the land," he also does so with regard to the sunlight, rain, etc. All are necessary to bring in the crops.

Aha! says the critic. This may be all and well for farms, but cities are an entirely different matter. Without doubt there are some metropolitan areas which began as farming communities. And in these cases, the homesteading by the farmers of wind, rain, sunlight, etc., could be passed over to the downtown landlords when they purchased the agricultural land, so endowed. Here there is no problem: the umbrella cannot be installed because the owners of city land own the rights to weather. They did not homestead these amenities on their own, but they purchased them from the farmers who did "mix their labor" with them.

However, there are some cities which did not begin their life in such a manner. Rather than being converted from cleared and planted acreage, they started as trading depots, manufacturing and trade centers, etc.

Here, there can be no claim of Lockean homesteading for rain, sunlight etc. City life is able to function quite well in the dark<sup>17</sup>. Can the "umbrella monster" objection hold sway at least in this case?

One way to obviate it would be to conjure up a case where this threat was anticipated. Suppose you owned some (non-ex agricultural) city property, and wanted to benefit<sup>18</sup> from the sunlight and rain. How could you preclude the construction of the "umbrella" which would block out the sun and rain for yourself, and cooperatively, with and for your surrounding neighbors? One way to do this would be to erect a very large tower, or even a stick, so high that it would render practically impossible the placing of a tarpaulin over the city<sup>19</sup>. What steps might be taken by your opponent in these very hypothetical circumstances? Well, he could<sup>20</sup> build his umbrella with a hole in it to accommodate your stick. It would be a strange looking umbrella, but it might well still function so as to achieve its task: blocking out the sunlight and rain, and thus supporting Tullock's objection to building bridges over private highways without their owner's permission.

Suppose that there were not one but several (dozens?) of large poles erected in the city, with the sole purpose of obviating the tarp monster. This would not entirely succeed, since even with an umbrella which resembled a swiss cheese, enough harm might still be done to the inhabitants of the city to render Tullock's objection a powerful one.

But the defense is not without one at least one more reply. Instead of stationary sticks, it could construct them so as to rotate at the top. If so, and again on the assumption that equal technology mandates equal heights for the stick(s) and the tarp, this would not entirely reduce the

offense to a rubble. It would all depend on how big the holes were in the swiss cheese relative to its total area, and whether such a "swiss" cheese could still be supported, and how much damage to the inhabitants below it would be capable of rendering.

There is at least enough uncertainty in such a scenario to render the road privatization argument immune from the objection that building a bridge over someone else's highway would not create the antimony of unlivable cities. That is to say, the bottom line on the stick-umbrella mental experiment is not an overwhelming win for the Tullock side of the debate. It might just be that given the natural advantages of twirling sticks over the tarp, one could build the bridge over the highway without setting up a principle of private property rights that would unduly disaccommodate the city dweller.

Nevertheless, just for argument's sake, and to make the case for road privatization as difficult as possible<sup>21</sup>, we are going to concede to the offense the "win" in this competition. That is, we posit the notion that if someone may with impunity build a bridge over the private road owner's property, there is no reason he cannot erect a monster umbrella over a city, blocking out its sunlight and rain. We further suppose that this would not only be of great harm, but would be intolerable. On the basis of our discussion of poles, tarps, swiss cheese, etc., we conclude that it is a violation of private property rights to build the tarp over the city. If so, we must perforce also concede Gordon Tullock's point that as far a building a bridge is concerned, a private roadway stretching from Boston to LA would indeed cut the country into two parts, and each part off from the other. All this follows from our stipulation.

But only if we are discussing an ordinary bridge. Happily, for the case for road privatization -- insofar as it depends upon connecting the country by leaping over the private road -- it is possible to specify a bridge in such a manner so as to overcome this objection.

Suppose the bridge were not opaque, but built of glass. This would allow the sun to come shining through. There would of course still be a problem with the rain. Suppose, further, then, that the bridge were not built of solid material, but rather of mesh, or grid; as long as the holes were not too big, a roadway constructed in this manner could both support vehicular traffic and also allow the rain to fall on the highway below pretty much as it otherwise would have. Further, the whole structure could be made in the form of a drawbridge, in case the initial road owner wanted to transport an over size (over height) parcel.

What, then, can we conclude from this discussion? The resolution is that Tullock's support of road socialism must fail. It is without merit, first and foremost due to the possibility of bridging over, or tunneling under, the "hostile" road owner. Secondly, it can fail if we conclude, on the basis of private property rights considerations, that no one could build the umbrella over the city, due to the practical power of defensive poles. Alternatively, Tullock's view may be disregarded even if the tarp does block out the sun and the rain, provided that this is deemed as desirable, e.g., is an external economy, not a diseconomy. Fourth, and finally, we need not acquiesce in road socialism even if the offense is given the nod over the defense on the tarp question, and the tarp is interpreted as a negative diseconomy, provided that the overpass is a draw bridge, built of glass mesh.

But the Tullock side of this debate is not without one further possible objection: the hostile road owner, like the city folk, can build a series of sticks both upward and downward, in an attempt to forestall the erection of and over (under) pass. But here, unlike in the city case, the clear winner is the "offense." That is, the road owner (the "defender" will have to place sticks throughout the 3,000 mile extent of his holdings, every ten feet or so, otherwise a transversing tunnel or bridge can be built. Even if we grant him a two year head start -- something he is by no means necessarily entitled to -- his is a tremendously expensive and daunting task. In contrast, all the "offense" need do is succeed once every dozen miles or so, the average distance between access points on modern limited access highways.

Further, increasing technology necessarily works against the "defender." Assume that every year innovations make it possible to extend the length of sticks, or bridges and tunnels, by, say, 10 feet. This would mean that the "monopolist" road owner would have to go through the process every year; that is, beat out its opposition over a 3,000 mile length, when all it has to do is to succeed in a few hundred discrete points. By contrast, the Nazi defenders had an easy task trying to anticipate where the Allies would land.

Let us now conclude. Notice how far the advocates of road socialism have to go in order to even mount an interesting attack on highway privatization. At a time when tens of thousands of people are being killed<sup>22</sup> on the byways of the nation, instead of calling for privatization, Tullock is instead placing philosophical roadblocks in its path. He does so only by inventing not only a contrary to factual

conditional scenario, but by being granted, only for the sake of argument, the reasonableness of supposing that a road owner would not positively welcome access roads, and overpasses.

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#### Footnotes

1. The genesis of this paper is as follows: it arose out of Gordon Tullock's verbal attempt to refute a contention of the senior author of this paper -- that private roads and highways are a viable institutional arrangement. This point was argued forcibly by Gordon Tullock in an informal (hallway) discussion at the meeting of the Mont Pelerin Society in Vancouver, Canada, in 1992. Tullock's objection to road privatization was made in the presence of the son of the senior author, Matthew Block, at that time aged 14. A series of long and protracted discussions on this topic between the author and his son then occurred over the next 12-18 months. The paper was written by the senior author, but incorporated many of the ideas of, and could not have been done without the participation of, the junior.

2. For a defense, elucidation, explication of this contention, both on logical and historical grounds, see Block (1979, 1980, 1983a, 1983b), Wollstein (19xx), Tannehill, Morris and Linda (19xx), Rothbard (1973), and Woolridge (1970). This literature contends with dozens of objections to the system, but not the one discussed in the present paper.

3. Even had the South prevailed in battle, there is no reason to believe that commercial relationships, akin to those that now take place between Canada or Mexico and the U.S., would not presently occur between the two halves of the country.

4. For the monopoly objection to private roads, see, in addition to the literature mentioned above, Armentano (1972, 1982), Rothbard (1962), Block (1977, 1994), Armstrong (1982).

5. Or undertake this task on its own account.
6. That is, on the assumption that people like Michael Milken were allowed to orchestrate "unfriendly" takeovers of recalcitrant management.
7. And this, for two reasons. First, it is exceedingly politically naive to think that an advanced industrial country such as the U.S. would ever move so close to a radically free society for privatization to occur to this extent. The public choice and "iron triangle" literature gives us good and sufficient reason for this supposition. Secondly, and less importantly, it is unlikely that a firm which found itself in this position would act in this manner, for reasons given in the text.
8. If only, ultimately, to show the flaws in such a system, at least in the view of the advocates of road socialism.
9. Strictly speaking, Tullock's objection had to do with traffic arteries crossing over this Boston - L.A. highway, not with access. But as long as there are entry and exit points every few miles, the worst this "highway monopolist" can do is make people go out of there way for a few minutes. He certainly cannot render one half of the country asunder from the other.
10. In terms of Fletcher (1985), Tullock is attempting to show that the concept of private road ownership amounts to an "antimony."
11. He is not going to be earning much money on his holdings. Even low real estate taxes would quickly bankrupt him, thus depriving us of an opportunity to wrestle fully with the objection.
12. In the many, many thousands of feet far away from airports, because it is likely that he took possession of his abode before there were any or many low flights in his neighborhood. However, if he lives near an airport, which homesteaded these rights before he or the original home owner did, then the airplane owners have the right to continue to take off and land, even if it means interfering with his quiet enjoyment of his home.
13. This is in sharp contrast to the Coasian Law and Economics tradition of the University of Chicago school of thought. There, property rights disputes are not settled by resort to prior use and homesteading. On the contrary, determinations are made in a manner contrived so as to supposedly maximize wealth. In the real world of positive and extensive transactions costs, the court in effect is asked to weigh the value of the right (noise, egress, whatever) to the farmer and the airport owner. For a critique of this system as a socialistic usurpation of property rights, see Block (1977), that Belgian girl (19xx), Cordato (1992), Gordon (1993), Hoppe (1993), North (1992).

14. Were the technology sufficient, this objection could be expanded to include the whole world. Why be content with placing a big umbrella above a single city, if one had the option of placing the entire globe in a gigantic cloth envelope, which would in like manner keep snow, rain and sun off of the surface, and, for good measure, interfere with the evaporation process?

15. If we are contemplating full private ownership of roads and highways, there is no reason to be at all behind hand when it comes to bodies of water such as oceans, lakes or rivers. See Block (1992) for a defence of this proposition.

16. For the case in behalf of legalizing such blackmail, see Block (1986); Block and Gordon (1985).

17. And of course there are those critics who claim it can function better in this manner.

18. Outside of the "public goods" literature (for a critique, see Block, 1989, Hummel, 1990, Rothbard, 1977), where economists seem very certain that some phenomena are unmitigated "goods" (e.g., national defense) and others unmitigated "bads" (e.g., species extinction), common sense and elementary subjectivism (Mises, 1966; Buchanan, 1969; Buchanan and Thirlby, 1981) tells us that what is pleasurable for one person is a disutility to another. "One man's meat is another man's poison." Or to give a more modern example, perfume undoubtedly creates external economies for some, but others are allergic to it and thus for them it is a diseconomy. There can be no doubt that what some fear and loathe as the "umbrella monster" would be positively welcomed by others as a great boon. After all, one of the benefits of the modern shopping mall is the ability to shut out the weather, whatever it is on any given day.

19. The same analysis, but in the other direction, applies to the tunnel. In the one case the stick would be erected in an upward direction. In the other the stick would aim downward. I owe this point to Matthew Block.

20. We ignore the cases where either you or he could build a better higher stick. We assume that technology is equal between the two combatants in this strange contest. If anything, the (slight) natural advantage is against the tarp monster. He has to build not one but four sticks, so as to hang his gigantic cloth between them; or, if he creates an umbrella which by definition has only one pole, he has to build it more strongly than the merely

defensive stick. For he would have to ensure it was strong enough to carry acres of cloth, a task not required by the defender.

21. Winning debates over the bodies of straw men is an unedifying exercise.

22. For a view that this is not due to alcoholism, or vehicle speed, or any of the other dozens of phenomena apologetics for road socialism put forth as explanatory variables, but rather to lack of privatization, see Block (1979, 1980, 1983a, 1983b), Wollstein (19xx), Tannehill, Morris and Linda (19xx), Rothbard (1973), and Woolridge (1970).