



## Episode 1,035: How Ludwig von Mises Fixed Economics (But Ingrates Won't Thank Him)

**Guest: Bob Murphy**

**WOODS:** You've got this great course. Just got done telling people about it, but why don't you tell us in more detail the kinds of topics that people can expect to see in it? And then we're going to do a deep dive into one of those topics.

**MURPHY:** Sure. So in part one, that was classical economics and the marginal revolution, and now here in part two, for lack of a better term, I called it 20th century economics. But it was basically giving me the opportunity to weigh in on several different areas, only some of which really overlaps with what we might think of as Austrian economics, per se.

And so my goal here is not to propagandize or anything like that to get across the right free market policy conclusions. I really do want to just teach people the development of economic thought in the 20th century. There were a lot of different innovations, and I just think it's – you would come out of this course I would say knowing a lot more about economics, so even from an Austrian perspective, you're just better equipped to understand what other schools of thought were saying.

So some of the topics, we start out saying how was the marginal revolution applied to money, and that involves a lot of the contributions of Ludwig von Mises. I spend three lectures on utility and welfare theory. And so here, again, it's a real subtle thing where, in the 1800s, economists, even some in the Austrian tradition, tended to think of utility as being this cardinal psychic magnitude that kind of explained consumer behavior, and then actually, early in the 20th century, that gets expunged because they realize, oh wait, we can get all of our results that we want for consumer theory without assuming that utility is cardinal. It's just this ordinal ranking of preferences. And so I go through that.

So there's different levels of difficulty with this stuff, and so one here that's an advanced lecture because I go through and actually do a proof of Arrow's impossibility theorem, which some of your listeners may have heard of, because it doesn't require any background in math. It's just you've got to sit there and be willing to sit through a half-an-hour chain of reasoning, but you don't need to know any background math or even economics to do it. And so I remember when I learned it in grad school, I thought, *Oh, this is a neat little result*. And so people who know that economists "prove" things and they don't really know how does that work, what does that mean

exactly, this is an example of something where you could teach it to somebody who's willing to sit there and listen for half an hour.

So we do that, just again as an example and to show that this is what Arrow proved, because there this is an example where it's a famous result and a lot of people talk about it, but they don't really know what the result was and so they get things wrong. So I just try to go through and show what did Arrow do when he shows that — it's sort of like the limits on social choice. I think it's very — it should be heartwarming to people who are stressing the premise of the individual and how collectivism has some logical difficulties as well as historical problems, and that's what Arrow showed, that to take a bunch of individuals with their own preferences and try to aggregate them into a "social choice function," you can't do it and respect some basic principles that you think are self-evident. You can't do it. The punchline is it only works if you anoint one person in society as a dictator, whose preferences just always trump everybody else's. So it's kind of a neat little result that was completely unexpected. And so anyway, I just go through and walk through that.

Other things, I hit the Coase theorem. I stress a lot of the capital and interest theory, which is sort of my specialty, again amplifying what were Austrian insights and to show how that still is relevant in mainstream economics. I do a lot on game theory. Talk about public choice. Real business cycle theory, which I think is important for Austrians to know, because real business cycle theory, as the name suggests, is saying, oh, the business cycle is due to quote "real factors," like a technology shock.

So in modern economics, it's typically Keynesians battling against real business cycle theory people because they think the Austrians are kind of old hat and not worth dealing with. And so in my view, the Austrian school combines the best of both worlds. Because the Keynesians are right that the real business cycle theorists have difficulty, like, *Oh, the 1930s was really just about a technology shock?* That seems implausible. And yet, of course there are reasons the Keynesians are wrong in what they say. And so I think the Austrians are able to rise above the fray and sort of take the best of both approaches.

All right, so I'll stop there. I've been rambling a bit, but it's really just a wide-ranging tour of modern economics, and I think in many of them I'll lay out the basics and then I'll say, oh wait, here's some typical misunderstandings to try to make sure the listener understands the pitfalls there.

**WOODS:** So this course of course is available at [LibertyClassroom.com](http://LibertyClassroom.com). It's course number, who knows? 800 zillion? I've lost track of them at this point. And the idea is not that you have to join Bob at 5:30 pm or something every day. These are already uploaded. Just consume them at your leisure.

So what we've decided to do is somewhat analogous to what I've been doing with Professor Casey in Ireland, who has a huge new book on the history of political thought. Instead of trying to cover that entire book, which would be ridiculous, we've taken individual topics and devoted entire episodes to them to give you a flavor of the book.

So in this case, we've decided to look at the first two talks in this course because they have to do with Mises. So we're going to start with an Austrian insight, and Bob is going to situate us in the problem. He's going to explain what is the problem that Mises was solving by integrating marginal utility with money. And you may even think, *I can't imagine that that could be of interest or importance to me*, but for crying out loud, it's Austrian economics, it's Mises, it's Bob explaining something to you. I guarantee you this matters.

So can you start by explaining what is it that Mises is completing? What was the problem that existed that Mises perceived and then proceeded to solve?

**MURPHY:** Sure. And why I like talking about this in particular is it really does show what a great economist Mises was, and it's not just that, oh, we like his strong support of the free market and he was such a powerful writer. That stuff's all true, of course, but he really was a pioneer in advanced economic theory in several different areas. And so this is one of them, and again, this isn't even just something that current Austrians look back fondly again in standard histories of economic thought if they got into this particular topic. I mean, people would realize that, yes, Mises really moved the ball forward on this particular issue.

So the context here, Tom, is the classical economists, they had a faulty theory of value. They thought that value was somehow due to objective factors, either the total cost or the total amount of labor that went into something. So like why would a stage coach trade for so many horses? Ultimately, the classical economist would come up with, *Well, it has to do with the fact that the number of labor hours that would go into making that stage coach is the same amount of labor hours to raise that many horses*. And they would try to explain it that way. And that's just a dead end. You're not going to solve it that way.

So the insight of Carl Menger and the other economists who are credited with the so-called marginal revolution that happened in the early 1870s was to say no, the starting point to explain market prices, to explain the value that things have in the marketplace is subjective value. It's in the mind of the beholder. Value is a subjective thing, a psychic thing. And that's where they started from. And so ultimately – and then it filtered upwards into the means of production.

So just to give you a quick example, before, when you're trying to explain why would a bottle of wine be so expensive, the classical approach would lead you to say things like, well, because the farmland where the grapes were grown was expensive, and so in order to stay profitable, to stay in business, they have to charge a lot for the bottle of wine in order to pay for the grapes, because the grapes have to have a high price in order to pay the farmers for the land. And so you'd sort of work that way. The costs are dictating what the price of the product has to be.

Whereas after the marginal revolution, the causality went the other way, that you would say, oh, the reasons grapes can fetch market prices and the reason that farmers would be willing to plant grapes or whatever is because consumers value wine. And so when you say to a consumer, "How much do you value this wine?" the consumer doesn't care how it was produced. The consumer just values it for the consumer's own subjective reasons.

Okay, so that's the revolution that was ushered in in the 1870s and started percolating around and completely revamped the way economists thought about pricing. But it reached a log jam when it came to money, and so now, Tom, I'm finally getting to your original question here, is what was the logical difficulty, what was the problem, and this was the thing that Mises was ultimately going to solve? So the problem was it seemed like when it came to money, you couldn't use this new approach.

So it made sense to say the reason people value apples is because they taste good or they solve hunger or what have you, and you start with the basic building block and then you work up from there. And so you say, oh yeah, the reason two apples trade for one banana, you start with the subjective valuations of apples and bananas and you come up with something. Okay, so that's why an equilibrium, two apples trade for one banana, that makes sense. You explain their market value that way.

But with money, when you say, gee, why is it that two apples trade for one dollar bill, it seems like cheating or it seems goofy to say, Oh, well, people subjectively value the apples because they provide utility or they provide happiness and they subjectively value the money, and then that's how you explain it. Because the problem is you could say, Wait a minute, why do people value money in the first place? Ultimately, the reason you value money is because you can go in the market and buy things with it.

So it looked like you would be arguing in a big circle if you tried to use that approach to explain the market value of money, because it looked – Let me just restate it. It looked like the chain of reasoning would be to say, oh, the reason money has value in the marketplace, the reason you can trade units of money to acquire other things is because people subjectively value the money. And then you say why do people subjectively value the money or what governs how much they value it? And you say, oh, because it has purchasing power. You can use money to go into the market and buy things. So yeah, that seems true, but ultimately it seems like you're saying the reason you can buy things with money is because you can buy money. And so it looked like that was a dead end and you were just walking around in a big circle.

And so before Mises came along, most economist just thought, okay, we can use this new subjective marginal utility approach to explain why a certain number of apples trades for a certain number of bananas, but when you want to then explain the money prices, like how many apples trades for a dollar bill, that you used a completely different approach. And they said, oh, how many total dollars are there in the economy? How fast do the dollars change hands? And it was this big, aggregate, sort of macro view that had nothing to do with individual decisions or subjective valuations at all. It was a very mechanical approach.

So on the eve of when Mises inherited all of this, there were two different methods. One method was to explain real exchange ratios, just goods trading against goods in a hypothetical barter economy, and then as an afterthought to explain actual money prices, economists had this completely different framework.

**WOODS:** So in other words, Mises is trying to say there's no need to have this artificial division. We can explain money the same way we explain other economic phenomena, so now we have a complete integration of the way we look at the world as economists.

**MURPHY:** Exactly. So again, not to lose people, I haven't told you the way Mises solved it yet, but I want you to realize this is what his achievement was. So you're right, Tom. Mises showed we don't need to use different principles. The same theoretical apparatus, the same mechanism by which we as economists can explain this is how the prices of consumer goods are formed and then from there we can explain and that's how the prices of factors of production are formed – because like to say what determines the market prices of a tractor, you can't answer that in a vacuum.

You would first logically need to say what determines the market price of wheat or of corn and you'd build that up from raw consumer preferences that are just taken as a given – because people like food or whatever, they like bread and they like corn on the cob and so forth. That's what you take as a given, and then you can explain the prices of wheat and corn, and then when you know that coupled with your knowledge about technology, you can then explain the price of a tractor.

So the point was they had this theory all spelled out nice and neat and logically consistent where you start with raw consumer preferences for consumer goods that make sense that, yeah, that's just a given. And then you build up step by step, logically speaking, and you can explain the prices of everything – consumer goods, producer goods, real estate, what have you. But the one huge omission from that until Mises fixed it was it looked like to say, oh, but there's this other type of good called money that, geez, it doesn't seem like we can fit it into that framework because it looked like you'd be arguing in a big circle.

And so yes, what Mises did is he showed no, there's no logical fallacy involved. The same way we explain the price of everything else, we can also apply that to goods that happen to also serve as money. And so he sort of unified all of economic theory and made it much more satisfactory. So one way I like to describe it is Mises unified micro and macro and made it just one, coherent body of thought.

**WOODS:** Can you explain the difference between micro and macro? Because I bet even that, a lot of people who don't do economics don't know what that is.

**MURPHY:** Okay, sure. So it's typical nowadays to have the bifurcation, so if you go to a standard college sequence and you take microeconomics, that's going to focus on individual markets, things like what's the wage rate for unskilled labor and how many unskilled workers get hired, or what's the price of milk and how many units of milk do consumers buy. Or you might study things like rent control. But those things are all micro, where you're looking at individual markets with a particular price and a product. And then there's downward sloping demand curves and upward sloping supply curves and those types of things. So a lot of probably what your listeners, if they've studied economics, would think of as just regular, basic price theory.

Whereas macroeconomics, as the name suggests, pulls back and looks at the entire economy. And so it looks at things like what's the rate of price inflation, or what's the unemployment rate for the economy as a whole, or what causes the business cycle. So that's the sort of thing that is typically treated in a macroeconomic course.

And what survives to this day is that it seems like a lot of the – at least the way these things are conventionally taught, it seems like a lot of the principles you would learn

in a micro class go out the window when you get to macro. So in a micro setting, there's tradeoffs, there's scarcity. Like, oh, gee, if we're going to produce more guns, then we have less resources to produce butter, and so there's a tradeoff involved. Whereas when you get to macro, especially if you're studying Keynesian economics, all of a sudden it's, gee, there's a recession and there's a bunch of idle resources so the government needs to run a budget deficit and — And it seems like all these tradeoffs and scarcity and whatever that you learned in the micro setting go out the window with macro. And so there's like different principles that are taught. Again, this is the way it's conventionally done.

And so what I'm saying is back in Mises' day, that bifurcation, the way it manifested itself was, again, if you wanted to explain why is it that in the marketplace two apples trade for one banana, the economist would say people have subjective preferences and on the margin we can determine da-da-da-da and look at their utility. And just two apples trades for one banana basically because of consumer preferences. And that's how you explain it.

But then if you said, okay, well then, why is it though that two apples trades for \$1 — and that would also be the case that a banana traded for \$1 for that all to fit — they wouldn't use that same apparatus. They wouldn't say because there are subjective preferences for apples and bananas. Instead, they would say the way we talk about money prices is how many dollar bills are there in the whole economy, and then on average in a year, how many times does a dollar bill change hands? And then how many total apples are made? How many total bananas? And so if you start looking at those two aggregates and divide, it's got to be the case that, on average in a given transaction, two apples trades for one dollar bill in order to make the numbers work out. And so you just see it's pulling back and looking at the whole system, so that's why I'm saying it's like a macro thing, whereas you might explain apples versus bananas, you're zooming in just on that one little marketplace.

**WOODS:** All right, so in a way, can you say that — I don't want to trivialize what Mises did, but at some level, he makes economists, at least in his tradition, intellectually fulfilled basically, that the system is much more elegant. I mean, I know it goes beyond that, but you can feel like this fundamental insight I have about the way the world works turns out to apply across the board.

**MURPHY:** Oh, entirely. That's what I think, yeah, he did. He sort of unified all of economics into one, coherent theory. And you're right, in my view, he completed the work of the marginal revolution. He fulfilled it, to use the word you picked. And so yeah, I don't think that's an exaggeration at all and that is what he did, and I think it does show the power of the subjective marginal insights that Carl Menger introduced. Other economists are credited with doing it in a more mathematical way.

But yeah, what we call the founding of the Austrian school was Carl Menger in the early 1870s, and that's his major intellectual achievement was to show how you could explain market prices using subjective marginal utility approach rather than the old classical school of looking at the cost of production or how many labor hours went into something. But Menger did not show exactly how you do explain money prices with that, so Mises came along and fulfilled that.

Because yeah, that would be a pretty big, gaping whole until Mises plugged it, to say yeah, we can explain things assuming there's no money. If we had a hypothetical economy where people directly traded apples against bananas, we could totally explain that now thanks to Menger. But in reality, of course, people trade everything against money first and then use the money to buy stuff, so for there, we need this completely different theoretical framework. I mean, that would be kind of embarrassing. I mean, it's not like that's a little detail. That's huge.

And also, I don't want to get too far afield here, but this spills into like the socialist calculation debate and all the other things where Mises was great on, because it crippled economists. They tended to think in terms of the economy as not having money. Money they just added as an afterthought. It was understandable because they had been trained to deal with it that way. Like, the way they thought about the world was like people were directly trading apples against bananas, because that's the way they could make sense of everything very elegantly, but if you added money, it didn't really fit the way they thought about it. It was kind of a pain to deal with. And so it's not surprising then that when you look at the rest of Mises' career, most of his insights had to do with how economic calculation worked where you need money prices.

So that's maybe – if you want to say what's the punchline from all this – and again, folks, I haven't told you how he solved it yet; I'm just trying to warm you up to see why it's important that he did solve it – is that Mises could not have explained the problem with socialism without having these insights, that Mises understood the importance that no, we can't as economists pretend to solve the world as if there's no money and think of our economics like that, and then as an afterthought say, *Oh, of course in the real world there's money so let's throw that in there later to dress up our model*. That's going to screw you up if you really go walking around, looking at the world, thinking of it in terms of a barter economy when actually in the real world people use money.

**WOODS:** All right, let's get into then how he solves it, and he's going to solve it using something that becomes known as the regression theorem. Now, let me tell you something. It's not as intimidating as it sounds, but if you listen to and follow something called the regression theorem, you're just a badass from now on intellectually. So don't switch this off. Listen. If you don't know what the – even if you do know what the regression theorem is, you'll understand it better after Bob explains it. And if Bob goes off into cloud cuckoo land of the economics world, I, the guy who simply reads about economics in his spare time, will bring him down to earth, I assure you.

So remind people of the circularity problem that Mises is solving and then let's hear about the regression theorem.

**MURPHY:** Okay. So I think very highly of your listeners, Tom. I don't think they need all these warnings. They want this stuff. They're thirsting for it. So here's how it goes. So remember, folks, let me just remind you what the problem was. So the issue is, if there's a barter economy, everything makes total sense. We can – oh, why do two apples trade for a banana? Well, because people have subjective preferences. They like banana shakes, they like apple pies, and you need the apples and bananas to make those. So you start with those raw, exogenous, given consumer preferences for

various types of consumer goods, and you easily build things up from there. Makes perfect sense.

The problem then comes in: okay, why is it that two apples trades for one dollar bill? Now, you could, just as a formality, just say, oh, well, because people have subjective preferences for apples and dollar bills. So you could go ahead and go through the analysis like that and there'd be nothing wrong with it, but the reason economists hesitated to do that before Mises showed them why it wasn't a problem is they thought you were arguing in a circle.

Because they said, all right, it makes sense, we as economists can defer to physiology or just whatever subjective tastes. If somebody values a Picasso painting and you just say the reason a Picasso painting has the same market value as 10,000 apples and you just assert that, well, people get happiness from it, they get utility from having that painting hanging in their living room, end of story – okay, there's no problem with that because people, hey, their tastes are subjective and who am I to say whether you should value that painting or not? That's fine.

But it does seem like it's cheating if the economist says the reason somebody gave up two apples in order to acquire that dollar bill was because the person valued on the margin that dollar bill more than the two apples and that's why the person agreed to the voluntary trade, end of story. If he just said that, that would seem kind of weird because you'd say, Wait a minute, though. Why does the person value that dollar bill? Where does it come from? It seems like you need to give me more if you're an economist than to just treat the dollar bill as if it's a Picasso painting, because clearly there's something more economic-y, if you will, about people valuing dollar bills versus valuing paintings.

And so then you say, all right, the reason the person values the dollar bill, why do people hold money as such is clearly tied to the fact that they expect in the future to be able to use those dollar bills to go buy other goods and services. And so ultimately, when you right now are trying to decide is it a good deal, is it a good bargain for me to sell my goods and services – like should I go perform three hours of hard labor in exchange for the wage payment someone's offering me – part of your thought process is you have to decide the number of dollar bills they're offering me, what can I go buy with that?

Ultimately, you're saying do I want to give up three hours of my labor now to go in the marketplace later and be able to get the kind of stuff I can acquire with, whatever, \$30 if they're offering me \$10 an hour. So ultimately, you see a huge part of why do I value money, why do I want to hold money right now, why would I give up things to acquire more money is because money has a purchasing power. Money has value in the marketplace.

So if you just reflect on what I just said there, I'm sure people realize every step in that little argument was valid, but look at what I just said. It sounds like I'm saying nakedly the reason people value money and money has market value is because money has market value. So it sounds like you're saying people value money because people value money, and that seems to be a problem.

So Mises solved that. So the first step in his solution was he introduced the time element, that Mises pointed out you're not arguing in a circle, you're not merely saying the reason a dollar bill trades for two apples is because a dollar bill trades for two apples. If that's what you were saying, then yeah, that would be a circular argument and that wouldn't really add much to our knowledge.

But Mises points out, no, there's a time element involved. Really, what's happening, the reason money today has purchasing power, the reason people will give up valuable goods and services today to acquire money – and so we're explaining today's purchasing power – is that they're making a forecast. They have expectations that the money will be valuable tomorrow. So if I'm working for three hours right now to get \$10 an hour so I get \$30 and I'm thinking about, oh yeah, I'll do that because I value what those \$30 can buy me more than my labor time, there's a time element involved. I'm giving up the labor right now to get the money right now so that down the road, I can take those \$30 and go buy stuff with it.

So notice that Mises has already in the first step of his argument broken up the time element, so it's not a circular argument, that ultimately, the reason money has purchasing power right now is because people are anticipating that it will have purchasing power, let's say, tomorrow. So I'm explaining today's purchasing power by reference to tomorrow's purchasing power. Okay, you with me so far, Tom?

**WOODS:** I'm with you.

**MURPHY:** [laughing] Okay. So now you say – Mises doesn't leave it there, because that would be kind of leaving people hanging. He said, all right, but where do people come up with that knowledge? How in the world could you formulate expectations about what money is going to be able to fetch you in the marketplace?

And by the way, just to make sure people see the problem, suppose you were in a coma and you woke up in the year 2070 and people came along and said, "Wow, this is amazing. You've been out for decades. We want to buy" – some publisher came up to you and said, "We want to buy the rights to your story because our readers are going to love this. You've been out for so long. What was it like to have been living back in 2017? This is amazing and we want to buy the rights, and we'll give you \$300,000 for the rights to your story," what would your reaction be? I think if you were smart, you would say, "I need to go look at some prices." You'd need to know what is a dollar worth. You'd have no idea. Maybe they're offering you something that could buy two loaves of bread at that point. You wouldn't know.

And so again, to know is it worthwhile for me to give my labor, time, or other things for dollar bills, you need to know what can they fetch in the marketplace. So back to Mises, he said the way you come up with expectations about what's money going to buy tomorrow so that you can decide how much purchasing power it has today is your memory of the recent past. You went out and you saw in the marketplace how much money was able to fetch, and so that's what gave you a grounding that gave you some sense of, ah, okay, looking at current market conditions, I see now what money typically can fetch in the marketplace for various types of goods that I might be interested in, and so that gives you a basis for making expectations about the near

future. So that can guide your actions today, and that's what ultimately gives money its purchasing power.

So now what Mises has done, if I can break it down succinctly, is he says money has purchasing power today because of your expectations of its purchasing power tomorrow, which you formed primarily by your observations of money's purchasing power yesterday. So see it's not a circle. Mises isn't saying money has purchasing power because money has purchasing power. He's saying the way we explain money's purchasing power today is ultimately by its purchasing power yesterday.

**WOODS:** Okay, which informs your expectations about the future. But then the remaining issue is: but the problem is it seems like this goes on forever because then yesterday, if I can place myself on that day, I form my expectations of the future purchasing power of money on the basis of what I had seen the previous day, and doesn't that just go on forever and isn't he still not solving it?

**MURPHY:** Right, so you're right. So it looked like — and I think some economists even toyed with the approach Mises took and then they abandoned it because it looked like there's an, Okay, sure, Mises, you solved the circularity problem, but then you just introduced a new problem of infinite regress. That yeah, you basically say the reason money has a particular purchasing power today is because it had a very similar one yesterday. And then, well, gee, Mises, why did it have that purchasing power yesterday? Well, because that's the purchasing power people saw the day before. And it just seems like you could go back forever. So again, economists would throw up their hands and say that is not helpful, Mises. You haven't really solved the problem. You're just setting up this new logical fallacy. And they moved on.

And so Mises then says, no, no, hang on. It doesn't go back forever. So yes, so long as the money exists in that fashion as we're treating it as money as such, yeah, you've got to use this technique I just developed to go back step by step back through time to explain where do people come up with their starting point of value and money to then know, well, if people are going to print more money or whatever, that affects things. But how do you know what's our starting point, is Mises is always saying your memory from the recent past. Okay, so you keep pushing that backwards.

And Mises pointed out that's not an infinite regress. There's a logical stopping point, namely, the point at which money did not exist. Because logically speaking, there must have been a point in the past where people did engage in — let's call it barter. Or direct exchange is the more technical term — where they did just trade goods directly against each other because of the utility they would give, where people just traded apples for oranges or bananas because, oh, here's what I can do with these things. That's why I'm willing to trade.

And so Mises is saying, in that original environment, some goods were more suitable to be what's called media of exchange, where you would accept something just knowing you were going to hold it for a while and trade it away again. And Carl Menger actually had already developed that theory. So Menger already had — I think it was in like *The Encyclopedia of Economics*, he had the entry on the origin of money, and Menger had already given a very satisfactory, step-by-step analysis of how people starting in a

condition of barter could not be planned, but just through individually rational, looking-one-step-ahead movements, give rise to money.

And of course, those types of money would be regular commodities, so like salt or whatever, gold and silver, things that had originally been valued in their role purely as mere commodities then also started doing double duty and became money. And so Mises pointed out that there's no logical problem here. You can keep going back in time to the point at which the thing that was money was valued for reasons that had nothing to do with it being a medium of exchange, and instead was just viewed as a commodity.

And we all agree as economists. We have no trouble explaining market value in those terms, in a barter economy – apples trading against oranges or bananas or an apple trading against an ounce of gold when people are valuing the gold just because it's jewelry or its use in certain production activities. We have no problem coming up with the foundation of what's gold's purchasing power in that environment. And so then if people start holding the gold because they realize, a ha, this is a very good way to acquire goods in the market down the road, then you've got to add that element to it.

But Mises' point is there's no logical problem there, so it's not that I've just set up an infinite regress. There's a logical stopping point. We all agree there must have been a point in the past where there was no money and it was a barter economy, and Menger already showed us how we explain going from that to the emergence of money. And so all I, Mises, have done is show how the value theory that Menger also gave us can be applied to this whole, historical process to explain the purchasing power or the value of money using the exact same tools that we explain the value of apples or bananas.

So there it is, Tom, in all of its grandeur. And that's called – what people later called it is the regression theorem, saying that Mises said that money's purchasing power you could trace logically back through time to the point at which it was just a regular commodity.

**WOODS:** So a lot really comes together with this, because the idea that you could go back to a time where money emerged on the market initially as – the idea of the way Menger and then Mises would view the way money came into existence was that we begin with barter, and then people realized the problems with barter, and they eventually begin to appreciate the value of having a good that is highly marketable – I mean, maybe not everybody thinks it through to this degree. They just one transaction at a time get themselves closer and closer and closer to this outcome.

But the idea is that you have a good that you might not necessarily want for its use value, but you want it because you know other people accept it, and this helps you facilitate more exchanges. So this is where money comes from. And there are reasons that money couldn't come about in other ways, but the point is that Mises is opposed to the state theory of money, that money just emerges because of state fiat. He's arguing that money emerges through the spontaneous process of social cooperation. So that view of where money comes from he then uses in the regression theorem to be able to have a stopping point. And the stopping point is the moment that this money commodity became a money commodity and not just a highly marketable good.

Now, the thing is not everybody believes in Mises' theory of money, so therefore, does that invalidate the regression theorem in their eyes?

**MURPHY:** Are you saying not everyone believes in the origin money story or —?

**WOODS:** Yes, right.

**MURPHY:** Okay.

**WOODS:** Yeah, I mean, I'm sure Krugman doesn't.

**MURPHY:** Hmm. Yeah, it wouldn't surprise me — probably if you told Krugman that Murphy and Woods like this theory, that would predispose him against it for sure. But yeah, you're right. So there's David Graeber is — I think he's a socialist. I'm not like using that as a smear term. He's literally a socialist. He is an — what is he? An anthropologist is I believe is his actual discipline, and yeah, he has written a scathing book against these economist interpretations of the origin of money, and he tries to use evidence about temples and things and how there was a temple tax and the religious tokens that were used as money, and he tries to show that the economists' story is just complete hokum.

And in fairness, I can see where somebody like Graeber's coming from, because it's not like Menger — and Adam Smith had a similar thing too. I think Menger's was more elegant, but Adam Smith also has a thing where he tries to just imagine like hunters trading beaver pelts or whatever and how money could emerge from that kind of primitive barter state. And Graeber and others are saying they're not looking at actual history here. They don't have it — it's not like they're finding an archaeological dig that has evidence. They're kind of just being armchair economists and thinking through, *Oh, this is how it must have happened*. And I'm sympathetic to what they're saying, but nonetheless, I think the logic is airtight to explain how could money emerge spontaneously, if you will, step by step from just individually self-interested motivations.

But also, in Graeber's account, the thing that the religious authorities in the particular one that I'm thinking of just so happened to use wasn't some like abstract unit of account like hash marks on a wall. It was precious metals. And so when I did a review of his book, I was being kind of sarcastic about it. I was like, isn't that a coincidence that Graeber's saying, no, money emerged not because of the process that Menger explained, because in Menger's explanation, it makes total sense why the precious metals would be the ones that eventually the community would hit upon as being ideal monies for all the attributes of why gold and silver perform that role so well, whereas in Graeber's account, if it really is just religious authorities sitting around and deciding, *Hey, you know, we could really improve the efficiency of our transactions if there was this common unit of account*. There's no reason that they need to — why would they pick gold and silver?

Okay, so I think the causality was the other way around, that money emerged in the marketplace through trading and speculators and so forth the way that Menger talked about, broadly speaking, and then certain other powerful groups would have then

incorporated that into their own things. *Oh, you owe us this religious tax, and so you can use this thing that now the merchants are using as a way of quantifying stuff to denominate how much you owe us.*

So I guess that's the way I would answer you, Tom, is that yeah, it's probably true – Well, I'll say this. Even if it is true that Menger's story of the origin of money is wrong and that really it was some wise king who just held up a shell and said, *You know what? Instead of doing barter, I'm going to force you all at sword point to trade everything against these shells*, and he could somehow get that off the ground and going, well, then Mises still would say, okay, we can trace the purchasing power of money step by step back and it's not an infinite regress; it goes back to the day when that king in ancient times held up a shell and gave money its first existence. So it still wouldn't invalidate Mises' solution to the problem of applying subjective value theory to money as a commodity.

**WOODS:** All right, then I guess I want to ask you – I hope this doesn't get too technical. Too late. But I want to know the average neoclassical economist today probably doesn't even know what the regression theorem is, and here you are on my show saying that it solved a major problem in economics. How can that be if no mainstream economist is even aware of it?

**MURPHY:** I don't want to horrify your listeners, but in many mainstream models, there is no money. So like I went to – You know, Tom, I went to NYU. You know how I like to say that to people.

**WOODS:** Yeah, once in a while I've heard that mentioned.

**MURPHY:** It comes up, yeah. And so there, money only was coming into the models if the model had to have the central bank in it, and even there, it was kind of a chore to get people to want to hold money. And so people need to understand, in a lot of these models, it was things like there would be a representative household and then there would be a representative firm and the government would be there spending or whatever and levying taxes, and you would solve the equilibrium with the representative household accounting for all consumers, and the household lived forever and it looked forward with perfect certainty and blah, blah, blah.

So I think your listeners would be astonished if they saw how crude the standard workhorse models were in mainstream economics. And that's not because the people are lazy or something. It's just that when you get real mathematical with it and you have to "solve the model," you've got to keep it simple; otherwise, it's intractable. You just can't compute what the equilibrium is if it was more realistic.

And so I'm saying I think most economists, they don't even worry about that. They say no, money is an afterthought, and then the way if you wanted to add it, it's things like they just impose, Oh well, we'll just say in order to do a transaction you need money, and so that forces people to hold it. Or they might say people get utility from holding money. We'll just throw that in the utility function. But there, it's kind of like treating money as like a Picasso painting. We're just kind of arbitrarily saying we know people in the real world hold money. We want to be able to talk about central bank policy, so let's just go ahead and throw that in the utility function. People get utility from

holding money. But the real reason that people hold money in the real world are often not in the model.

And so to answer your question, I would just say it's because, in most mainstream models, there isn't money. They have the model being a barter economy and that's how they solve the "equilibrium price ratios." And then, like I say, if they want to put money in there, it's as an afterthought. So I think maybe the way mathematical economics went, they're still at the stage where it stood in a verbal form before Mises came on the scene.

**WOODS:** Wow. Okay, so we covered this. How about that? We covered this. All right, now given that we've spent a lot of time on this topic, I'm going to give you 30 seconds to explain who cares.

**MURPHY:** Sure thing. So this piggybacks right on the comments I was saying a minute ago, Tom, that, think about the implications of what I'm saying. If you are going to as an economist talk about things like what should the Federal Reserve's policy be and you're deriving those implications or those policy recommendations from a model in which there's no reason for anyone to hold money in the first place, that should scare you.

So I get how different models can do different things, and if you're talking about rent control, in the grand scheme, it probably doesn't matter if in the model people are directly trading apples for rental services or whatever and the landlord's willing to be paid in kind. That's probably not going to change the market for housing, and you could talk about the problem of rent control even if there's no money there. That's not really going to be a big deal.

But if you're talking about something like what should the central bank's policy be when it comes to interest rates and how much money should be created, if there's no reason in that model that the agents actually should hold money in the first place, then probably the things getting spit out of that model are totally erroneous. And I would say they are. And so I think there is an important role for the Austrian tradition where Mises, the framework he developed in his conception, he can use the same logical theoretical apparatus to explain the prices of all commodities, including the commodity that serves as money. And so I think when he in that framework develops thoughts about what happens when the central bank lowers interest rates or pumps in money artificially, blah, blah, blah, I think those results are much more accurate and much more relevant to the real world because he's starting from a model that correctly shows why do people even use money in the first place.

And again, that totally spills over into the socialist calculation debate and so on. It's understandable how naive a lot of the mathematical economists were in the socialist calculation debate when you realize the models they used and talked to their students, there was no role for money. So it's not surprising that they missed the role that monetary calculation plays in the real world in guiding entrepreneurs and the allocation of resources.

**WOODS:** Not quite 30 seconds, but I'll give you partial credit for that answer. All right, I'm going to let you get going. Bob Murphy, thanks for your time. People should be

following you and reading your blog at [ConsultingByRPM.com](http://ConsultingByRPM.com). Click on the Free Advice blog. And of course, check out this course at [LibertyClassroom.com](http://LibertyClassroom.com) and all our courses, because you get them all as a bundle when you join the thousands of liberty folks who are already over there. All right, Bob, good talking to you. We'll talk to you again soon for this week's episode of *Contra Krugman*.

**MURPHY:** Thanks for having me, Tom. Always a pleasure.