Critique of *Mathematically Perfected Economy*

by Victor Aguilar

Abstract

I identify and evaluate the four premises underlying Mike Montagne's Mathematically Perfected Economy™:

1) People trade things that are of equal value. If they trade things that are not equal in value, then one of them is being cheated.

2) Borrowers are trading more money in the future for less money now. It follows from premise #1 that they are being cheated.

3) Any monetary system subject to interest ultimately terminates itself under insoluble debt. It follows from premise #2 that, because the charging of interest is not currently prohibited, the world economy is destined to collapse.

4) There is class conflict between laborers and usurers as they battle over the unearned gain (surplus value) that is the proletariats' due. By an argument similar to dialectical materialism, as the world economy collapses (see premise #3), the implementation of Mathematically Perfected Economy™ is inevitable.

Mr. Montagne denies that he is a socialist though I view his theory as being akin to Marxism and find fault with all four of his premises.

I have been asked to review Mike Montagne's website (he is unpublished), PEOPLE for Mathematically Perfected Economy™. Having famously stated that "critiques and rebuttals are how science advances," I did not feel that it was appropriate to just ignore Montagne. Anyway, I was asked, and I try to respond to my reader's questions whenever I can.

From what I could find on the internet, the only people to previously engage Montagne in debate were the Austrians, who pounced on the word "mathematical" in the title of his theory and denounced him as a mathematician, which they despise. I can commiserate – the "math *cannot* predict human action" line has been directed at Axiomatic Economics as well.

Montagne quotes a Ron Paul supporter:

> *One thing I find as the inevitable pitfall to MPE is that math* cannot *predict human action… [Montagne's] assumption that there exists a perfect mathematical model for running an economic system containing inherently flawed organisms, presumes the feasibility of a symmetrical model for economic development that contradicts the asymmetrical reality of human nature.*

And Montagne is not cherry-picking these quotes either. This is typical of what I found on the Mises Institute Forum when I plugged "Montagne" into their search engine. "What one would expect from mathematical 'economists,'" writes Jon Irenicus, a well-known Misesian who does not see any difference between Montagne, Debreu or this author – apparently, once an Austrian has seen one mathematician, he has seen them all.

Clearly, Montagne met with little effective resistance from the Austrians. Frankly, I saw no evidence that they had actually read Montagne's website. If they had, they would have found that there is no math there, unless one counts some graphs purporting to show a "probability and timeline for world-wide economic collapse as a consequence of interest." Of course, all mathematics is axiomatic, so our task is to determine whether Montagne's premises are sound, not to just blithely accept his premises and then confine our investigation into whether his graph does indeed go to zero, which would indicate an economic collapse.

Theone, of the Market Ticker Forum, who is not known for mincing his words, also believes that we must look at the assumptions that people make.

> *With [Montagne's] assumptions you can make the numbers do whatever the hell you want them to do and monkeys "might" fly outta my ass. As far as I can tell there is absolutely* ***nothing*** *in those equations that prognosticate "systemic*

> *failure." [Montagne] is simply pulling his comment about systemic failure right out of his ass at the point at which the maximum amount of money has been "created" from a finite reserve amount.*

Montagne has sent me an e-mail claiming that I do not know what a proof or a disproof is and demanding that I accept his assumptions and confirm or deny that they prognosticate systemic failure. But, since Theone has already demonstrated that Montagne's assumptions are insufficient, what remains to be shown is whether they are sound and thus can be redeemed by additional assumptions or unsound and thus irredeemable. My task, therefore, is to determine whether Montagne's premises are acceptable, not to inquire what they prove alone or what they might prove if additional and more restrictive assumptions were made.

But before we consider Montagne's premises, I want to point out that drawing a timeline to world-wide economic collapse and calling oneself "mathematically perfected" is very similar to Marx predicting the inevitable collapse of capitalism and calling himself "scientific."

Joshua Muravchik (2004, p. 60) has written about the "spectacular inversion" of what is meant by the term "scientific socialism:"

> *What is science but the practice of experimentation, of hypothesis and test? Owen and Fourier and their [utopian] followers were the real "scientific socialists." They hit upon the idea of socialism, and they tested it by attempting to form socialist communities. In all, there were scores of these tests in America and England – and all of them failed, utterly and disastrously.*
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> *Then Marx came along and said never mind these experiments at bringing about socialism by human devices, it will be brought about by the impersonal force of history. In other words, under the banner of "science," Marx shifted the basis for socialism from human ingenuity to sheer prophesy.*

So, let us not allow talk of mathematical perfection to beguile us into a study of sheer prophesy, but let us consider the axioms on which these prophesies are grounded. I ask no less of my own critics. That is why my three axioms are printed at the top of the homepage of my website and I have a non-mathematical explanation of the axioms. It certainly wouldn't do to have people saying, "if he's claiming axioms, then he ought to have listed them," so I made sure that my axioms were clearly posted when I started my website in 2005.

Montagne's theory is based on four premises:

1) **People trade things that are of equal value. If they trade things that are not equal in value, then one of them is being cheated.** Montagne writes:

> *Free, unimpeded barter allowed people to produce to natural capacities, and to obtain for our own production whatever we deemed to be equal, undiminished measures of the production of others… Because no one takes from the trade anything but the equal of what they contribute to it, each party receives the full, self-determined equivalent of their contribution to the overall pool of their wealth.*

2) **Borrowers are trading more money in the future for less money now. It follows from premise #1 that they are being cheated.** Montagne writes:

> *[If] we were confronted by a small man and 5 body guards… and the small man shouted down to us his law that "he" had taken control of the [market] grounds, all consummated trades required each party to give up 3 items for each 10… This would be the end of our trade without cost, on the ground, at the value, and for the reward of our common choosing. But usury is a greater abomination, because while it may not so much require armies as deception, disinformation, ignorance, fear and division, it inherently and inevitably takes more than any knowledgeable public would ever assent to, and by necessity must erase the very possibility of representation.*

3) **Any monetary system subject to interest ultimately terminates itself under insoluble debt. It follows from premise #2 that, because the charging of interest is not currently prohibited, the world economy is destined to collapse.** Montagne writes:

> *Any purported economy subject to interest ultimately terminates itself under insoluble debt, because to maintain a vital circulation, we must perpetually re-borrow periodic principal and interest payments as subsequent debts, increased so much as periodic interest. Re-borrowed principal equals and thus retains the former debt its payment would otherwise resolve. Thus the sum of debt increases so much as periodic interest, which is re-borrowed as new debt, above the retained sum of debt… the probability for world-wide collapse as a consequence of interest is therefore 100 percent. Certain.*

4) **There is class conflict between laborers and usurers as they battle over the unearned gain (surplus value) that is the proletariats' due. By an argument similar to dialectical materialism, as the world economy collapses (see premise #3), the implementation of Mathematically Perfected Economy™ is inevitable.** Montagne writes:

> *We have in effect two conflicting philosophies. One wants earnings for its work equivalent to its work. The other wants unearned gain which can only be taken at the cost of earning equivalent to real work... We mature beyond the era of unearned gain… Like cannibalism, unearned monetary gain and all the manipulation which goes with it will one day disappear from history forever after.*

The conclusion, of course, is that loaning money at interest should be banned. Montagne explains, "Mathematically Perfected Economy™ thus is to loan interest-free currency into circulation… A virtually cost free capacity to sustain unlimited prosperity without the artificially imposed irregularities of inflation."

And what will our economy be like after the Revolution? Montagne boasts:

> *For example, a $100,000 home with a 100 year lifespan would be paid for at the overall rate of $1000 per year or $83.33 per month; and the earning this alone would immediately free should we implement mathematically perfected economy™ immediately, reflect the degree to which we would prosper further, without any other improvement whatever.*

That sounds like a fine plan if you are in the market to buy a house! Of course, rent control also sounded like a fine plan – until it was actually implemented. Then, for some reason, no new apartment buildings were constructed and the existing ones fell to slums. Who could have anticipated such a thing? (I mean who besides Milton Friedman and just about every other economist with a working brain?)

At first, when a Castro or a Chávez is seizing houses from the bourgeois and distributing them to the proletariat for a nominal $83 per month, socialism seems like a fine plan – maybe even a mathematically perfected plan. It is only later, when the people are crowding into old houses with leaky roofs that were built before the Revolution, do they start to wonder if it was such a fine plan after all. Of course, by then it is too late to revolt – they are too tired to fight and they have long since hocked their rifles to buy bread. If only they had known more about economic theory, they might have seen through Great Leader's siren song of mathematical perfection!

The basic flaw in the logic of modern socialists (Montagne, Cook, Zarlenga, etc.) is confusion between motivation and capability. "He's *privately controlled!*" the socialist sneers at the Federal Reserve chairman, the unspoken assumption being that, were the socialist put in charge, he would immediately open the floodgates of wealth and prosperity for us all. It would be a veritable socialistic paradise, if only the Benevolent One were given the authority to print money! But, the fact is, the Fed is in a box. If a socialist were put in charge, he would be in the same box. Basically, if a central bank prints too much money, they debase the currency. Small countries like Zimbabwe are in a much tighter box than big countries like the United States, but a box it is.

Montagne's claim (sometimes called the Debt Virus Theory), that spending paper money directly into the economy, rather than buying Treasury Bills as the Fed does, is not inflationary can only be sustained with a gross re-definition of the word "inflation." But re-defining words like "inflation" does not revoke the laws of economics. If you are taking a curve too fast in your car, you cannot avert a crash simply by re-defining "road" to include what used to be known as "median."

Arguing with socialists is a bit like Alice's meeting with Humpty Dumpty – common words like "inflation" just seem to mean whatever the socialist chooses them to mean. So, rather than following Montagne down that linguistic rabbit hole, I will simply point out that his plan has already been tried, albeit without the hubris of calling itself mathematically perfected. During the Revolutionary War, the Continental Congress spent paper money directly into the economy and we all know what happened to them. They won the war but the expression "not worth a Continental" still resonates with us today. Ten years later, their government went the way of the Weimar Republic. Fortunately, unlike the Weimar Republic, which was replaced by the Nazis, the Continental Congress was replaced by the United States of America, which turned out to be a pretty good government. So, hyperinflation does not *always* lead to tyranny, though that is something to beware of whenever one contemplates debasing the currency.

Today, in every city, there is a small contingent of people making pests of themselves at city council meetings by insisting that payday and title loan companies should be banned as usurious. In their public pronouncements, they do not use the word "socialism," though it is organizations like Socialist Alternative who are sponsoring them. Montagne's arguments are similar, though he goes much farther when he insists that loaning money at *any* interest rate, not just a high one, is usury. He bases this conclusion on religious, not economic, arguments.

“Judaism, Christianity, and Islam (in chronological order), all derive from the Old Testament, in which a scattering of commandments forbid the practice of usury. Islam, in its further works is perhaps the most strictly compulsive in its observance of these commandments,” writes Montagne. He goes on to quote Webster’s Dictionary, which gives archaic, formal and modern definitions of the word “usury” as 1) interest, 2) the lending of money with an interest charge for its use; and 3) an unconscionable or exorbitant amount of interest. Montagne takes this as evidence that the “money masters” have conspired to change the language in order to allow loaning money at low rates, where it had previously been prohibited altogether.

Invoking religious edicts is clearly a conversation stopper. Of course, it is a free country and, if one’s religion prohibits borrowing or lending money at interest, nobody is going to make one do so. However, America is not a theocracy. If one wants to impose this rule on everybody, then one must present an economic, not a religious, rationale for it. Thus, except for a couple of quick comments about Montagne’s religious beliefs, I will discuss only the four premises listed above and ignore any references that Montagne makes to religious edicts.

Somewhat incongruously, every page of Montagne’s website begins with a portrait of George Washington, though he was not an economist and, as far as I know, had nothing to say on the subject of loaning money at interest. However, he did live during the time of Adam Smith, when it was widely believed that people trade things that are of equal value. This belief was one of the first misconceptions to fall before the rise of modern economic theory. (In Smith’s day, there was no economic theory *per se*; there was just the study of political economy – the budgeting of government expenses.)

If I buy a candy bar for 89¢, I do so because candy bars are *not* equal in value to 89¢; they are *greater* in value, at least to me. Obviously, the candy store owner has just the opposite view – he’d rather have the 89¢. Why does the candy store owner have such a different valuation of the candy bar? Is he just a stupid person who doesn’t know how good they taste? No. It’s because he has a lot of them – whole shelves full. I, on the other hand, have none – and I’m hungry. So we both come away from the trade with something of greater value than what we brought to it.

Montagne’s first premise is wrong. Neither now nor in the days of barter was it true that “no one takes from the trade anything but the equal of what they contribute to it.” In fact, they *always* take something of greater value. It is not because of a vague “propensity to truck and barter” (Adam Smith) that people enter into trades, but because they specifically intend to come away from the trade with something of greater value than what they brought to it.

In my *Critique of Austrian Economics*, I write:

> *Ever since Smith's 500-page tome (*The Wealth of Nations*, 1776) got itself attached to America's Bicentennial celebration, popular bookstores have stocked multiple editions of it to the exclusion of all other economic treatises. Apparently people buy them to decorate their offices, since almost nobody has read past the pin factory story. Smith's reputation has outlived his contributions while Menger dashes popular misconceptions that are as prevalent today as they were a century ago.*

In fact, the primary contribution of Carl Menger's 1871 book, *Principles of Economics*, is the theory of marginal utility, which is exactly what Montagne needs to learn. The idea that people come away from trades with something of greater value than what they brought to them and that their valuation of things depends on how many of those items they already own is the foundation of all modern schools of economics. It is for the invention of marginal utility (by Menger and, independently, by Jevons) that 1871 is considered the year economics became a science, comparable to when chemistry detached itself from alchemy. Frankly, it is amazing to find someone now, in the twenty-first century, blithely championing ideas from a hundred years before economics even began.

Montagne's second premise is no better. He does not seem to understand the concept of time preference. People value the same item more if they receive it sooner rather than later. How much more determines the rate of interest that they are willing to pay and is the inverse of the mean of the Distribution of Wealth over the Capital Structure, DWCS, as I proved in my *Critique of Austrian Economics*. In my Rejoinder to Mr. Murphy, I write,

> *To get an intuitive feel for what the mean of the DWCS represents, ask yourself, "How much of my wealth is in my house, which is intended to provide shelter for twenty years, how much is in my car, which is intended to provide transportation for five years, and how much is in peaches or fashionable clothes for my girlfriend, which will be valuable for about a week before becoming overripe or going out of style?*
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> *For wealthy people, the mean of their personal DWCS is around twenty years, that is, most of their wealth is in long-term projects. Their interest rate is about 5%, slightly less than what they get on certificates of deposit. For middle-class people, the mean of their DWCS is around five years, that is, most of their wealth*

> *is in their car. Their interest rate is about 20%, slightly more than what they pay on their credit cards. For people living in hardscrabble conditions, their horizon does not extend beyond a month and their yearly interest rate is about 1500%. This is slightly more than what they pay at the pawn shop when hocking their possessions.*

So, in answer to Mr. Montagne, when one person loans money to another at interest, it does not imply that the latter is being cheated; only that two people have different time preferences. They made a trade based on that difference in the same way that the candy store owner and I were able to make a trade because we had different valuations of a candy bar. The only thing new about this theory is that they are trading present goods for future goods, whereas the 89¢ and the candy bar that I traded it for both existed in the present.

The people who would ban payday and title loan companies have their hearts in the right place, as they are sympathetic towards the poor. But such do-gooders do not understand that putting a high value on present over future goods is a symptom of poverty, not the cause of it. Poor people aren't stupid; when they hock their property or take out a loan against an upcoming paycheck, they *know* that they are paying a high rate of interest. They don't need Johnny Economist to tell them that. They borrow at that rate because the alternatives are worse.

For instance, if a workingman's vehicle has been impounded, the towing company is charging $25 per day and it will seize the vehicle in a month. But *right now* he can get that car back for the $100 towing charge. An interest rate of 1500% per year may seem exorbitant, but he doesn't need the loan for a year – just for one week until payday. It is actually much more economical to visit the payday loan company than to leave the vehicle at the impound lot. Also, without a car, he could very well get fired for tardiness. And keeping his job means *everything* to him.

The people who would ban payday and title loan companies just don't understand what the poor are up against. And Montagne is far more extreme than they are, as he would ban the loaning of money at *any* interest rate. Montagne claims to have the best interests of the poor in mind, but these are the very people who would be hurt the most by his proposals.

In regards to Montagne's third premise, even if there *were* people systematically cheating the rest of us, that would not make an economic collapse "inevitable." After all, their income is a part of national income statistics in the same way that Montagne's and mine are. Economists count everybody's income when they compile those statistics, not just the incomes of the people that they like.

Böhm-Bawerk denounces "the tendency among English economists – often and quite justifiably censored – to regard workers as producing machines; that view made their wages a component part of production costs, and counted them as a deduction from national wealth instead of a part thereof" (1959, v. 2 pp. 72-73). Montagne is making exactly the opposite mistake: He is counting only the proletariat's wages toward national income, while excluding the income of those wicked money lenders who prey on them.

During the Middle Ages, the nobility had everybody over a barrel in the same way that Montagne imagines that modern money lenders have us over a barrel, but feudalism did not collapse in the way that Montagne envisions and, when it did, it was due more to luck than inevitability. Feudalism lasted for hundreds of years and it could have gone on indefinitely if gold had not been discovered in the New World. The resulting inflation made share cropping contracts worth less to landowners. There were tradesmen in town making several times more than noblemen in the countryside were getting from their share of the corn grown on their property. Also, the Industrial Revolution just made corn less important to society as a whole – during the Middle Ages it had been the *only* thing of value. But none of this has anything to do with the "mathematically perfected" timeline for worldwide economic collapse that Montagne has calculated.

Edward Flaherty has already addressed the idea that any monetary system subject to interest ultimately terminates itself under insoluble debt in his rebuttal of Jaikaran's book, *The Debt Virus*:

> *Jaikaran's main warning is that if we wished to repay all the debt, we would be unable to do so because of the shortage of money. But why would we wish to retire all the outstanding debt in the economy? Loans and bonds have a variety of maturities and only the most remarkable synchronicity would have them all, or any appreciable portion of them, come due at once.*

Remarkably, the Austrians conceded to Montagne his third premise. He quotes a Ron Paul supporter: "While an interest based monetary system eventually breaks down because of greed, corruption and the intractable problem of insoluble debt, there is no reasonable alternative."

Leaderless youth! Paul has given these kids no guidance, only bumper sticker slogans. They let Montagne's labor theory of value go unchallenged, conceded to him the kernel of his theory, the "intractable problem of insoluble debt," and then beat on him with a sponge. "Math *cannot* predict human action!!!"

Finally, in regards to Montagne's fourth premise, this is basically dialectical materialism, which should be familiar to any critic of Marx. Montagne has sent me an e-mail claiming that he is not a socialist, in spite of quotations like this, "We have in effect two conflicting philosophies. One wants earnings for its work equivalent to its work. The other wants unearned gain which can only be taken at the cost of earning equivalent to real work," which sounds like it came directly out of *Das Capital*. Notice Montagne's reliance on the labor theory of value and his talk of class struggle and unearned gain (surplus value), all of which are hallmarks of Marxist writing.

The easy answer is that, just as society is no longer partitioned into workers and capitalists but has many prosperous self-employed tradesmen and many salarymen who own stocks, neither is it partitioned into debtors and creditors. We no longer have company towns where the residents have made serfs of themselves by borrowing more from the company store than they can ever repay. Today, most people are simultaneously both creditors and debtors.

To judge whether or not Montagne is a socialist, let us consider his vision for the future:

> *For example, a $100,000 home with a 100 year lifespan would be paid for at the overall rate of $1000 per year or $83.33 per month; and the earning this alone would immediately free should we implement mathematically perfected economy™ immediately, reflect the degree to which we would prosper further, without any other improvement whatever.*

But we do not buy houses from the government, we buy them from private developers, and they expect to get paid for those houses. Developers hire contractors (carpenters, plumbers, electricians, etc.) and they demand cash on the barrel head. Unless forced to do so, no developer in his right mind is going to spend his private funds to hire contractors in the here-and-now if the only expected return is Montagne's promise of $83 a month for the next hundred years. And if Montagne intends to use force, then he is a socialist. That is what the word "socialism" means: Forcing people to provide things like houses so that the government can distribute them to who they choose at a price that they set.

I stand by my assessment of Montagne. Mathematically Perfected Economy™ is straight-out socialism in the guise of a pseudo-religious attack on money lenders.

In conclusion, to Montagne, Cook, Zarlenga and anyone else who claims that they can open the floodgates of prosperity by spending paper money directly into the economy, I say: "*The Debt Virus Theory is not worth a Continental!*"

I think that settles it. However, I do have two questions for Mr. Montagne: 1) Why did you choose to illustrate every page of a website about economic theory with a photo of yourself in the woods posing with an elk you just shot? 2) If you were on a solo bow hunt seven miles into the wilderness, how did you ever pack that big animal out of there? Seven miles is a long ways to venture from your pickup truck. (I can't resist posting a joke here.) Incidentally, when taking a self-portrait, it's a good idea to look into the sun so that your face isn't in shadow – just a hint.

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