

Speaker 1 ([00:00:04](#)):

Welcome to The Bill Walton Show, featuring conversations with leaders, entrepreneurs, artists, and thinkers; fresh perspectives on money, culture, politics, and human flourishing, interesting people, interesting things.

Bill Walton ([00:00:25](#)):

Welcome to The Bill Walton Show. I'm Bill Walton. Most of the ways that people talk about economics is wrong. Economics is not an incentive system, it's an information system. Free enterprise is driven by the creativity of the human mind. And material resources are essentially infinite. They're not scarce. Karl Marx and now the cultural Marxists are dead wrong. Economics is not a zero-sum game, class struggle for power. Instead, what governs human growth is human creativity. Innovation and growth are capitalism's infinite promise, and it is humanity's best path of escape from stagnation and tyranny.

([00:01:15](#)):

But with that open, I don't know where we go from here. There's all this good news to talk about. The gist of that, I think I borrowed most of it from my guest, George Gilder, who is one of the great American heroes and thinkers. I've been reading George, I won't tell you how many decades I've been reading you. And now we're lucky enough to have him back. I guess, George, you were like our fifth or sixth guest on the show.

George Gilder ([00:01:37](#)):

Is that right?

Bill Walton ([00:01:38](#)):

Yeah.

George Gilder ([00:01:38](#)):

All right. It's an honor.

Bill Walton ([00:01:41](#)):

Well, get back. And of course everybody-

George Gilder ([00:01:43](#)):

Your audience was smaller then, though. I'm always somewhat skeptical about being an early guest because-

Bill Walton ([00:01:51](#)):

Well, you should be. But you're in the open and everybody always says to me, isn't that George Gilbert? Why don't we get him back again?

John Tamny ([00:01:57](#)):

That's why there's so many viewers now, George, come on.

Bill Walton ([00:02:00](#)):

Anyway, George is one of America's leading thinkers and author of many books. I think most of you should have heard about and should have read *Wealth and Poverty*, *Knowledge and Power*, *The Scandal of Money*, and *Life After Google*. And now he's written, I think, a really defining book, *Life After Capitalism*, which is, and I touched on it in the opening, the meaning of wealth, the future of the economy, and the time theory of money. And joining me in this adventure is John Tamny, who's been back here, how many times have we done this together? Seven or eight times?

John Tamny ([00:02:34](#)):

Been more than I've got fingers.

Bill Walton ([00:02:36](#)):

Anyway, John's joining me as a co-host this time. He's the editor of RealClearMarkets, and most recently, he is the founder of Parkview Institute, which is going to be dedicated to... John?

John Tamny ([00:02:50](#)):

These kinds of ideas explaining how the economy works through day to day innovation. Very controversial stuff.

Bill Walton ([00:02:57](#)):

Well, in this day and age, it is.

John Tamny ([00:02:59](#)):

This day and age.

Bill Walton ([00:02:59](#)):

The age of gloom. Anyway, he's also recently published *The Money Confusion*, how illiteracy about currencies and inflation sets the stage for a crypto revolution. George, welcome, John.

John Tamny ([00:03:12](#)):

Thank you.

George Gilder ([00:03:12](#)):

Great to be here.

Bill Walton ([00:03:16](#)):

There's so many places to go with this talk, the information theory of economics.

George Gilder ([00:03:21](#)):

Yeah. Well, information theory is really the foundation of our global economy, and it applies from computer science to communications, all our internet developments. It applies to biotech where codes from DNA program, RNA to program, ribosomes to produce proteins. I mean, information theory is really the foundation of our modern era. And what I do in this book is to extend it to economics and it resolves a lot of key problems of economics. Some of its findings are enormously favorable that

capitalists around the world have been performing far better, I mean, up to a thousand fold better than all the economic statisticians imagine. And our GNP accountants/economists calculate.

[\(00:04:43\)](#):

It is a basic science of our era that applies to our economy and corrects most of the errors that are pervasive daily in your newspapers as you read about inflation as a natural phenomenon. And you read about money as a sovereign tool or a magic wand for central bankers. It's a new theory of economics, but it derives from John von Neumann, Oskar Morgenstern, a great figure in the past who collaborated with John von Neumann in developing game theory. Also wrote a pioneering book called On the Inaccuracy of Economic Observations. If you really read that book carefully. And he is one of the great geniuses of our era, you discover that almost all the economic statistics you see in the newspapers are just plain unfounded. They're just projections, arbitrary subjective views, their self-interested inventions, and information theory puts it all right. And that's the contribution of this book.

Bill Walton [\(00:06:17\)](#):

Well, you... Go ahead, John.

John Tamny [\(00:06:20\)](#):

I think it's important to stress that Von Neumann, probably one of the smartest people who ever lived, your book is so much more than that in that you bring these theories down to a typical person. And one of the things that I pointed out in my review is that you make the point that when you go pump gas, which people need to know this, you are not pumping gasoline into your car. You're pumping knowledge and the knowledge is the wealth. And so could you talk about that? The information theory isn't some obscure thing. It is, we compound knowledge over time and it makes life better and better and better.

George Gilder [\(00:06:58\)](#):

And better and better. Yeah. Well, the key theme of this book is wealth is knowledge. The Neanderthal in his cave, as Thomas so pointed out in 1971, had all the physical material, resources we have today. The difference between our age and the Stone Age is entirely the accumulation of knowledge. And how do you accumulate knowledge? It's by a process of learning. In one of the absolutely central propositions of information theory, but of all business consultancies, beginning with the Boston Consulting Group and Bain & Company and McKinsey & Company and all these business consultancies, operate on the learning curve. And the learning curve states that with every doubling of total units sold, costs drop between 20 and 30%. In other words, the natural progress of costs is to drop. Cost and prices should be dropping all the time. The idea that the natural condition of life is 2% inflation every year is completely spurious.

John Tamny [\(00:08:40\)](#):

Just absurd.

George Gilder [\(00:08:40\)](#):

It's a self-interested argument that government economists make to disguise the fact that the reason our economy doesn't work is that GNP is wildly overstated for government services and wildly understated for business contributions.

[\(00:09:08\)](#):

The third proposition is money is essentially time. When you run out of money, what you're really running out of is the time to earn more money. Money is essentially time. And William Nordhaus, the Yale Nobel Laureate developed time prices as the way to unify all economics across time and space. Through history and around the world the number of minutes and hours it takes a typical worker to earn the money to buy the goods and services to sustain his life is the time price. And that time price is a universal measurement, and it falsifies, almost all the government data is just completely wrong if you measure by time, which is a universal measuring stick rather than by all the subjective judgments of the consumer price index, the GDP deflator, the consumer price index minus food and fuel.

Bill Walton ([00:10:32](#)):

I remember the story you told last time, I don't think it was on the show, we were just talking, you were talking about Peter Drucker and you went to a conference for Peter Drucker. He was the famous management theorist and wrote Effective Executive and it became a Bible for a lot of young guys like me who wanted to learn how to be a manager. You'd read Peter Drucker. He was very brilliant. And what did he say about CFOs and the accountants? Do you remember that story that he was sitting up there, he was giving a talk, I think at one of your conferences?

George Gilder ([00:11:05](#)):

Oh, right. This is one of his last pieces.

Bill Walton ([00:11:08](#)):

The point is all these people who are putting numbers on things may be missing what's really going on.

George Gilder ([00:11:14](#)):

It was a great moment. Peter Drucker was in his 90s. He was really deteriorating, and they carted him up on stage for a Forbes conference in Seattle. And Rich Karlgaard, they came out to... He was in the front in this big chair, and then his head just fell directly backwards and everybody gasped. They thought he was-

Bill Walton ([00:11:50](#)):

Pistols.

George Gilder ([00:11:52](#)):

I was shocked.

John Tamny ([00:11:52](#)):

History-

George Gilder ([00:11:53](#)):

Everybody was speechless. We thought we were observing mortality in work. But he proved immortal. He then fell forward and pointed out his finger to the audience and said, "I have only one thing to tell you today. And that is no one, but no one in your company knows less about your business than your CFO."

Bill Walton ([00:12:29](#)):

The chief financial officer.

George Gilder ([00:12:30](#)):

Yeah, that's right. And everybody gasped. But he was really saying that business is not about the statistics, it's about real things.

Bill Walton ([00:12:41](#)):

Well, the thing about all the statistics is they measure what is. I mean, then they try to do it and it's always backward looking. And it never measures what could be. We're dealing with all these dire forecasts about the environment. And the Chinese and the rest of the agents seem to have a habit of shoving all the plastics into the river, which goes out in the ocean. And we've got accumulating something, an island the size of Manhattan in the middle of the Pacific-

George Gilder ([00:13:11](#)):

It's the size of Texas.

Bill Walton ([00:13:13](#)):

Okay, size of Texas, and it's filled with this flotsam and jetsam of all the plastic and other waste that they put out there. Well, one reaction would be, okay, we got to shut everything down and we've got to do something about this thing. The way the typical environmentalist thinks about it is, well, this is caused by fossil fuels somehow. So if we don't want plastics, we're going to have to shut down fossil fuels. And that gasoline you're going to pump, well, we wouldn't have it. But there's another way to think about that field of plastics, the size of Texas is, it's an incredible raw material. And you write about that in your chapter on the carbon economy.

George Gilder ([00:13:54](#)):

On the new carbon economy.

Bill Walton ([00:13:56](#)):

What do we do with this junk?

George Gilder ([00:13:57](#)):

One of the great scientists in the world and most creative is Jim Tour of Rice University who took over-

Bill Walton ([00:14:06](#)):

T-O-U-R?

George Gilder ([00:14:07](#)):

T-O-U-R, James Tour of Rice University. Great man. He took over the laboratory run by Richard Smalley, who won a Nobel Prize for discovering buckyballs and various inventions in carbon nanotubes. Tour in the last three or four years has developed a way to convert any plastic carbon waste, including raw garbage into perfect ribbons of turbostratic graphene. And graphene is the most extraordinary development in the last 30, since the outbreak of the silicon economy. There's been no major breakthrough comparable to the discovery of graphene. It won the Nobel Prize for two, Geim and Novoselov in 2011. It caused huge hype. It's 200 times stronger than steel. It's the most thermally

conductive substance ever discovered in the universe, as far as we know. It's harder than diamonds, and yet it can bend like rubber without breaking. It transmits signals so accurately that you insert it into a spinal cord and the signals are propagated so perfectly that the spinal cord refuses. You can see that on YouTube, if you want, with a mouse.

Bill Walton ([00:16:03](#)):

So this was an element that was invented or discovered?

George Gilder ([00:16:06](#)):

It was discovered. It's a single layer of carbon atoms.

Bill Walton ([00:16:13](#)):

But we didn't know anything about this 10 years ago. This was not part of human novel.

George Gilder ([00:16:16](#)):

We actually use it all the time when we write with a lead pencil. Actually, if the lines are light enough, they are essentially many layered graphene. But we're about to move into a graphene age because Jim Tour and his student from Vietnam invented something called flash Joule heating, which makes it possible to produce graphene by the ton from any carbon waste, including-

Bill Walton ([00:16:53](#)):

So, for example, that Manhattan-

George Gilder ([00:16:55](#)):

... that island in the Pacific suddenly becomes a gold mine. It's a wonderful resource of wealth because it can produce graphene, which is currently worth some \$200,000 a ton. And single-layer graphene is produced by all sorts of exotic techniques like chemical vapor deposition that produces milligrams for mega dollars. And this you can convert garbage to graphene and graphene, the new age is going to be founded on the proliferation of graphene applications. Since Tour made this invention, there are about 18 companies have emerged to pursue it in Israel.

Bill Walton ([00:17:51](#)):

So you predicted the internet in which year?

George Gilder ([00:17:53](#)):

What?

Bill Walton ([00:17:54](#)):

You predicted the internet in which year? '79 before Al Gore and Benedict?

George Gilder ([00:17:58](#)):

I really, well, I predicted-

John Tamny ([00:18:00](#)):

Al Gore heard him.

George Gilder ([00:18:02](#)):

My great speech was to Microsoft in 19-, I guess '89, '90, in which I told him that the computer of the future would be as portable as your watch, as personal as your wallet. It would recognize speech, it would navigate streets. It would collect your news and your mail. It just might not do windows, but it would open doors to the future.

Bill Walton ([00:18:39](#)):

Bill Gates didn't like that.

George Gilder ([00:18:41](#)):

Bill Gates didn't like it. I've argued with Bill Gates about this. And two years later, or three, maybe, he gave his internet speech where internet would be in everything at Microsoft. But that was a good moment.

Bill Walton ([00:19:03](#)):

But I'm just pointing it out in case you want to go call your broker, that when George talks about what's going to happen, very often it does happen.

John Tamny ([00:19:10](#)):

Well, so how does this square? This is an optimistic assessment, thank goodness. And we should be optimistic.

Bill Walton ([00:19:16](#)):

This show is about the upside of everything's that's going on.

John Tamny ([00:19:18](#)):

Yeah, it's about what we're doing-

Bill Walton ([00:19:19](#)):

We got enough gloom.

John Tamny ([00:19:19](#)):

... which is a wonderful theme. I mean, the people who complain, go look at the 20th century. But you also make the point in the book that markets have given way to a new generation of government rules, best defined as emergency socialism. That's your negative side of it. I was hoping you could comment on that while crucial emergency socialism-

Bill Walton ([00:19:43](#)):

Emergency socialism is a term for what we did with the lockdowns.

John Tamny ([00:19:46](#)):

Yes. And you note that in the book. Where this is crucial to me is you're one of the few people I know, and thank goodness you're one of the people saying it, that one of the authors, one of the instigators of this emergency socialism, was no less than Milton Friedman in concert with Richard Nixon.

George Gilder ([00:20:03](#)):

Yeah, he did.

John Tamny ([00:20:04](#)):

What he did to money was disastrous. And so, again, how does the optimism square with some of the emergency socialism and what these clowns have done to money?

George Gilder ([00:20:15](#)):

Well, as your book points out-

Bill Walton ([00:20:17](#)):

Hold on, George, I'm taking my 12-minute break here at 20 minutes because we're... I'm hanging on every word.

([00:20:27](#)):

This is The Bill Walton Show. I'm here with the great George Gilder and the equally great John Tamny. And we're talking about the information theory of economics and everything that leads to and how it's really a pretty bright future if we think about it that way. So, George, I'm sorry, do you need to rephrase your question? Did I-

John Tamny ([00:20:46](#)):

You know it. It's-

Bill Walton ([00:20:47](#)):

Okay. All right.

George Gilder ([00:20:50](#)):

Emergency monetarism was launched with Richard Nixon under the council of Milton Friedman way back in 1971 when he removed the world economy permanently from the gold standard with Milton's enthusiastic endorsement and prediction that if we removed the gold from the dollar, the price of gold would plummet. And this really, Milton Friedman thought the dollar was propping up the price of gold rather than the price of gold propping up the dollar. Now this wouldn't be important, except that Milton Friedman was one of the greatest economists of the 20th century with Free to Choose and all his books are brilliant, and we continue to live by them among libertarians. But he got his Nobel Prize for his worst idea.

John Tamny ([00:22:04](#)):

Absolutely. Thank you.

George Gilder ([00:22:05](#)):

Which is usually true. This is my rule of people get-

John Tamny ([00:22:09](#)):

Keep talking.

George Gilder ([00:22:10](#)):

... the Nobel Prize for their worst idea. William Nordhaus pretty much invented time price.

Bill Walton ([00:22:17](#)):

Can I give you an exception to that? Paul Krugman who got the Nobel Prize for his only good idea.

John Tamny ([00:22:24](#)):

Very true. It's very true

George Gilder ([00:22:27](#)):

But it was sort of a truism, wasn't it? The geography has an effect on economics. I mean-

John Tamny ([00:22:34](#)):

Yes.

Bill Walton ([00:22:39](#)):

Anyway, that's all right.

George Gilder ([00:22:43](#)):

But anyway, that's... But Milton really didn't understand money, and it was a tragic error for which he got his Nobel Prize.

Bill Walton ([00:22:51](#)):

Well, he wrote a book called A Monetary History of America, right?

George Gilder ([00:22:56](#)):

Yeah. Right.

John Tamny ([00:22:57](#)):

Disaster.

George Gilder ([00:22:58](#)):

Oh, he was the world's leading expert on money at the time Nixon made that decision. So you really have to blame Milton more than Nixon.

John Tamny ([00:23:09](#)):

It's staggering how much monetary theory left to right is governed by this absurd notion that the money that only has a purpose insofar as it facilitates the exchange of goods and services has to be planned by central planners. It's the equivalent of saying, we've got a centrally planned production, yet Milton Friedman, that's been his gift to economics, and it's perverted the discussion ever since.

George Gilder ([00:23:35](#)):

Yeah. It's really sad. And we're in the middle of it now with just central banks have become just ways to steal from the future to reward your cronies and constituents in the present. This is the function of money, and this is why your insight that the perfect cryptocurrency has not yet been contrived, but I believe that from the cryptocurrency movement will emerge a global monetary system that is based ultimately on time, which is what remains scarce when everything else is abundant. We're in an economy of abundance as time prices show, and as the great book, Superabundance, which I explain and I introduced by Marian Tupy and Gale Pooley is-

Bill Walton ([00:24:46](#)):

They've written a couple chapters in your book.

George Gilder ([00:24:48](#)):

Yeah.

Bill Walton ([00:24:49](#)):

So the money, the cryptocurrency, I've got a couple of guys who are placed out of Virginia, they're obsessed with Bitcoin. Can we put Bitcoin in a context where I can... I don't think Bitcoin's the end all and be all, but they keep telling me I'm wrong.

John Tamny ([00:25:08](#)):

It's Netscape. It's the Netscape of the crypto revolution.

George Gilder ([00:25:08](#)):

Well, in life, Netscape revolution.

Bill Walton ([00:25:11](#)):

Netscape. Okay.

John Tamny ([00:25:12](#)):

Yeah. It's Netscape of the crypto revolution.

George Gilder ([00:25:13](#)):

Yeah, right.

John Tamny ([00:25:14](#)):

It created the craze, brilliant, but it's the opposite of money. It can't-

Bill Walton ([00:25:22](#)):

Amplify because we need to kill this.

John Tamny ([00:25:26](#)):

Let me begin this because it's something that George and I have discussed a lot. You can't have enough good money because you can't have enough production. George is talking about abundance. The sole

use of money is to move around production, which means that the only limit to quote, "so-called money supply", is production. Bitcoin is rooted in the Friedman notion that you've got to limit the supply of that which moves production, which means it can never be money. Everyone says its greatest aspect is that there's a limit to the number of coins. No, that's what means that it can never be money. Good money is endless because measures are endless. And time, the way in which you measure time, it's endless. There's no-

George Gilder ([00:26:13](#)):

Yeah. It's like limiting the number of rulers in order to prevent the exploitation of the environment.

Bill Walton ([00:26:23](#)):

So the flaw of Bitcoin is they made a finite amount of it.

John Tamny ([00:26:25](#)):

Yeah.

Bill Walton ([00:26:26](#)):

So that's the fundamental flaw.

George Gilder ([00:26:27](#)):

That's the fundamental flaw. The human imagination is not limited or finite.

Bill Walton ([00:26:35](#)):

Well, that's our central thesis here. Yeah.

George Gilder ([00:26:38](#)):

Time has two properties. In the present, it's scarce, but it reaches out into an unlimited future. And so money has to have both those properties. It will express the scarcity of immediate opportunities, but open to a future of unlimited opportunities. And money as time actually has that property. When you run out of money, what you're really running out of is the time to earn more money. That's what money is, it's time. In this respect, it resembles all the other measuring sticks.

([00:27:36](#)):

The System Internationale in Paris has a perfect kilogram, a perfect wad, a perfect ampere, a perfect lumen. And all these measuring sticks all include a frequency in them, which means that they're ultimately based on the speed of light. That's what unifies all the measuring sticks that allow world trade, that allow us to produce microchips in Taiwan, that work in Abu Dhabi, and that can be manufactured into computers in Malaysia and combined into systems in Palo Alto. Time is the basic measuring stick that governs our lives. And it's also the foundation of money. The information theory of money is money is essentially time. It's tokenized time, it's time converted into a form that can sustain all the transactions of the existing economy and allow investment into the future.

Bill Walton ([00:29:01](#)):

This is The Bill Walton show. I'm here with George Gilder, who is explaining time, and John Tammy's going to help me explain what George just explained. I'm still a little lost in that. Bitcoin doesn't meet

the test of real money because it's finite, but gold does. But isn't gold, and I mean, you can mine more gold, but how is gold different?

George Gilder ([00:29:32](#)):

Well, that's different. You can mine more gold and the quantity of gold steadily expands.

John Tamny ([00:29:41](#)):

But it also doesn't limit money.

George Gilder ([00:29:43](#)):

It nullifies capital and technology because as you mine more gold, the gold becomes more diffuse and harder to mine from more remote places. And so the effect is that the time to mine an incremental ingot of gold has hardly changed in a thousand years.

Bill Walton ([00:30:13](#)):

The time to mine an ingot of gold, I mean-

George Gilder ([00:30:15](#)):

Yeah, hasn't changed. So gold is in fact a time measure, and that's why it's been so successful.

John Tamny ([00:30:24](#)):

But it's also market money. It was what markets happened upon over thousands of years of trial and error.

George Gilder ([00:30:31](#)):

Yeah, that's true.

John Tamny ([00:30:31](#)):

And what the markets happened upon was that every ounce of gold ever mined is still with us because there's no industrial use really to gold. And so it's like me saying, "Hey, Bill, after the show, I'm going to go sell a million shares of ExxonMobil." And you would say, "Well, you're not going to move the price one iota because there's six billion outstanding." There's what, 220,000 metric tons of gold in the world. So any discovery, any sale, can't move this price. And so gold's genius is its stability. And that's why markets happen upon it as money. Milton Friedman and Richard Nixon basically said, we are going to replace the market. We will substitute the market that happened upon a stable measure for money for the PhD standard, which isn't any surprise that from that-

Bill Walton ([00:31:22](#)):

What PhD?

John Tamny ([00:31:22](#)):

Doctors.

Bill Walton ([00:31:25](#)):

Oh, the doctor.

John Tamny ([00:31:26](#)):

Guys like Friedman planning-

Bill Walton ([00:31:26](#)):

Oh, you mean... Okay. We get so many acronyms, I thought you were inventing a new one.

John Tamny ([00:31:31](#)):

Yeah, literally economists-

Bill Walton ([00:31:32](#)):

A doctor though. Okay.

George Gilder ([00:31:32](#)):

I got that one.

John Tamny ([00:31:33](#)):

... economists substituting themselves for a market decision arrived at over thousands of years. We finally found reasonable stability, which is what money is. It's just a way for us to measure the movement of real goods. And we're going to replace it with the genius of economists. So emergency socialism, it's emergency central planning. It is economists substituting their microscopic knowledge for that of thousands of years of information. And we wonder why there's, what do we call it, a crisis. We wonder why, as you point out in the book, there's seven trillion, I think you said it's up to 10 trillion in daily currency trading.

George Gilder ([00:32:13](#)):

It's probably 10 trillion.

John Tamny ([00:32:14](#)):

Well, of course. The markets are trying to mitigate this disastrous infusion of planning.

Bill Walton ([00:32:19](#)):

So floating currencies.

John Tamny ([00:32:21](#)):

Yes.

Bill Walton ([00:32:23](#)):

I suffer from this, George. I actually was one of those CFOs at one point. I became a CEO and developed more imagination, I hope. I suffer from having taught accounting. And the thing I wonder about gold is we were on the gold standard until, what, 1935?

George Gilder ([00:32:42](#)):

Sort of. Well, we were really to 1971.

Bill Walton ([00:32:46](#)):

Okay. '71 when Nixon did it. But then since then, the world in the volume of trade and economic activity has grown exponentially. And then in terms of fiat money, it's grown much more than that. And yet the volume of gold in the world, you now say, we've got 200-

George Gilder ([00:33:04](#)):

No, the actual growth of value has even exceeded the growth of fiat money. That's what time prices show.

John Tamny ([00:33:13](#)):

Clearly.

George Gilder ([00:33:14](#)):

It's an amazing discovery

Bill Walton ([00:33:15](#)):

So, in fact, we're undermeasuring the growth in the economy because of the way we're using currencies. We're 220,000 tons now. How much do we have in 1971?

George Gilder ([00:33:28](#)):

Well, 170 tons.

John Tamny ([00:33:31](#)):

It would've been probably-

Bill Walton ([00:33:34](#)):

It went up 30, 40%.

John Tamny ([00:33:36](#)):

It goes up about 2% a year historically.

Bill Walton ([00:33:37](#)):

So if gold is going to be backing money, but we've got this massive increase in real economic activity, how does gold back that activity?

John Tamny ([00:33:47](#)):

Gold doesn't back it, gold defines it.

George Gilder ([00:33:48](#)):

Gold is the measuring stick.

Bill Walton ([00:33:50](#)):

All right. But I'm using my hands, I've got my George Gilder-

George Gilder ([00:33:53](#)):

Through history, there hasn't been any relationship between the amount of gold and the growth of economies. I mean, during the industrial revolution in the United States, gold quantity, gold reserves increased by, I think it was three times, while total economic activity rose roughly 400 times. Gold was the measuring stick. And you could use it to multiply currency as long as the currency didn't violate the signal that the measuring stick offered. It was like a ruler. It was a gauge. And it wasn't a magic wand for central banks. It was a measuring stick for value. That's its function. People misunderstand gold. They think money was gold. And so you need more. There isn't enough gold to be money. That's true. But gold is a measuring stick for money. As long as you didn't violate that measuring stick, you didn't start lying about the real values of what you're producing, you could have as much money as people could employ to produce goods and services. John explains that brilliantly in his book.

John Tamny ([00:35:41](#)):

But let's think about this through wealth is information. So in 1971, there were no currency markets. Why would there be money as a stable measure? Why would you trade currencies? There's no volatility to them. Have you ever thought about what we've lost in terms of information as all these brilliant minds have moved to facilitator roles, basically trading the chaos? Is it unrealistic to say that cancer would've already been cured, among other things, had we not stolen all this genius from the economy, from production?

Bill Walton ([00:36:21](#)):

Now, is that another way of saying that when George writes about the financialization of the massive growth-

George Gilder ([00:36:27](#)):

The hypertrophy of finance.

Bill Walton ([00:36:29](#)):

Yeah. I mean, that's... So let's-

John Tamny ([00:36:33](#)):

What have we lost?

George Gilder ([00:36:34](#)):

Well, I think we've lost a lot. However, all this loss, what really has happened is that the private economy around the globe has yielded value thousand times greater than is actually measured, that time prices show that value in the private economy has been increasing between 4 and 5% for decades. And Nordhaus estimated just focusing on one facet of value, the advance of lighting through the millennia, that while people wrote about dark satanic mills and the dismal science of economics, an efflorescence of lighting was proceeding throughout the industrial world. 100,000 times more value was created by the progress of lighting, according to Nordhaus, than was measured by economists.

([00:38:03](#)):

So all this was private sector contributions, but the GDP pretends that the government is just really doing a great job. It's producing value right at pace with the private sector. And the natural state of prices is not to drop steadily as a result of the learning curve, but instead it's supposed to drift up 2% a year. That's just an alibi for the bureaucrats who are botching the economy and losing value. Most of the activities are a net negative for progress. And that would be evident if you use time prices. The only things that are losing value in time prices are government services like education and recently medical care. Our lifespans are no longer increasing, they're decreasing at the moment.

Bill Walton ([00:39:11](#)):

Well, the more government takes over healthcare, the less progress we see.

George Gilder ([00:39:15](#)):

Yeah.

Bill Walton ([00:39:17](#)):

Well, you just stated the official position of this show. Government produces no value. In fact, it's negative.

George Gilder ([00:39:26](#)):

I mean, some governments, you do need a low entropy carrier that's a predictable carrier of constitutional law and property rights and moral codes in order to bear high entropy, unexpected creations. "Human creativity always comes as a surprise to us," as Albert Hirschman of Princeton wrote. He studied all the UN and World Bank economic projects all around the globe and found none worked according to their projects and agendas, but every so often there would be an entrepreneurial surprise. Some entrepreneur would take some of the money and so he said-

John Tamny ([00:40:23](#)):

You talk about that.

George Gilder ([00:40:24](#)):

I'll just complete this. He said, "Creativity always comes as a surprise to us. If it didn't, we wouldn't need it and economic planning would work."

John Tamny ([00:40:39](#)):

Well, and so you talk about that a lot in the book, and I think it's Vinton Cerf, he would get together with his buddies at Caltech and they wouldn't report the experiments that yielded the obvious. They would report their failures.

George Gilder ([00:40:54](#)):

Carver Mead.

John Tamny ([00:40:54](#)):

Carver Mead. And so the question then... And you so crucially say that all this government spending on global warming and stuff, it's not producing real knowledge, which we know is wealth. I ask this because

supply siders for years have said to me, "John, don't talk about government spending. Don't you know Jude Wanniski said, 'Don't talk about government spending.'"

Bill Walton ([00:41:16](#)):

Why did they say, don't talk about government spending?

John Tamny ([00:41:17](#)):

They would say, because we can either be Santa Claus or we can be the Grinch. And I would say, no, no, no. Government spending is the crushing of knowledge. It's basically this pursuit of the opposite of knowledge. Where are you on this? You discredit incentive economics here, which obviously you and I were talking... Do you agree that government spending is arguably the biggest tax on progress of all, precisely because it robs us of the leaps that you think are so important?

George Gilder ([00:41:49](#)):

Yeah, it does. It does. However, what time prices have shown is that it moves around the world. The entrepreneurial creativity moves to the areas where it's most welcomed and leaves the areas where it's condemned. And the result is that economic growth has been far faster than anybody has estimated, measured by the amount of time that a typical worker has to spend to get all the goods of services-

Bill Walton ([00:42:27](#)):

Let me bring it back down to my CFO level. We say that economic growth, GDP was 3%. You're saying that's nonsense, that that doesn't even come close to showing what happened. If you take the quality of the goods and services that are being made, that's not being captured in the accounting numbers. And its value is much greater than the numbers would say. Is that, am I getting-

George Gilder ([00:42:54](#)):

That's right. That's right. The real measure is the time it takes to earn the money to purchase... In Superabundance, the book by Tupy and Pooley, they measure the time that it takes to produce the 50 key commodities. There are everything from oil to salmon, to copper, bread. And they discovered that since 1980, the price of all these 50 commodities and the amount of time that you got to work to get a unit has dropped 75%.

John Tamny ([00:43:51](#)):

But that's almost-

George Gilder ([00:43:53](#)):

While world population has increased 75%.

John Tamny ([00:44:02](#)):

Doesn't that understate, I mean, this is a super computer that sits in my pocket. What's the time price of this? This would've cost what? Your colleague, Brett Swanson says, this would've cost 15 million not too long ago. The time price of this that you can get for next to nothing-

George Gilder ([00:44:17](#)):

And a lot of it would-

Bill Walton ([00:44:20](#)):

So we're zeroing in on what time price means, because I want to understand. So the time price is the time it takes-

John Tamny ([00:44:29](#)):

To work to get.

Bill Walton ([00:44:30](#)):

To work to get. But also the inventions that went into that device you just held up, I mean, it put-

George Gilder ([00:44:40](#)):

That's knowledge. Increasing knowledge increases wealth. That's what's really increasing.

Bill Walton ([00:44:48](#)):

So who benefits from selling the notion that everything is really worse than it really actually is? And I can answer my question.

John Tamny ([00:44:56](#)):

Booksellers.

Bill Walton ([00:44:58](#)):

You've got... Well, booksellers, that's sort of the point. The media benefits from selling us bad news, whether you're on the left or the right. If it's on the right, the other side's terrible. And the political class also benefits from sort of the same thing is that things are terrible and I'm going to take care of you. And they couldn't do well if they said, "Look, everything's fine. Just relax. We're going to-"

George Gilder ([00:45:21](#)):

We don't need any new programs.

Bill Walton ([00:45:23](#)):

We don't need any new programs.

George Gilder ([00:45:24](#)):

We don't need any more bureaucrats.

Bill Walton ([00:45:28](#)):

If we just look at what always naturally happens, there's some guy that's going to invent something to deal with that Texas-size junk of plastic in the Pacific Ocean.

George Gilder ([00:45:40](#)):

Turn it into a resource, not deal with it, but-

Bill Walton ([00:45:44](#)):

So we could all just relax and enjoy our life.

John Tamny ([00:45:45](#)):

That's right. I don't know why you're doing this.

George Gilder ([00:45:47](#)):

Flash Joule heating not only converts garbage into a valuable resource, perhaps the most valuable resource, but it also yields as a side effect pure hydrogen. I don't think we actually need hydrogen fuel for a lot of things, and they can also get hydrogen from deep in the earth now, there are all sorts of sources of hydrogen. But still, this means that garbage is being transformed into two enormously valuable substances, graphene worth between \$100,000 and \$200,000 a ton, and hydrogen, which is regarded to be a clean fuel. It sheds only water when it's used as a fuel. It's just that the possibilities of human creativity are essentially infinite. And they always come as a surprise to us. Really the founder of information theory was Claude Shannon in 1948. And he defined information as essentially a surprise, as unexpected bits. And if everything I say today, you already know, no information is being transmitted-

Bill Walton ([00:47:30](#)):

I don't think you're saying a lot today that I already-

George Gilder ([00:47:34](#)):

And information is unexpected knowledge, not predetermined knowledge or material, random factors fluctuating through time. It's unexpected knowledge.

Bill Walton ([00:47:52](#)):

I want to go so many places with this. It's the economic theory of information versus the politics of fear.

George Gilder ([00:47:59](#)):

That's right. I think that's right. That's a very-

Bill Walton ([00:48:07](#)):

And we're dominated by the politics of fear.

George Gilder ([00:48:10](#)):

Yeah.

John Tamny ([00:48:10](#)):

The late Fred Thompson, they asked him, "Why didn't you run for president in 2000?" And he said, "I just didn't want to go around the country telling people how bad they had it." And I thought it was a brilliant response.

Bill Walton ([00:48:20](#)):

That's a really-

John Tamny ([00:48:22](#)):

Thank goodness, finally someone pointed the obvious out, that these guys are running, to your point, on how awful it is, and let me show you how I'm going to fix it. Have they lost their minds? Have they looked around the world? Everyone in the world would give anything to have their problems-

Bill Walton ([00:48:39](#)):

Well, but they know how to win elections.

John Tamny ([00:48:40](#)):

Yeah. No, it's good politics.

Bill Walton ([00:48:42](#)):

I mean, this is what we're seeing with social media. I mean, that's what the... You get driven down this rabbit hole of fear and concern. Well, I think... Get us out of here, John. We're doing something really... But we've got demons that are purported to be so terrible and rearrange the whole world economy, like the CO2 scare. I mean, that has to be one of the biggest-

John Tamny ([00:49:15](#)):

Oh, aren't we a rich world that we can worry about something so not important.

Bill Walton ([00:49:19](#)):

Well, let's all guess... I mean, George and I were talking about this, but I mean, people don't understand what an infinitesimal amount of the atmosphere that CO2 really is.

George Gilder ([00:49:29](#)):

0.004%. And that's not enough, according to the real great scientists of Europe, people like Freeman Dyson, a great physicist who studied CO2 for decades, Will Happer, who's head of physics at Princeton, who was briefly Trump's science advisor, got Trump to withdrawal from the Paris Climate Treaty. That was a brilliant and bold move that Trump did. And that's Will Happer. Richard Lindzen, who was head of atmospheric physics at MIT, and Steven Koonin, who is provost and physics professor at Caltech and Obama's chief science advisor. They all agree that there's no evidence that there's any kind of CO2 crisis.

([00:50:37](#)):

Many of the really most brilliant Nobel-quality scientists actually believe that the big threat is not enough CO2. CO2 is what makes the planet green. And Howard Hayden, who's a brilliant physicist from University of Connecticut, has shown that all the impact of CO2 on warming has already happened. There's just almost no further room. No matter how much CO2 we emit, there will be very little impact. And actually temperatures today are significantly lower actually, than what's called the Medieval Climate Optimum. The temperatures are lower today than they were in the 1930s when the Dust Bowl occurred. It's a completely fake-

Bill Walton ([00:51:51](#)):

Yeah, if you look at the chart, the spike in temperature in the '30s was extraordinary and it had nothing to do with what their-

George Gilder ([00:51:58](#)):

Yeah. But it wasn't-

John Tamny ([00:52:00](#)):

But you couldn't have talked about it in the '30s.

Bill Walton ([00:52:02](#)):

Well, but we're hitting on something here about this thing is really being driven by agendas that the political class-

John Tamny ([00:52:08](#)):

Everyone's got a crisis. The right talk today about, well, we're not having enough babies and, oh, that's going to drive disaster in this country. Have they lost their minds? A baby being born today is worth thousands of babies born 50 years ago in terms of productivity. And so imagine John Kerry talking about how we're-

Bill Walton ([00:52:26](#)):

Well, you're not saying we shouldn't have more babies.

John Tamny ([00:52:27](#)):

I'm saying people should do what they want to do. But John Kerry talked about global warming, imagine if he talked about it in 1935 after you've had World War I and you've had the Russian Revolution and the slaughter of the Armenians, and you had the leaving of monetary stability, and then you had Hitler, and then you had World War II and the Holocaust and the spread of communism around the world. We're talking about global warming? Boy, we must be a rich society, but also one that has nothing to worry about because the things that the right and left worry about, that they say crisis are microscopic to what happened in the 20th century, it's a bullish signal that a clown like Kerry is going around the world saying this.

George Gilder ([00:53:18](#)):

Brilliant, John. That's a good conclusion. That's the climax. John, really great.

Bill Walton ([00:53:28](#)):

I got something. You have to buy this book. It's Life After Capitalism and just some of the chapters, is money a commodity? We talked a little bit about that. Bitcoin capitalism, the myth of the economic man and how we understand incentives could be all wrong. The carbon age. We're getting at something in this that I think is essential though, that if you really look at what people do when left free to live and innovate, they're creating wealth decade after decade after decade. And if we just leave people alone, it might be okay, but there'd be no job for John Kerry. George, I'm going to let you have the last word.

George Gilder ([00:54:20](#)):

Well, I think this is a wonderful moment of opportunity in the world, the transition into the graphene economy which will transform every industry and meet the crucial heat crisis that is bringing Moore's law to a close in the silicon domain. Now we have an element, graphene, that is 1,000 times more heat conductive than silicon, and it's going to transform electronics, communications, medicine. It really is a wonderful moment of global opportunity that we are dissipating in our preoccupation with these phony

crisis of heat, of weather, rather than the thermal problems of the AI data centers. They are all mostly dominated, they're giant refrigerators really, all these data centers that produce our AI.

Bill Walton ([00:55:51](#)):

Well, they're supposedly trying to solve the problem of heat. I mean, the more the internet expands, the more artificial intelligence expands. You got to cool all these machines down and you can't afford to do that.

George Gilder ([00:56:02](#)):

But you can do it with graphene and with a distributed artificial intelligence.

John Tamny ([00:56:09](#)):

Oh, to have these problems.

George Gilder ([00:56:09](#)):

The world is back in the 1960s when IBM thought that 14 giant mainframes could fulfill all the needs for computation of the global economy, this is in the 1960s. Now we got 14 vast data centers by glaciers and dominated by cooling problems. And they're supposed to produce a unitary singularity AI as if there's just one truth that AI can propagate and be controlled by a few mainframes. And AI is going to be in everyone's pocket. AI is going to be a wonderful new phase of the computers' revolution. But it has nothing to do with becoming conscious or competing with human minds. That's just another fake crisis that's being used to have government nationalize these few mainframe data centers that now do all the AI for Google and Facebook and Microsoft. A few big companies dominate AI and AI's going to be great if you just don't nationalize it.

Bill Walton ([00:57:47](#)):

So this has been The Bill Walton Show with the majestic George Gilder. And I need an adjective for you, John Tamny. Thank you for the-

John Tamny ([00:57:57](#)):

Beautiful or something.

Bill Walton ([00:57:58](#)):

And I hope you've enjoyed this dose of positive reality. This is not optimism. I mean, if you just look around at the world in the last 250 years, the kind of thing that George and John have been talking about, and I'm struggling to understand some of it, but it's also real in that all these good things that are happening will happen if we just let them happen and if we keep government out of it. The idea that there's some magical people in an office that can protect us from all these things, it's just all wrong.

([00:58:32](#)):

So I don't know whether this is a proper close for a show, but anyway, thanks for joining. We're on all the platforms. You know where to find us. Please send us your comments. We take them into consideration. I know you're going to want George and John back to continue the conversation because we've just touched the tip of the iceberg. Anyway, thanks for joining. Oh, by the way, subscribe to the show. Give us a five-star review. Maureen, what else am I supposed to say?

Maureen ([00:58:59](#)):

About the new-

Bill Walton ([00:59:00](#)):

Oh yeah, we're going to be starting a new segment here called.

Maureen ([00:59:04](#)):

Bill Walton Live.

Bill Walton ([00:59:06](#)):

Bill Walton Live. It's called Inside Backstage, and we're going to be bringing people on live on Facebook or YouTube. I'm sorry. What platform are we going to be on? We're going to be on Zoom.

Maureen ([00:59:20](#)):

Zoom.

Bill Walton ([00:59:21](#)):

And we're going to have a dialogue with you and some other guests and just talk in real time about these questions and hopefully have some answers. Thanks for joining, George, John.

John Tamny ([00:59:31](#)):

Thank you. Fantastic.

George Gilder ([00:59:31](#)):

Thank you.

Bill Walton ([00:59:35](#)):

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