

The Five Forces Shaping the Global Economy - With Ray Dalio, Founder of Bridgewater Associates

Ray Dalio – 00:00 (Intro Highlight)

The greatest tragedy of individuals, and then collectively of mankind, is confidently thinking they're right without stress testing their thinking with the smartest people.

Simon Brewer – 00:13 (Introduction)

Welcome to the Money Maze Podcast. I'm Simon Brewer, and Will Campion and I have created this show to explore and unravel some of the mysteries surrounding the investment business. You can keep up to date by visiting moneymazepodcast.com and please sign up to our newsletter to ensure you won't miss a release. If you enjoy the show, please subscribe, and we'd love you to tell a friend or colleague about it. Thank you for listening. According to Bloomberg, our guest and his firm have made more money for investors than any other hedge fund in history. He's been dubbed the Steve Jobs of investing, and Fortune has referred to the company he founded as the fifth most important company in the US. Investor, commentator, philanthropist, an analyst of history's relevance in assessing today's economic and social challenges. So Ray Dalio, founder of Bridgewater, a very warm welcome to the Money Maze Podcast.

Ray Dalio - 01:06

It's so great to be here.

Simon Brewer – 01:08

Well, I have been a huge fan of yours for years. I've read your works, which you've shared generously, and we're honored, and I think our listeners will be thrilled and they're now in over 110 countries, and our viewers on YouTube, to have this opportunity to hear and see you. So thank you very much for giving us your time.

Ray Dalio – 01:27

Thank you for your time.

Simon Brewer – 01:29

You and I share one thing in common, which is that we both have August the 8th as our birthdays. And we've both had careers in investing, but I don't think that that necessarily would be viewed by most people as proper parallels. So we're going to jump right in. And in reading your books, which have been fascinating and very, very insightful, you wrote about your early days. You said your father was a responsible man dealing with an irresponsible kid. And I wondered on a scale of one to 10 just how irresponsible you were.

Ray Dalio – 02:01

I was extremely irresponsible. I mean responsibility, I was beyond responsibility. I had this challenge with my dad. He would make me mow the lawn of course. I mean I should mow the lawn. We had a small

house, a lawn in the front and the lawn in the back. And after a lot of pushing, I would mow the front lawn. I said, "I'll do the back tomorrow." It would rain, the back would grow and so on. I hated school. I didn't want to study. I wasn't interested. I loved markets. When I was a kid at 12, I used to caddy. I did a number of jobs. This was a good influence. I wanted it, I don't remember how it got to me wanting it, but I had a paper route, and I shoveled driveways during snows, and then I caddied. When I was 12, I bought my first stock because I took my caddying money, and the people I would caddy for would talk about stocks in the '60s. It was there. So I did the things I liked. Responsibilities, I wanted no part of them!

Simon Brewer – 03:05

On that same scale of one to 10, did you ever get to 10 in terms of responsibility?

Ray Dalio – 03:11

Yes, because later in life, I would say I got to responsibility after having kids and wanting to do my own thing. So I wanted to do my own thing and I had kids. Okay, that gives you responsibility. Because if you want to make it work, that's your choice.

Simon Brewer – 03:35

We just released today an episode with Sir Anthony Seldon, who is the country's leading educationalist, talking about are we educating our children properly? But of course, it does come right back to the fact that, are we responsible parents as well?

Ray Dalio – 03:46

This is true. When my parents gave me... Oh boy, I wish everybody could have that. I was so lucky. I had two parents who loved me. My dad was a jazz musician, was a lower middle class family. My mom was a stay-at-home mom. They wanted me to study and all that, and I wouldn't want to do that. But I did get somehow the paper route and all of that, and for the money that I learned. So I learned work and money, and then I learned practical interactions with reality. And I knew that I, at the end of the day had to take care of myself. So I think that that education that you're referring to in which there's practical education, not just this academic education which you sit in a class, and your teachers spew things you're supposed to remember, and you write them down, and you're tested on how well you remember them as distinct from doing. Doing is the best way to learn I think.

Simon Brewer – 04:49

I'll send you the episode, because I learned lots of things, lots of things that I wish I'd learned a lot earlier. But anyway, never too late, I guess. So let's jump to '74. You start work at the broker Shearson Hayden Stone. I'd read that you were dissatisfied by the hierarchical structure. And then later that year, it is said, you'll correct me if I'm wrong, but, "Ray got into a drunken argument with his superior and punched him, which eventually led to his termination and the genesis of Bridgewater." And I did think it probably should have been dubbed the billion dollar punch, but you then start Bridgewater. And my two questions were why, and what was your initial vision?

Ray Dalio – 05:25

I'm going to describe that, but I'm going to start in 1971 and tell you what. I was hooked on markets. And between my graduation in 1971 from college and going to Harvard Business School, it's because I liked college by the way that I did well, and I got to Harvard Business School. But in that summer, I was clerking on the floor of the New York Stock Exchange. And on August 15th, 1971, President Nixon

announces on a Sunday night that the United States is defaulting on its obligation. He didn't say it that way, but in other words, won't give the gold that it promised to give for the money. And I went down on the floor of the stock exchange, and I thought that everything was going to collapse because money as we knew it was ending. It was exact opposite. The stock market went up a lot, the most in decades. I didn't know how devaluations worked. That was the first devaluation I had. And I studied history, and I found that Roosevelt did the exact same thing on March 5th, 1933. In other words, he got on the radio at the time, and he told that you couldn't get the gold, and he devalued and had the same effect, and I understood the mechanics. So now, I'm addicted to the markets. I go into Harvard Business School. And when I get out, we're having that phenomenon. They devalue the dollar and stocks go down. We have this inflation. And I came out in 1973 from Harvard Business School, which is the same year as the oil crisis, and stocks were going down. And because in my summer job I had worked for Director of commodities, because I happen to trade commodities. At the time, I was interested in commodities. I was hired at Shearson Hayden Stone to be responsible for commodities and so on. But I still had this irresponsible streak in me. And my boss and I on New Year's Eve, we had a company party. Before you went to your regular party during the day, we would go in and we'd have drinks, and then we got into a fight and I decked him. And he and I, and everybody realized maybe I shouldn't be in the company. But clients of what was then I think Shearson Hayden Stone at the time, clients then wanted still to get the input from me and they'd pay me. And so okay, I liked that. So I started that. I had to call it a company. When I graduated from Harvard Business School, I set up a company for trading called Bridgewater. So I used that name and I set up Bridgewater. But it wasn't a company. I was in a two bedroom apartment. My roommate moved out, and on the second bedroom I worked. And then it became Bridgewater. So that's how Bridgewater started.

Simon Brewer – 08:27

Got it. And I think I'm right in saying that you offer this strategic advice, currency advice to corporates and to other investors. And then, was it the World Bank that changed the game because they asked you to manage money? Was that the big pivot?

Ray Dalio – 08:42

Yeah. In 1985, they gave us \$5 million, which I thought was a ton of money then. I would put out research, and I'd sell the research, and then I would do consulting for those who had commodity exposures on how to hedge and lots of things. Currency risks, other things on hedging. And I put out this, and the World Bank got that research and said, "Well, why don't you manage bonds? You can manage bonds." And so they gave me my first bond account, which was a \$5 million account, and I thought \$5 million was a lot of money. So I started that, and that's how we started to get into the asset management business.

Simon Brewer – 09:25

Before we get into some of the really important geopolitical things we're going to talk about, how do you reflect on that journey of building Bridgewater?

Ray Dalio – 09:37

I think life in the broadest sense, it's almost you're born, you go after the things you want, where your pull is toward, you have your goals. And then you have your encounters with reality. Your encounters with reality teach you how reality works. And in the process, particularly pain, of an expression of a principle, pain plus reflection equals progress. Okay, reality works in this way. It produced a signal here

for you. And now reflect, pause and reflect. How does reality work, and how should I deal with reality? And then you learn. And through that interaction, you evolve. So that's what I was doing. I had my nature and I love the game. And then I pursue that path, and then I have my mistakes, the mistakes I've come to treasure. I've developed an instinctual reaction. If I have a pain, there is a message. It's like if I solve a puzzle, how does reality work and how should I deal with it? I get a gem. And that gem is a principle, a learning of how I could deal better in the future. And so that was what the progression was. So I know what I wanted. I know my nature. I'm encountering these things, I get fired. I go to the other, and I'm learning. And I can tell you many mistakes. I can tell you the biggest one that changed my life in the most important ways, mistake, thank God for it. But anyway, that was the journey.

Simon Brewer – 11:24

Why don't we just share that mistake, because I don't want to get lost later on and you are going to tell us something important.

Ray Dalio – 11:31

Okay. In 1970s, American banks lent a lot of money to emerging market countries, and I in 1979, '80, '81, calculated that with the tightness of monetary policy that existed, that those countries would not be able to pay back those debts. And I said very publicly, that this is going to be a big debt default and it's going to be terrible. And that was very, very controversial at the time. Then in August 1982, Mexico defaulted on its debt, August 1982. And several other countries followed. And so I got a lot of attention because I called that and then was asked, what do I think that happened? And I thought that there was going to be a terrible debt crisis that would hurt the economy and so on, and I couldn't have been more wrong. August 1982 was the exact bottom in the stock market. The doubt was at '77. So I lost money for my clients. I lost money from me. I was so broke that I had to borrow \$4,000 from my dad to pay for family bills. That was very, very painful. And that was what changed my life. That was the most powerful thing, because it gave me the humility I needed to balance with my audacity. In other words, it made me think, how do I know I'm right? It made me think of the risks of being wrong, and that led me to deal with that, and I dealt with it in two ways. First, it gave me an uncertainty, that was a healthy uncertainty, that allowed me to make changes. At that time, I'll tell you what it was like, risk and return go together. And I said to myself, "In order to have a terrific life, I want the best life possible. I'm going to have to do risky things, but I cannot continue to do this. I'm going to be terrible." So it felt like I was on one side of a jungle or all sorts of threats, and how would I cross the jungle to get to the other side of the great life, great success that I wanted? Or, would I stay on one side of the jungle? In other words, I was faced with a choice, am I going to put on a tie, commute to New York on the train and live that life, or am I going to do something else? I realized, how do you go through that jungle? So the way I went through the jungle is first to find other people who could see things I couldn't see, who were on the same mission to go into that jungle and to be successful. And so I tried to find the smartest people I could who disagreed with me, and would challenge my thinking so we could explore what was going wrong. And then I also learned that diversification properly done could reduce my risk by up to 80% without reducing my return. So I learned out of that painful mistake and approach to life that I really want to pass along. In other words, that power. Don't always assume you're right. The greatest tragedy of individuals, and then collectively of mankind, is confidently thinking they're right without stress testing their thinking with the smartest people. It's a tragedy because they could so easily improve their decision-making and how to work together if they can recognize that those smart people who see things differently, working that through intellectually can get you into a better position of more likely to be right and also working together. Which by the way, is a big problem of our world today. Because we have all these sides so

damn sure that they're right and they are reconcilable differences, and they will only fight with each other. They will not work it through.

Simon Brewer – 17:24

And we're going to come back to some of those, and some of what you just talked about is brought out really well in your book principles, your books. But I will just say we may have shared it with listeners before, but back when you were getting your account from the World Bank in '85, I had two memorable interviews. One was with Goldman Sachs. When they asked me what I wanted to do, I said portfolio management for high net worth individuals, to which the answer was, "We don't do it." And the interview ended. And the other one was with Salomon Brothers where I interviewed alongside Michael Lewis, who it turns out knew the Managing Director's wife and he got the job and I didn't. So there we go. My lessons in humility.

Ray Dalio – 17:57

We have a lot of history in common.

Simon Brewer – 18:00

Your new book, 'The Changing World Order', you have conducted a study of the major empires, putting into perspective the big cycle that's driven successes and failures of the world's major countries through history. And I'm going to use my shorthand, but the five mega forces you believe are at work are debt, conflict in the changing world order, populism, nature's changing patterns, and technology. I may not have that quite right, but let's just start with the first one of those, and then we'll work through them. Big government debts aren't new, but this isn't post-war America with all of the growth that was attendant. So how does this debt get resolved?

Ray Dalio – 18:41

Before I get into the data, I want to explain that what I had learned from the experiences I described before, particularly in 1971 when I didn't understand the devaluation, I found the same thing happened on March 5th '33. That led me to study the Financial Crisis, the '30s, and that understanding of history led me to be able to anticipate the 2008 Financial Crisis. And we made a lot of money in 2008 when most everybody lost money. So I came to realize that most of the things that surprised me were due to them not happening in my lifetime, but that they happened many times in history. So when I see things happening, that are big, important things happening that haven't happened in my lifetime, I want to go back and study history. So I'm not a historian, I'm just a guy trying to deal with now and next year of what's likely to happen. The three things that are happening in our lifetimes now, that never happened in our lifetimes but happened in history, were the amounts of debt creation and debt monetization, that whole dynamic. Then last time that happened was in 1930 to '45 period. The second is the amount of internal conflicts between the left and the right populous related to large wealth and values gaps. So those populists are individuals who will fight and win at all costs. So the idea of a democracy of working across party lines to solve things becomes in jeopardy. So in the 1930 to '45 period, four countries that had democracies and parliamentary systems chose to have autocracies of one side winning out of the other, that in history. And number three is the great power conflict. In other words, comparable powers, the rising power. Economically and militarily, that rising power challenging an existing power, existing world order. That was Germany in Europe, and Japan in Asia, and happening for the same reason. That same reason is there was an economic depression, there was an economic bad thing caused by a lot of debt that created this fight; internal fight and external fight for power. Who wins and who nominates.

And because I saw that of the thirties, and because I'm thinking about what is the dollar as a reserve currency, how does this all work? I knew that I had to go back and study. I wanted to study the rises and declines of reserve currencies and empires. And those arcs like the British Empire before, and the Dutch before that, that was the world's reserve currency. And all of those led me to a study of the last 500 years of the rises and declines of different economies and so on. And I saw that the same thing happens over and over again, which is that confluence of those forces that we're talking about. These five great forces. The debt, the internal conflict, the external conflict for world order, the acts of nature caused more debts and toppled more orders, domestic political orders and international orders. And number five, man's inventiveness of technologies and their inventiveness. With these five forces were the biggest forces, and I saw them play out repeatedly. So now as we go into answering your question, as we look at the debt, we have the political, we have the external, geopolitical. We have climate, which is going to be very costly in one way or another. And we have the technology. So I'm happy to go into whichever one you want to go into. I think you want to go into debt first, probably, right?

Simon Brewer – 23:00

Yes, please.

Ray Dalio – 23:02

Okay. So it's just the reality that one man's debts are another man's assets. You can't spend more than you earn and not pay back or default essentially on your debt over a period of time. But as the debts accumulate, mechanistically debt service becomes a higher and higher percentage of your expenses. So that squeezes out consumption. It's happening to the government now. And also, in order to alleviate that and not stop the debt, because it's more pleasurable to spend more than you earn. So nobody wants to go the other way, but yet you have to. In other words, when you are paying back debt, you have to spend less than you earn to pay back debt. But there's a mechanics, but that doesn't end. It keeps compounding. And then what happens is one man's debts are another man's assets. So if you don't have a return in relation to inflation that is high enough by holding that debt, you won't hold that debt. You'll instead borrow that debt. And so what happened as we went through the accumulation of all this debt, which really culminated in 2020 and beyond with the creation of more money and giving out more money, the governments sent out a lot more money than was necessary to compensate people and companies for losses of income. In other words, in the COVID period, there were losses of income by people and losses of income by businesses. And if you said we're going to neutralize those, you'd set up a certain amount. Well, what you did was the governments typically, and this is around the world mostly, but it's a world phenomenon, sent out much more money than was needed to require that. And with that greater amount of money...you also had at the time, they were giving away money before Covid. You had negative interest rates. Negative interest rates, and you didn't have to pay back principle. So what that encouraged everybody to do was borrow and buy stuff, and it was a lousy deal to lend to the lending. And so the central banks had to come in there, and they did the lending because what they did is they would buy up the bonds, because there was not enough demand for the bonds. So they buy the bonds and they keep the interest rates down there. And so you build up this debt, and you have this debt, and you move it forward. So they send out this money. And lo and behold, inflation goes up. Well surprise. And if you give out a lot of money to a lot of people, they're going to spend a lot more money. And we went through that dynamic. So we have now a lot of debt accumulated over decades, but particularly the government gave the household sector and the business sectors lots of money. And now we have the government debt, and then you have the central banks who bought all this debt. All the central banks have lost a lot of money, equivalent roughly for most central banks on average 8% of GDP. So now, how does a central bank work? Okay, it has negative capital. How it works varies by country.

More responsible countries say the government has got to give the central bank capital so that it's capitalized. In the UK, it's about 2% of GDP has got to now go to the government, they got to give them 2% of GDP. Which means that the government has got to now come up with another 2% GDP. Where are they going to get the money from? Are they going to borrow it, or they going to raise taxes? So you see this self-reinforcing problem that then gets to the point that it becomes intolerable. And at the end of the day, holders of the debt want to sell the debt. When they want to sell the debt, it's much bigger selling than even comes from the new debt. Right now, there's a lot of new debt. You run a large budget deficit. Okay, how do you get that? You sell bonds, you sell debt. Well, there's the new debt, but there's also a lot of the old debt that nobody wants to own and they're losing money in that debt. You get the selling of that debt and you have a major problem, because then they have an imbalance. Then what the central bank is forced to choose between is interest rates rising a lot that curtails everything, has very bad implications, or coming in and printing a lot more money. So that's where we are.

Simon Brewer – 28:14

Later on in the conversation, we're going to return to the state of the fixed income markets currently, but we'll hold that debt question there for now. As we think about that international conflict or the changing world order, it's that dual polarity of China versus the US. As you've diagnosed this and processed it, what would you consider the most likely outcome of this conflict?

Ray Dalio – 28:38

I've been going to China since 1984. 1978 was when Deng Xiaoping came to power and made two major changes. Reforming the domestic economy, in other words, making it much more capitalist. He said, "It's glorious to be rich," and when asked about injecting capitalism into the economy versus communism, he says, "It doesn't matter if it's a white cat or a black cat, just as long as it catches mice." And so what he meant is if it works. And so that was a big move, and I was invited in 1984 to teach the only company that could deal with the outside world. It's called a window company, CITIC was its name. I was asked to come in there and teach them about how the world financial markets worked. I was very curious, because China was closed and there were communists behind that. My image was masses of them with Mao's little red book in the square and all that. I wanted to go in there and I was curious, and I went in there. And from that time through now, I had the pleasure - never making money, money wasn't my objective - I had the pleasure of getting to know good people, and they were building their economy, and they were building their markets. And I gave advice because they were friends and I liked them. And I watched this evolution take place, and I watched then their power and their incomes rise. Since I started going to China in 1984, per capita income increased by 28 times. The life expectancy increased by 10 years, poverty rates went from 88% to less than 1%. In other words, wow. They built the biggest economic change, and with that came changes in power and so on. And I watched that come and develop into the conflict, starting really with intellectual property issues and then trade disputes. And I watched that transpire, and I'm still very close to seeing the both perspectives. Okay, so now you have a classic war, let's say, the United States and the Western powers, the existing world order, the dominant world order being challenged. And then having more of a containment policy. Very, very similar to Japan in World War II. In Japan in World War II, you had that rising power in Asia. By the way, we could do the same with Germany, but you had the rising power in Asia, and you had geopolitical conflict. And the United States essentially prevented the oil from going into China and froze Chinese financial assets, which is the equivalent of sanctioning as part of that process. And what's happening today is the same thing. You are seeing we're embargoing chips or oil, and we're preventing chips to go in from there, which is part of the economic sanctions. It's part of that pressure because of the geopolitical [context]. And with that, we're also seeing the possibility of sanctioning their debt. In other words, like Russia, you

could see China's debt not being in dollars, not being sanctioned. And that's what's happening. So now, we have irreconcilable differences. There are a number of those irreconcilable differences that they're very close to the red lines on, and I can review those. There is Taiwan, of course. There is chips, and embargoing chips. In other words, not allowing them to receive and import certain chips and us, because the winner of a technology war is going to be the winner of this global world order war. And then there are other conflicts. So we have that conflict, and we're going to have that conflict intensify during the political period. What you have is a competition, a wrestling match, which is very near red lines. So for example, Chinese support or dealing with Russia in a number of ways is helping them in dealing with Ukraine. All of these issues now come right to the edge, and you're going to have that struggling match. So they are approaching, in their way, very Confucian... I studied the dynasties since the beginning of a unified China 221 BC, and I follow it. And what's happened in China throughout history, but it's also happened in the world throughout, is when you come into a conflict period, there is autocracy or downright dictatorship. Because in periods of war, there is a great risk of internal conflict. So everybody's got to line up, and it's almost dictatorial. Even in the United States of World War II, you were not allowed to be anti-war. And in all countries, you have to line up behind the side and fight and do what you're told. And so what we're having, President Xi in China says, "There's a 100-year storm on the horizon and we have to operate." So that's what's going on there, and they're doing it in their way, which was very similar to Japan and others doing it in their autocratic, dictatorial, whatever way. And so you're seeing a breakup, and you're seeing almost this ideological difference between. And that also is coming out with two different approaches, almost a fascist approach and a communist approach, on both sides in terms of, what are you fighting for? So that's what we're seeing happen. I think that as we look forward, both countries are fearful of war. Because if you cross that line, economic war or military war, our economies are very intertwined. And if you cut this, it's enormously impactful. 22% of American manufactured goods imports come from China. And so you cut these off, these are painful interactions. It's economically cut off their money, and then you have a retaliation of money. What is the value of money and all that? But then you also have that conflict that could be military war, to be very specific in China's case, and Taiwan. Here's the history of Taiwan very quickly. In the 1800s, starting around 1840, the foreign powers came to China, and China was very rich, they didn't want to trade, the British come in, others come in and they want to trade. And the Chinese say, "You don't have anything to sell us. Please stay out. We want to keep our communities. Stay out." And then they had the Opium Wars and they lost militarily, and they call it the 100 years of humiliation from 1840 to basically 1944, which is the end of the war. During that hundred years of humiliation, foreign powers came in. Japan takes Taiwan. And when Japan takes Taiwan at the end of World War II, Japan loses the war. China was an ally of sorts. They give Taiwan back to China, and everybody agrees that. However, China has a civil war. So who's in control of Taiwan is not clear. So the losers of the civil war, the capitalists who are Chiang Kai-shek, they run to Taiwan. They control Taiwan. So everybody agrees it's one country and Taiwan's part of that country. They just argue who's in control. And then when Henry Kissinger about 50 years ago then interacts with China, bringing it into the world community, they reaffirm that there's one China, and Taiwan's part of China, and there should be peaceful reunification over a period of time. And so there's one thing that could cause a war here. It would cause a war. Everyone knows this in the United States, [and] politicians and China, so if the United States says, "We're in favor of Taiwan independence." So what we are doing is there's a pushing of that limit. There's a good chance that during the election committees that they will say, "We will defend Taiwan's independence," and that there will be sales of military equipment to support that position. And so we're very close to a red line. Now you asked me what I think is going to happen. There are other red lines we're talking about, very close to irreconcilable differences that there could be fights over. I think that what's happening now is that we're not going to cross those red lines now, but we are both sides preparing for that war. So you see changes in China that have to do with getting rid of certain leaders, the defense minister and the like, and lining those people up, and you will

obey. There's no room for debate. You line up, and we're going to behave that way. And you're seeing developments in the United States, also our set of issues in the United States. Internal political conflict. Who's going to be in control? How is that going to work and the military? So I think that you're not going to cross that line. You're going to press the edges of it, and it'll be risky, but both sides are not prepared to go to a higher level now. But those risks increase over time, and how they transpire will have a lot to do with how both sides are effective. The most important thing that the United States can do or what powers could do is be strong. What does that mean? Strong financially, strong working together, being united, being productive, being strong. But we have an internal conflict and an internal debt problem that is facing that. So each is their own internal problems, at the same time as their external problems. People sometimes say, "Is the United States going to win or China's going to win?" No, I think the thing to realize is that for the foreseeable future, we don't know who's going to win per se, but that they're going to be formidable powers that are going to be in conflict right at the edge, with the risks increasing with time.

Simon Brewer – 41:43

As an investor, there is significant bottom-up value in the equity world. There is all this geopolitical risk that you've just articulated. Ultimately, does that mean that your preference is to stay away?

Ray Dalio – 41:56

My number one preference is to diversify well. I told you back in the old days, one of my mistakes was how could I have all this great upside without so much downside? And I learned that if I could take good bets, winning bets that were uncorrelated and diversify well, that I could eliminate up to 80% of my risk without diminishing my expected returns. And so my view is by and large, I want to diversify well these portfolios. And I by and large want to distinguish geographically where I'm investing by three major categories. But firstly, in other words, spread it around the right way. But also, I look at what's health. What's health is three things. Are you earning more than you are spending so that your income statement is good and your balance sheet is good? Places that have good savings and good financials will be better off in this time than those that don't. The second is, is there a risk of big internal conflict? If you're talking about returns on investments and you have an internal conflict, particularly between the left and the right, and particularly about how to get money, there is always that you want to be a place where at warfare internally. One, history shows that you could lose more money not just in price movements, but can be confiscated from you or taken from you in different ways. So paying attention to that, I don't want where there's internal conflict, particularly extremes left and right, and all of that. Number three is I want to minimize places where there's going to be an external war, because history has showed that the neutral countries have done better than even the winning countries in wars economically. The British won the war, but they bankrupted themselves. And the way the Americans made a lot of money is that they entered all the wars late, and they accumulated a lot of money, gold at the time. They accumulated a lot of gold and became the richest country, most powerful country in the world. So when I look around the world, I want, and my portfolio, really good diversification of asset classes and so on. And I want to have a bias of spreading it out with the favorability of where there's good conditions rather than bad conditions. So that starts to enter places like the ASEAN countries. Singapore is a financial hub in a region that has rising living standards and is more neutral. It's a risky neighborhood, but they're a plot. India is emerging as a power that is also remaining neutral. You're seeing a number of neutral states. The Gulf states, you're seeing United Arab Emirates, and Saudi Arabia, and so on actually having Renaissance type of periods. So I pay attention to those places. But I diversify well in terms of asset classes with a general bias along those lines.

Simon Brewer – 45:21

Now one of these mega trends that you've highlighted is, you might dub acts of nature, pandemics to droughts. We'd had Peter Frankopan, Head of Global History at Oxford [University] on the show a year and a half ago, but he was actually the only proper academic to warn government a year ahead of COVID. Not that helped the UK or anybody else's plan. But what sense can you make out of something so inherently unpredictable as you think about the future?

Ray Dalio – 45:50

What I know about COVID, and there's climate change. For whatever reasons, cost of climate change, we don't even have to get into. I don't think there's much debate about the subject, but you don't even have to debate it. What you do know is that in order to go from what's called brown energy to green energy is going to cost a lot of money. So there are three ways climate has an effect. The energy transition, very expensive because you have to invent it. You don't use as much, you don't invest in the old technologies, the old energy sources. So you have less supply in that period of time before it's replaced by the newer energy sources, and you have to invest in developing those and so on. So you have that first transition cost. The second cost is, we do know that climate change, sea level rising and the number of things, are requiring the changes of infrastructure in different places. Miami and Jakarta underwater, and other places, and many places there's going to be infrastructure builds and things that are going to be costly for that. And number three is that it has damage. You have worse crops. And you have its damage. The estimated cost of that, whatever you do, let's say you make more progression to find alternative energy sources. Well, it's going to cost you a lot of money to do that, or you don't do that and then you're going to have more costs on the other side. Whatever you do, it's going to be expensive. And that estimated amount is between \$5 and \$10 trillion a year, and it's very difficult to do in poor countries and still a hell of a battle. World GDP is \$100 trillion. So this realistically is going to be very costly, something like 5 to 10% of GDP each year. I don't know. Wow, that's a lot of money. That's coming at the same time as we have the other issues, like we say the deficit. The number one thing is okay, stop spending so much money relative to what you earn. But we're now in a world where they say, "Well, we have to spend money. We have to spend money on climate, we have to spend money on infrastructure, we have to spend money on education, we have to spend money on a lot of things." And there's a lot of merit to the fact that we have to deal with each one of these things, and it's costly to do that. But where does the money come from and how are they going to deal with it? So the climate thing relates to the internal conflict thing, relates to the financial thing,

Simon Brewer – 48:44

Which also then leads you to your technological piece, because mankind's been extraordinarily innovative, perhaps now more than ever. But that throws up opportunities. It throws up a ton of problems as well. So just tell me how you're processing the two sides of that technology coin.

Ray Dalio – 48:59

This is a truly remarkable revolution. I have very intimate contact for many years on using computerization for thinking, and replicating that, and all of this. So I'm immersed in this. And I think that this is the greatest impact on our ability to be productive because it is on how we think. If you look at the evolution of man, most people were like oxen in the agricultural era. They plowed and that was their purpose. And then in the age of exploration, they became clever. They can go out there with ships, and get money from other places and resources. And then you move forward, and man's ability to think created the industrial revolution. And okay, man's ability to produce. So we've gone from physically

enabling ourselves to mentally and thinking wise, and this is a lurch forward in our thinking that's going to affect everything. So that's tremendously productivity enhancing, but it's a power also like nuclear power. Meaning it can be used for war, it can be used to do each other harm. It's a great power. And it's certainly going to create incredible disruptions in who benefits and who loses. In other words, the inventors of those technologies, and so what will be the multi-billion dollar companies, and those who found them will make a tremendous amount of money. And those businesses and entities that use them to replace people. A big thing right now is the combination of robotics and AI, which is replacing people. And how that is dealt with will have big implications in terms of wealth and so on. And that has to be dealt with. And how we deal with it together in a world where there's ideological big differences on how it should be dealt with will be a big challenge.

Simon Brewer – 51:22

I do note, because you would be too modest to say it, but Bill Gates says about your book that you have provided it with invaluable guidance and insights that are available. So I know you are thick in this whole technology discussion. But what intrigued me as I read about your history is that you had these investment ideas, you developed a process. And quite early on, you started integrating them with technological support, or machine learning I guess as it was then. So how has that now moved at a place like Bridgewater, where you're still involved with the world of AI?

Ray Dalio – 51:56

What I learned, and I really want to pass along... By the way, I'm at a stage in life, the reason I do interviews like this and so is I want to pass along stuff. What I learned early on is that when I encountered my dealings with reality that gave me these lessons, that I would reflect and write down how does reality work, and what are my principles for dealing with reality? I have a principle which is pain plus reflection equals progress. And so I would write down those principles. I also knew in the investment when I'm doing that, is that if I can have clear decision rules, that I could then specify and see how they would've worked in the past. Because decision rules that I wrote down and I learned from the 1930s allowed me to make a lot of money in the 2008 Financial Crisis; Bridgewater and I made a lot of money in that time for our clients. I knew that if I could write them down. I wrote them down, I could put them into algorithms. So it was like let's say on thinking, okay, I'm going to systemize my decision making, I'm going to test all my decision making, and I'm going to put them into algorithms. I was able to, with others that I had work for me at the time with me, we then would put those into algorithms. So what we saw, it's like creating a computer chess system that represents my or our way of thinking. And what I learned from that is it could be superior in many ways. It couldn't invent the same way, but it could be superior in many ways that it could process a lot more complex things instantaneously, a lot quicker, a lot less emotionally. And I could also see how it would've worked in history. And that was a key to Bridgewater's success. So all along there, there was the computerization of the process and so on. That evolved and as we're now moving through generative AI, natural language processing, and so on, we are in the process of course being at the cutting edge of those things. And I'm developing synthetic thinking. Because I wrote down so many of these principles and because I've operated that way, people go on the show and I go online, you ask ChatGPT because they've been expressed so much, so clearly in books of principles. I write books of principles, that you can actually have a conversation with it about what would I do about this and that. So I'm building on that and I'm intimately involved. And I think each individual more and more will do that. I'm involved in that process even if there wasn't technology, that process of pausing, reflecting, how does reality work, and how should I deal with it? When you encounter reality, particularly in that moment, write it down in words. Write down your principles.

That process, even to communicate it to others you're dealing with, that helped me communicate when I was raising Bridgewater. What are we going on? I know my principles. If this, I will do that. And then you build on that. I think you're going to see that have an enormous impact. I think people will be doing that more and more. There'll be an interaction between people and this almost synthetic type of people, in which they're going to mutually support each other, and then you'll see better collective decisions. I think you'll go to your handheld, your smartphone, and you will be able to get really good advice from the best people. Like you mentioned, I know Bill Gates and we do that. I'm very lucky to talk with many leading people in many domains, get to know them and so on. I tell them all, "If you were to do that, write down your principles and so on that way, then we could get to the best collective thinking." And I think we're moving in that direction.

Simon Brewer – 56:15

So this was a little bit of your work that I didn't fully understand. You write about knowing how to deal with my not knowing. But you're also a macro investor, and one of the essences of the great macro investors is they develop an intuition and they build that intuition into a concept, and investment theme, and they look for markers along the way. And you've created something which I believe you call the 'believability waiting'. And I just wondered if you could explain that.

Ray Dalio – 56:44

Well, when I was forming the company, and I knew that the best way I could get decisions was to have the best decision-making possible, and it didn't have to all come from me in my head, what I wanted to do was to create an idea meritocracy. So how do you make the best ideas win out? And I know that people have different strengths and weaknesses, different skills, different areas of knowledge. And so what I did through the collection of data in a lot of ways, is to be able to ascertain in a manner that everybody considered to be fair, how strong and weak your believability is in different subject matters, domains, and so on. We are all intuitively looking at people and saying, "How believable are they?" If you go to the doctor, I want the best doctor. How believable it is, lawyer or whatever it is? Or somebody's giving me advice. We're all in our heads trying to calculate how believable they are. Well, I found a way using data and so on, that everybody agreed was a fair way to get believability points for somebody. And then we would have believability weighted voting. That doesn't mean in your authority... I have a certain authority. But what I would do, of course I owned, and ran, and controlled the company, and I was the boss so to speak. But I put myself in the position of reporting to others so they could fire me, a management committee. And I did believability weighted voting so that if I have a view, why should my view carry? There's only one reason my view should carry, and that is because I'm more believable in that. So that believability weighted voting made sense. That's what it's about.

Simon Brewer – 58:45

Thank you for explaining that. So let's go from some of these key principles to some of the current priorities in the investing world. You've written a lot about bond markets, we talked about the debts. But let's just bring it down to today. The bond market is, as you've written, the most important market in the world. I grew up like you, where the long end of the bond market was the policeman, and then QE came along, and the bond market was emasculated. And now we're back, and yields have been rising as we know sharply. Where is the point where treasury yields become so compelling, that they suck liquidity out of other asset classes?

Ray Dalio – 59:22

The world is holding a lot of bonds, particularly US bonds, but they're holding a lot of bonds in their portfolios. They've all lost a lot of money and it constitutes a high percentage of their portfolios. And then also, we have a world in which there are sanctions. And those sanctions means that some countries believe it's risky to own particularly US bonds, because then maybe they can get sanctioned. And then you have the whole political thing going on. What's going on with these countries and their debt? All of that creates a low demand for the bonds relative to the supply of bonds, which makes it more risky. Riskier on the higher rate side than not. I think we're coming into a period of time where the central bank's now inclination, particularly like the Fed, to have the balance sheet roll off. In other words, have less bonds, holding less bonds, essentially almost selling those bonds, is going to exert upward pressure on rates too. Because rather than a buyer of the bonds, they've turned into essentially a seller of those bonds. All of that exerts upward pressure on rates until the consequences are felt.

Simon Brewer – 1:00:42

And you did put out a very good piece. Many won't be following you on LinkedIn, but you made it available, as to explain exactly why it is you like dollar cash right now. And that's well worth people looking at, because I think you went into some proper detail, more scientific than most when they sit around and say, "I'm going to allocate more some cash." I think that was helpful. I'm going to ask you some questions here. If possible, I would like the answer to be long, short, or no view, because some questions have come in from various listeners. JGBs, Japanese government bonds. Long, short, or no view?

Ray Dalio – 1:01:13

Short, but short and favoring the equities. Because if you look at the expected return of equities relative to the expected return of bonds, they're very, very attractive. And also, that exerts downward pressure keep away from the currency exposure. So when I say that, I don't want currency exposure in yen, because we very much could see a situation in which as rates rise, the central bank loses an enormous amount of money, because they acquired so much debt in that. And that is going to put them in a position of them probably having to print a lot more money, which would be negative to the currency. By the way, I happen to answer to that question related to JGBs and so on. That'll be the last question I'm going to answer on what do I think about any market at this time. For two reasons, I don't want to hurt people. Giving a view, which first of all might be right, may be wrong. But also, circumstances always change and my view might change in an intervening period of time. So I don't think it helps people to do that. And what my main goal is, is to teach them how they themselves can come up with the analysis. What is the mechanics? So that's what I'd like to pass along rather than today, I like this market or I don't like that market.

Simon Brewer – 1:02:50

And that's very fair. I'd like to just shine the spotlight on the word of philanthropy. You created the Dalio Foundation to serve as your philanthropic vehicle. I believe you've given more than \$1 billion to philanthropic causes.

Ray Dalio – 1:03:06

Well, the foundation is greater than 5 billion, and I've given away over considerably more than a billion dollars.

Simon Brewer – 1:03:13

Which is extraordinarily generous. And you are a very analytical person. And we've had discussions on philanthropy with previous guests. And I wondered how you thought about the how, the why, and the when in processing potential beneficiaries?

Ray Dalio – 1:03:33

First of all, I was very lucky, like I said in my background. I didn't have anything. I was lucky to have two parents who loved me, raised me well. I went to a public school and I came out to a world of equal opportunity. I had my passion, and I didn't intend even to acquire as much money as I acquired. It just happened to be that the game that I played paid well if you play it well. I believe in raising a family, or for myself, but even in raising a family, just as there's a curse of having not enough money to take care of those basics. An excellent education, food. Every human being, we should establish a minimum living standard. Housing, food, education for children should not fall below a certain level, because our society pays a terrible price for that, and it's so unfair. But anyway, just as not having enough money for that, having too much money can be bad for people. You raise your children with too much enablement, too much money, too much of all that, that that's a curse too. And so as I think about these things and I go on, I say, "Okay, there's an ecology." I believe that we are all part of a system and an ecology, and what is the healthy thing that also brings me joy? So that has to do with the giving and how I give. So we set up that foundation. We want to do that in an orderly way. It's become a family activity. Family members, I have sons, and now to some extent, my grandkids learn how to work hard, be self-sufficient. I call it self-sufficient plus. Earn more than you are spending, and so on, and be strong. And then do that in terms of that philanthropy. And so then what we pursue are individual passions related to that. So that's how it works.

Simon Brewer – 01:05:37

So I've got some general questions as we move towards a close. You build Bridgewater, so you are required to be both an entrepreneur and investor, which are often two very different skills and difficult skills. And we've got lots of listeners who are in the asset management industry. People are weighing this up. How did you equip yourself to manage what really are two often different skills?

Ray Dalio – 1:06:02

That's right. There were really three skills. The three skills were manage money well, run a business, be CEO of 1500 people. CEO of that has all different dimensions. Legal, compliance, HR, real estate, computerization, and all those things. That's a job. And then also deal with clients, make them happy. Okay, there's only one way. And that is to rise above it and have wonderful people who are at the next level and then carry that down like a pyramid. And they have on the people. So throughout history, in ancient times, when China didn't have contact with Europe, they all did it the same way, which was somebody who's in control, they own the thing. And then they have ministers, essentially. You have that next level a minister of education, a minister of whatever you're doing, technology and so on. People who can have the expertise, and they work well together to then take responsibility for that next level. "Do you have me covered on this? Do you have me covered on that?" I'm still the ultimate owner. But in other words, the owner of how you make the machine work well is to be able to have those people, but to know enough about the subject matter, not just you blindly delegate. Like I say, to manage well, you have to go to the level below the people that you're working with. You have to have KPIs and so on. And you have to build a culture, a great culture of doing that well. That's what I did. That's the way.

Simon Brewer – 1:07:52

Here are the closing ones. What advice would you give to a 20-year-old Ray?

Ray Dalio – 1:07:55

First, know your nature. You are on a journey to take your nature and find the right path for it. Some people are left brained or right brain. Some people are creative. Some people pull toward a venture, some people have risk aversion, to get a sense of what your nature is. In order to do that, by the way, I created a personality profile test that's free for everybody. When I say I created it, I got the best psychometricians and we worked on it together. It's called 'PrinciplesYou'. It's free. Go look up 'PrinciplesYou'. You can take it, and it'll tell you about your nature. And if other people take it, it'll tell them about their natures. And when you look at it, it will describe you very accurately. You will say, "Wow, it really knows me." And it'll even show, if two people put their info in there, it will show what their relationship will be like. So to know your nature, to feel your pull, and discover the path that is suitable for you, that satisfies you, and accept reality and learn. So there are three phases in one's life. The first phase is you're dependent on others, you're learning, you're going to school. Too much of that academic learning. Then you graduate, and now the second phase is totally different. In that second phase of life, you're on your own. You could do anything that you want. You try to be successful. More and more people are going to become dependent on you, and you are going to try to be successful. So if you're a 20-year-old, you are right at that point where you're about to make that transition to this new phase in life. You were in this environment in which you were told if you remember these things, you're smart and you're proud. "Okay, I'm smart. I'm smart." You haven't even encountered reality yet. So when you go there and you encounter your realities, reflect on those realities and learn. So if I'm 20-year-old, find your nature. Look for your path through your experimentation. Value your painful mistakes as learning experiences. So learn how reality works. Don't get upset if it doesn't work the way you want it to work. You own it. You own your life. You own the responsibility of making those choices. Open your mind to learn from others who've been through it before and find your path. Because life is more like a video game than like the school told you. In other words, you go after your goals, have your encounters with your realities, you bump into problems. You have to solve the problems. You get learning points as you accumulate your learning, and you build on that to move on to higher levels and so on. That's how you have to approach life as you discover and learn at the same time.

Simon Brewer – 1:10:56

I've been told by your team that I cannot hold you any longer, because you're needed somewhere else. But I'm going to conclude with two of the observations you've made, of which you've made many, which are very, very helpful, is that pain and reflection put together can mean progress. All of us should be writing down these things so we can learn from them, number one. Number two, the winner of the tech war is going to be the winner of the geopolitical war, with all sorts of interesting thoughts and ramifications. And finally, which I hadn't really processed, is that in times of conflict and war, it's the neutral countries in terms of their asset prices, and fair better actually than the winners. So Ray, it's been a real pleasure today, and you've been very generous with your time. And we might have to ask you back next year. So thank you very much for being here.

Ray Dalio – 1:11:44

Thank you. I love the conversation. Thank you for doing it so well.

Simon Brewer – 1:11:49

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