

THE ARTFUL TRADER

Episode 1: Around the World in 80 trades with Raoul Pal

Michael McCarthy: Around the World in 80 Trades. What happens when the world is truly your oyster?

Raoul Pal: It is like the world's most beautiful puzzle that never gets solved. You can solve it for brief periods of time, and then you have to start working on it all over again.

Michael McCarthy: Hi, and welcome to the first episode of The Artful Trader, an original podcast series by CMC Markets. I'm Michael McCarthy, the Chief Market Strategist at CMC Markets Asia Pacific, and your host for this podcast series. Each episode we'll talk to one of the industry's greats, and dig deep into their personal histories to find out about the highs and lows of trading, and discover their journey to mastering the art of the financial markets. Today we'll hear from Raoul Pal, who has built his success on piecing together the dizzying complexities of the macro puzzle.

Raoul Pal is one of the world's top macro investors. He used to work at Goldman Sachs, and is a Hedge Fund Manager at GLG, retiring from trading at 36. His latest venture, Real Vision TV, is a finance news channel with the aim of improving transparency in finance news. We're talking to Raoul from the Cayman Islands where he now lives. We'll talk about where in the world the new opportunities lie. But first we'll discuss macro investing, and why he thinks it's the most beautiful puzzle.

Raoul, you've been described as a true European with heritage across the continent. You've lived all over the world, and you're currently in the Cayman Islands. Are you an internationalist?

Raoul Pal: Well actually true European is a little bit difficult, because I'm half Indian half Dutch. I grew up in England. I lived in India for a bit. I lived in Spain for ten years. I now live in the Cayman Islands. So I'm kind of a man of no home, and a citizen of everywhere. Belonging to nowhere, but feeling part of everywhere is one of the best attributes you can have, because you see things with a much broader perspective. Where east meets west is a spectacular perspective to have on the world. For me I find it really useful.

Michael McCarthy: Is that why you became a macro investor?

Raoul Pal: Maybe subliminally it is. Really I think why macro resonated for me is because it is like the world's most beautiful puzzle that never gets solved. You can solve it for brief periods of time, and then you have to start working on it all over again. It's a very visual

thing, where you have to live in the future. For me that's the way my brain is wired. It thinks much more visually than it does numerically.

Michael McCarthy: You describe it as finding the missing piece of the puzzle. Was there a lightbulb moment, or was it a gradual realization?

Raoul Pal: I think the lightbulb moment for me was the Asian crisis, about 1997, where I realized that suddenly the world had gone pure macro. If you remember the mid 90s was a period like now, of low volatility. The dollar didn't go anywhere, things didn't do a lot. We had the bond market blow up in '94, and then basically the markets trended higher in equities, and not a lot went on. Emerging markets went higher, and there was no value to be added. Then the Asian crisis came, and suddenly you had to learn about deflation, debt, and currency pegs. Then all of macro came together, and I realized it was all about the confluence of economics, markets, charts, imbalances, and all of those good things.

Michael McCarthy: But I see from your biography that you started with technical analysis. Can you tell us something about the journey from a being a chartist to being a macro specialist?

Raoul Pal: After university my first job was at a company called Dow Jones Telerate, which eventually became part of Reuters, and Thomson Reuters. That was a company that had all the training screens in the dealing rooms. My first job there was custom support for a technical analysis product. In part of that I had to train traders on how to use technical analysis. It was the hot thing at the time, in the very early 90s. Now obviously the problem was that I knew nothing about it, so I had to learn it from scratch. So I picked up John Murphy's book *Guide to Technical Analysis*, read it, and realized I saw things in pictures. So therefore here was a way of understanding any market in the world in a second. I thought, wow, this is fantastic for me.

That led onto getting a job offer at James Capel, which was a stockbroking firm that was part of HSBC in the UK. It was a very big firm at the time. There I was working in European equity derivatives. That's when I started getting exposure to more macro thinkers, and some hedge funds. It was from those hedge funds that I started realizing I thought in the same way, and that chart was an advantage. That I could basically flip through any asset, any market, anywhere in the world, and have a rough idea of what was going on. The great thing about a chart is that it forces you to ask the question why. That's the whole world of macro, why is it doing this, what does it mean, and what are the knock on effects. That's where it started for me.

Then I moved firms to NatWest, the big UK bank at the time. There I suddenly got introduced to all the world's largest hedge funds. Before I knew it suddenly I was speaking

to Paul Tudor Jones every day, all of the senior portfolio managers at Moore Capital, Louis Bacon, and all of his team. The guys at Tiger, the guys at Soros, and I was immersed in the world. Also Long-Term Capital Management, and a whole bunch of other really famous names at the time. I found a niche for myself. I was the European guy who covered all of these guys. I was one of the only people in the world to be doing that. It was just like being taught acting by Robert De Niro. It was an extraordinary opportunity to watch and learn how these guys did things.

Then I moved on to Goldman Sachs where I was asked to start and manage the hedge fund sales business, and equities, and equity derivatives in Europe. There I got exposure to absolutely everybody. But also because that firm is so broad and deep, you get to speak to the fixed income guys, and the currency guys, and the commodity guys. You can then start piecing together how Stan Druckenmiller's brain works, how George Soros's brain works, because you could trades across numerous asset classes. That to me was the missing part of the jigsaw. I had the charts, and I realized suddenly that Stan Druckenmiller, Paul Tudor Jones, George Soros, all of these guys started with a chart, so I did too. I learned they would then piece together what the world meant around it, so I started to do that. Then I realized there were knock on effects across all asset classes. Suddenly the whole world was opened up to me. Again, just being able to learn from the greatest people in the entire history of the industry was incredible.

Michael McCarthy: Is there one person who really influenced the way you see the world, or was it a collection of people?

Raoul Pal: It was a collection of people. Paul Tudor Jones probably the most. I'm not a trader like he is, and clearly will never be as good as he is. But his use of charts, and how he succinctly brought everything down to the most basic of concepts, whilst understanding who complex the world was, that was really useful. I tried to learn from how incredibly Stan Druckenmiller would construct trades. I mean he was genius, as was Louis Bacon. So I learned from everybody. I learned as much as I could, and that was the best thing about being in a position like that.

Michael McCarthy: You've seen a lot of the trading world, and you've seen some of the world's biggest traders at work. Can you describe one of the most beautifully constructed trades you've ever witnessed?

Raoul Pal: It was one of the names I just mentioned, and it was during the Asian crisis. The head of trading came to me and said, Raoul, I want to sell South Africa. I asked, what does that mean? He said, I don't care, sell any equity, don't sell futures, and just keep selling. I'd never had an order like that, I don't think anybody has. So we just started selling

equities. This went on for days. I asked, does it need to look like the index? What do you want me to sell? He went, I don't care, just sell stuff. If you can make it look like the index, that will help.

Michael McCarthy: Sell everything.

Raoul Pal: Sell everything. This went on for days, really aggressively, and in enormous size. I can't remember what it was, a billion dollars or something at the time, or half a billion dollars. In South Africa that was an enormous trade. I wondered, what are they trying to do? Are they trying to manipulate the market? The market was collapsing, but everything was collapsing, and this was in '97, '98. Everything was collapsing. So it all died off, and we carried on doing business. Several months later they called back up and said, can you just start buying back South Africa? Then on we went for another five days of buying back stocks in South Africa. It was a bit messy, but not quite as rushed as it was on the way in. Then we close it all out.

I called the guy up and asked, what on earth was that about? It was all a bit messy, you didn't really care what you were doing, and I figured out you've made about eight or ten percent I think. Was it worth it? He's like, don't be crazy, we made 58 percent. I asked, what do you mean? He said, we didn't care about that stocks, because that was just a bonus on the side. The problem was there were two currencies in South Africa. One of them you couldn't get access to for foreigners. The offshore one, which foreigners could get access to, everyone wanted to short the currency, so interest rates were over 20 percent.

To short the currency you had to pay enormous interest sums, but the onshore one wasn't affected by the speculators. But by selling South African stocks in South Africa, you essentially would sell the stocks and receive rand. Then you could sell those rand for dollars, and buy them back later. So what it was was a way of borrowing South African currency for half a percent, which was the cost of stock borrow, versus the 20 percent that the interest rates were pricing it. Basically it was an interest rate arbitrage, in the ability to short the currency, and the currency fell about 50 percent. It was an extraordinary trade that was so well thought out that nobody understood it until it was done. Then everyone went, wow. I didn't see anybody else do that trade.

Michael McCarthy: Raoul, I'm sure a lot of our listeners will immediately leap to the idea that the Chinese currency is currently in a similar situation. Do you see it that way?

Raoul Pal: Yes. But it's harder to trade onshore stocks, and the interest rate differentials between the onshore and offshore currencies are not the same. Now under a speculative attack, it may be possible if you can get access to the stocks yourself. That was just a

unique situation at the time. Sure, it will probably replay itself somewhere else in the world. But I don't think China is the one right now, because there's no big interest rate differential.

Michael McCarthy: It takes a special something to be able to recognize that trade, and put that together. A lot of us have technical skills. But what are the extras that allow a trader to see the world like that?

Raoul Pal: A deep understanding of the plumbing of financial markets helps, because the very best trade construction is that. Then there's the amazing knock on effects. Again, the same guy was brilliant at processing things quicker than anybody I've ever seen. There was a time in England that they had the 3G licenses for mobile phones. The first bid came out, and it was way higher. So suddenly there was a situation where the 3G licenses were going for extraordinary sums. Then next European nation said, we should do the same.

That guy, the moment he saw that hit the tape he realized that every country in Europe was going to sell its 3G licenses, and that every single incumbent phone company had to bid wildly to get access to it. So there was a shortage of this particular thing, and people had to pay whatever it was. He figured out, rightly so, that they were almost going to bankrupt themselves doing it. He was so fast in realizing that opportunity, seeing the knock on effects, and what it would do to the teleco sector overall. That was, again, brilliance by him. By not thinking it's a single stock specific single country thing, that it was a global thing that was going to spread rapidly. To win in global macro you need to live in the future, and understand the knock on effects.

Michael McCarthy: There's a lot of fear amongst traders, that robots are taking over the world. But that's a trade that would be almost impossible for an algorithm to find, isn't it?

Raoul Pal: Look I do think algorithms will take over a lot of what global macro does. They can understand imbalances in the business cycle, and various bits and pieces. Trade construction, it would take a long time for artificial intelligence to learn all of these kind of things, and to understand the knock on effects is not that easy. However, if you think about it, what they do with the chess supercomputers basically is a knock on effect. So there is a possibility that it's understandable. But unlike chess, you can't game out every single play there has ever been, because financial markets are so dynamic. So I don't know. I think there is space for humans, but less space than people think. There is only space probably for genius.

Michael McCarthy: I'd just like to go back to what you said a moment ago, that macro means living in the future, and in the past, not in the present. I'm sure that there would be a lot of fans of Eckhart Tolle who would be aghast to hear you say that.

Raoul Pal: In what way?

Michael McCarthy: It's not being in the now.

Raoul Pal: It cannot be in the now. If you're in the now, you're reflecting what is in the price now. So you are adding no incremental value. Your incremental value is always living in the future. Where is this going, what is the path to get there, and what are the probabilities of those paths. Being it goes one way, the other way, or multiple variations of. Soros is very good at doing that. I think it was in Soros on Soros, his book, where he talks about the probabilities of paths. That is all about living in the future.

Now if you live in the now, all you're doing is representing the news flow. You have no advantage over an algorithm, or anything else, because you're not expressing anything. What you need to express is where the future lies. Now the past is important in the future, because the history of financial markets, and the history of economies are cyclical. Patterns repeat, and things repeat. People basically follow the same behavior patterns time, and time, and time again. So if you understand the past, you have a better understanding of the future.

Michael McCarthy: So I'd like to get into your understanding of the markets. When you look at a chart, what do you see?

Raoul Pal: You see where the prices come from first, and where we are today. Is it in the bull market, is it in the bear market? Has it been consolidating? All of that information is there. Then you start applying chart patterns. Is there a wedge on the chart? Is it going to break high, break lower? Is there a head and shoulders? Is there a channel it's trading in? Whatever it does, all a chart does for you, it's not wizardry, it's just probabilities. It gives you probabilities of certain things happening. You generally know that a wedge pattern, a pennant, a flag, whatever you want to call it, tend to break in the direction of the trend. I.e. if it has come up, consolidate, it will go up again. So you would say probably something like I would suggest, 70 percent of all of those patterns resolve themselves in the same way. Well that's incredible value. That's odds on your side. Now there are times you're going to get it wrong. Nobody can be right all the time. All you're trying to do is be right more often than you're wrong.

Michael McCarthy: Have you ever ignored the charts?

Raoul Pal: Yes. I'm blind without a chart. Basically whenever I've done that, I'm acting on gut emotions. Some people can do that well, it's just not my thing. Different people have different ways that suit how they think, and how they act. Some people act in short term time horizons. That doesn't work for me. Again, the greatest piece of advice I've ever been

given was from Paul Tudor Jones. He said, Raoul, the best traders in the world are the people whose trading time horizon matches their idea time horizon. He said, because most people tend to have a longer term idea, I think the economy is going from here to here over the next year, and they trade one week trades, two weeks trades, or one month trades. He said, that doesn't make any sense. If you're trading a one week view, trade the one week view, but don't trade a one year view. If you're going to trade a one year view, then expect to have the trade on for that year. That was incredible.

So it allows different people to have different time horizons depending on how they see the world. For me that means longer term. I'm much more of a six months to five year kind of guy. I'm much longer than most compared to the short term. The reason I like a longer term time horizon is having spent a long time in this industry I've realized that everybody is forced into a monthly NAV. Which means that to trade around their NAV, and not lose too much money from month to month, or whatever it may be, to manage their risk, they're basically trading two week, or three week time horizons. So if everybody is competing in one area, compete in the other where nobody is. That's in the longer term. Because in the longer term I find macro much more predictable. You essentially have a much better probability of understanding what the business cycle is going to do over a three year, or two year time horizon, than over a one month or two month time horizon. Because you're just trading one or two bits of economic data. But over that period of time you know the ebbs and flows, or the trends in the economy, or in asset prices. So I've found that's a huge advantage for me, and it's better for how my mind works.

Michael McCarthy: That opens up a question, doesn't it. Can you tell us about some of your biggest mistakes in the market?

Raoul Pal: Oh yes. I've made a few of those. Mistakes are what we learn from, right? We don't learn when we get it right, because we don't understand what we did, because we just got it right. But when you got it wrong, you actually analyze why did I get that wrong.

Michael McCarthy: Pain is a great teacher.

Raoul Pal: Yes. But it's also the hardest thing. Psychologically it overwhelms you. The psychological pain of losing money far exceeds any high that you get from making money. For me, I think back in 2002, maybe 2003, the Federal Reserve had finished cutting rates, but were on hold. I looked at the opportunity and thought, well maybe I can bet on them not doing anything. There were some complicated option ways of doing this. That basically would suggest that I shouldn't be able to lose any money at all, but I could make a lot of money if nothing happened. So I thought fantastic. I could lose very little money.

So myself and the co-manager of the fund. At the time I was running a global macro fund for GLG partners, put on an absolutely enormous bet, along with some of the other really famous macro guys in Europe at the time, some of the largest hedge funds in the world. What happened was something we didn't expect, which was that the price of volatility was marked against us by the market makers, and everybody else who knew about these positions. Basically what should have

been limited loss trades suddenly were losing four times as much as they ever should have done, just because of what they were doing to option prices. That made me realize that overcomplicating a trade generally exposes you to risks you didn't know you were making. So that should have been a winning trade, but we all ended up getting stomped out, and losing more money than we should have done. I think that's a very, very typical lesson, never overcomplicate things.

Michael McCarthy: Just to clarify, the market makers, instead of making a normal skew, were making an S shaped skew.

Raoul Pal: Yes. Because they knew it was going to cause us all the most amount of pain, and there was nothing we could do about it.

Michael McCarthy: How did that make you feel?

Raoul Pal: I would like to say angry, but it made me feel stupid. The point is we took too much risk, thinking we had a very limited risk position, but the risk was much larger than we thought. I think that's very typical of mistakes made by people. Also the other mistake I made, and this was when I started publishing The Global Macro Investor. So I opted out of the hedge fund business, and opted out of the rate race, and moved to Spain on the Mediterranean coast, and started writing macroeconomic research for hedge funds, family offices, sovereign wealth funds, governments, and stuff like that. In 2004-2008 when I started writing, I had really spectacularly good years, particularly 2007 and 2008. In 2009 I based my entire framework generally around the business cycle using the ISM. It had started turning higher, but I was so involved with what was going on, and so bearish of probably the tail risk outcomes that I ignored my entire framework and went with my gut. That cost me a lot of money in 2009. Where I just ignored everything I've done, which is use your framework, use your framework. I just ignored it, because I thought I knew better, I so I'd second guess myself. Once you second guess yourself, and you've walked away from your framework, you have nothing concrete with which to pin your trade on. Then you're just hoping you get it right, as opposed to knowing that it's deviating from your framework, and maybe you need to reassess. That was a very expensive mistake.

Michael McCarthy: So the equity market low was March 2009. How long did you persist with this?

Raoul Pal: Most of that year.

Michael McCarthy: Ouch.

Raoul Pal: Yes. I mean on and off. I positioned off, had another go, because I thought it was going to roll back over again. Whether it's the equity market, or various other forms of risk around that time. That's how it is. You have to learn these lessons. You don't learn a single thing when you make money.

Michael McCarthy: You're also well known for forecasting the next big thing, whether it's a drop in oil, or a move in the dollar, or Bitcoin. Where in the world do you see the next big opportunities?

Raoul Pal: That's a more complicated question. Usually I'm full of answers to that. If we look at what the key driver of asset prices are, it's the business cycle. The business cycle generally around the world is okay, or reasonably strong. However, when you look beneath the surface things are not as good as you expect. But that leaves you in a situation where you want to express views about the business cycle turning over, but it's not doing so, so that's not a great view to have. I've been very long, the US dollar, for a very long time, four years or so. I still think the dollar is in a bull market, but it's correcting. Normally I would say, you've got to do something with the dollar, but it's going against me for the time being. With the dollar going against me, it goes against my view of oil a bit. Oil tends to fall when the dollar goes up. That goes against my emerging market view, so I'm kind of stuck in an area where of the main global macro, I'm waiting for more information, the real opportunity. I see very little opportunity to take risk. Equity markets at all time highs, valuations at almost all time highs. Risk taking is at all time highs. Complacency is at all time highs. The whole thing worries me, so it keeps me out of a lot of things.

Michael McCarthy: Yet volatility is at all time lows.

Raoul Pal: Volatility is at all time lows. So that keeps me out of many trades, because the market is doing something opposite to my view, and it's not confirmed yet by my economic framework. But then I look further and think, where are the opportunities. You see some incredible things that happen. Again, this for me was a classic knock on effect trade. Where suddenly at the end of last year India announced the banning of large notes, demonetization they called it. Every libertarian in the world jumped up and down saying, this is terrible, they're stopping banknotes. I was at first the same, which I think is now lazy analysis, of going to the first thing. Everybody, the newspaper, everybody says the same thing. Everybody starts following each other, and groupthink prevails. I stepped back and thought, I need to read some more about this.

Suddenly I realized that this, as opposed to being the first step, was the final step in one of the biggest transformations of any economy I'd ever seen in history. That was the digitization of the entire Indian economy, with something started called Aadhaar, which was a digital biometric identification for every single person in India. Now there's 1.3 billion people in India, 1.2 billion are now on this Aadhaar system, where they have fingerprint or retinal scans attached to a number, like your social security number. That sounds fine, but in India it meant you could now suddenly prove who you were, because so many people had no birth certificates. If you could prove who you were, you could then open mobile phone accounts, or bank accounts.

Suddenly it started freeing people up. Now what was amazing about the fingerprints, and this new technology also called IndiaStack, it meant that all of your details, like your utility bills, your bank details, could all be attached to your fingerprint. So you could go into a mobile phone store, get a phone, and an account just with your fingerprint in 20 seconds, which is mindblowing. Then it meant you could open a bank account in 20 seconds with a fingerprint, which is extraordinary. But then IndiaStack is also going to start allowing people to put their medical records on. So if you get run over somewhere in the middle of nowhere India, they can find out who you are, and what your medical records are, so they could treat you for any ailments, or whatever it is. But not only that,

attached to this IndiaStack is something called UPI, which is a payment interface. Now the payment interface actually is like Bitcoin in the fact that it's a frictionless payment system with no middleman. Basically I could send you money with my fingerprint instantaneously with no middleman, and no fees. It basically can handle 50 times the amount of traffic that Bitcoin can currently. So that is revolutionary.

So what you're also doing is bringing people into the financial system. They're forced to open bank accounts because they can't use cash. India was 97 percent cash. What you're doing is recapitalizing the banks, forcing the money into the banking system, allowing the banks to relend out. To lend money for infrastructure spending, to build roads, and bridges, and all the things that India needs. So it will transform the economy at the macro level, and at a micro level. Because the rural poor can now suddenly get access to mobile phones, bank accounts, and subsidies. They have proof of who they are. They also got rid of the corruption of the middleman who would take the money away from these guys. That meant subsidies went directly to them, nobody was in the middle taking a slice. What that's going to do over time to India is completely revolutionize the economy. No major economy is anywhere near as close to this digitization as India is. The whole thing is net conducive to a much longer economic growth pattern in India. Now that doesn't mean India won't have large corrections as foreign flows come in and out, or whatever may happen. But it becomes this economy with a demographic that's young, that has no debt, that is eager to do trade, and do business, and now has an economic system with less rigidity and more freedom. So the probability of India having a higher rate of growth for longer is extremely high. So stuff like that gets me really excited.

Michael McCarthy: I can hear that in your voice Raoul. It's very clear that you're still very passionate about the macro environment, about markets. So why did you retire at 36?

Raoul Pal: Because of what we talked about before. I realized the hedge fund business was going to die, and it was going to die because everybody was having to compete in the same time horizon. The investors had gone from being family offices who wanted risk and high return. The old days of Soros, where he would make 100 percent in a year, and suddenly have a down year of down 30, or whatever it may be. It was return driven. It then became the pension funds who invested. They wanted it to look like a bond. That was the prevalence of these big firms like Breven Howard, that could produce good returns with low volatility. But that sucked in all of the assets in the world, because everybody, all the pension funds wanted ten percent returns, and five percent volatility. Or eight percent returns, and four percent volatility. It went lower and lower and lower as bond yields went lower. So basically they're thought of as a bond yield.

So I saw that coming, and I decided I had to get out. I thought the time horizon, the return profile was not the beautiful game that it was, the one that we all read about in Market Wizards, it was something very different indeed. I think I've been proven right. I mean the industry is struggling. Then with the technology coming into it as well, it's struggling even further. When I started writing I called it the death of G7 macro. Now obviously we had 2007, 2008, and a few other great macro

opportunities. But overall the great macro players, and the equity long, short players, and everybody else has basically struggled.

Michael McCarthy: Indeed. Of course the greatest trend at the moment is towards passive investing in equities. But you're not really retired are you?

Raoul Pal: I wish. I was semi retired for a while. I was writing. I thought I was a bit of an Ernest Hemingway. I grew a big beard, hung around in the Mediterranean. Actually to go back, I was one of these lucky people who predicted 2007, 2008. I was highly uncomfortable with people I knew coming up to me asking, why didn't we know? I was like, that's not right. Why did people at the center of the financial system all know, and those guys who had their life savings in it didn't? I was like, this is not good. It sat really uncomfortably with me. I thought, I need to do something about this. Then I was observing the trend in the media business, and seeing how you didn't need a broadcasting license to have a TV company anymore, because on demand video had now become the thing. YouTube had launched, and the world effectively changed overnight, and the incumbent television companies didn't know what to do about it. They were just paralyzed with fear.

So over a glass of wine in Spain one day with a couple of friends we thought, why don't we start a media company that takes on this challenge of not creating finance as entertainment, but finance as something meaningful. Treating people's life savings seriously. Democratizing financial information, and making it available to everybody. High quality information, not the three minute soundbytes on financial TV, or the low quality newsletters that promise 1,000 percent returns in a week. We thought, people deserve better than this. So stupidly, knowing nothing about media, we started a media business. That's what I do now. That's Real Vision. I still write The Global Macro Investor, I still obviously invest myself, but I'm also the CEO and Co-founder of Real Vision, which is the financial television and media company that we started three years ago that has now grown from being some videos, to having customers in 100 countries, to having a podcast, which is something a lot of your guys might like called Adventures in Finance.

Michael McCarthy: Adventures in Finance.

Raoul Pal: Which you can find on iTunes. Also we have written research, we have a free newsletter called 20/20. We have written publications, Real Vision publications. We have all sorts of stuff. So we're coming at the media from multiple angles, and trying to reinvent and disrupt every part of it that we can.

Michael McCarthy: Is this about truth and transparency?

Raoul Pal: Yeah. Truth in finances, the core symbol of what we represent. We're subscription based. We have no advertising, no sponsorship, and no editorial buyers.

Michael McCarthy: You're obviously very well versed in all things market. Have you had much of a look at behavioral finance?

Raoul Pal: Yes. I love it. I gave a speech at, I think I've done it at Cambridge University, and Warwick, which was called Everything They Teach You About Economics at University is Shit. Sorry for the language. Because basically all economics taught universities are model driven. Those models are all based on a little innocuous two words in Latin, *ceteris paribus* all things remaining equal. Basically that means they don't exist in the real world. So these models don't work. They've failed us time and time again. They've almost blown up the world endlessly. We switch between the Keynesian model, and the monetarist model, and they're all the same. In fact, they're just models. The sudden advent of the advances in behavioral economics, and behavioral finance is extraordinary.

When you marry behavioral finance with big data, you change the world. I think the future of economics lies in an understanding of human behavior. If you understand the business cycle, which is what I'm a student of, you understand it's cyclical. If you understand markets, you understand people do the same things time and time again. If you go to a cinema and shout fire, people on average will tend to act the same way. Once you understand that, you can understand incentive patterns, and how to affect behavior. Once you do that, you can change economics properly. Once you start putting government policy around incentives, as opposed to disincentives, which is usually the case of how it's done now, you actually can create an economic system that is more balanced, and understandable, and doesn't make the mistakes that we make now.

Michael McCarthy: Would it be fair to say that you view markets as organic, that they live and breathe?

Raoul Pal: Yes. Absolutely. They live and breathe, but they always repeat themselves.

Michael McCarthy: Well this has been fascinating. Thank you for your generosity. I'll certainly be checking out Real Vision, and 20/20, and all the other offerings.

Raoul Pal: Fabulous. Thanks very much. I really enjoyed it.

Michael McCarthy: That was Raoul Pal. He has written a blog post exclusively for The Artful Trader on our site, where you can also access limited time only offers for new and existing clients. Just visit theartfultraderpodcast.com.

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