

welling@weeden

reprints

<http://welling.weedenco.com>

VOLUME 14

ISSUE 3

FEBRUARY 3, 2012

INSIDE

Listening In
Brock Calls Out
Faulty Logic, Data
Mining By Both
Left And Right

PAGE 1

Guest Perspectives

PIERRE GAVE

Velocity Is Back!

JOHN HUSSMAN

Warning:

Goat Rodeo

MICHAEL BELKIN

*Get Out! Indicator
Signals Private
Sector Now
Embracing Risk*

Chart Sightings

RON GRIESS

*Up Wedges And
Divergences
To Watch*

LOUISE YAMADA

*Bear Retreating?
More Questions
Than Answers
In These Charts*

**Talk Back
Acute Observations
Comic Skews**

ALL ON WEBSITE

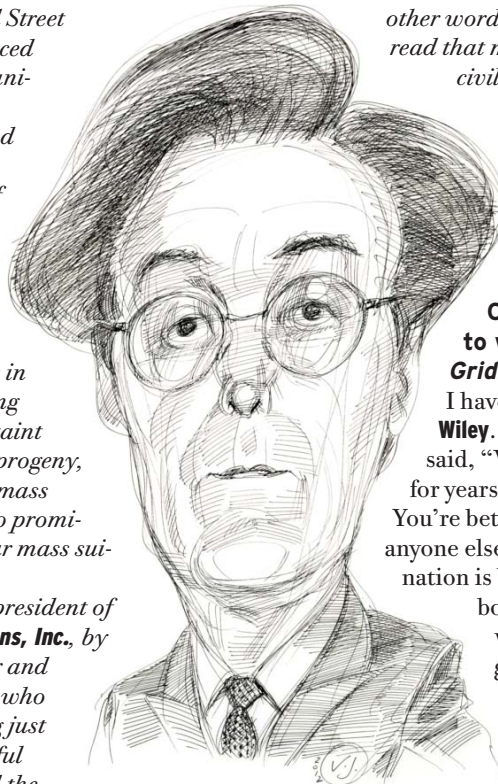
listeningin

Logical Deductions

Woody Brock Suggest “Common Sense” Solutions To American Gridlock

Woody Brock came to Wall Street with a boatload of advanced degrees from prestigious universities, some of them in arcane realms of advanced mathematics. But as a glance at the caricature of the gentleman over yonder will tell you, he’s the antithesis of the packs of gun-slinging young quants who these days are required fixtures in hedge funds and on trading desks alike – despite the taint attached to some of their progeny, the financial weapons of mass destruction that figured so prominently in the markets’ near mass suicide, a few years back.

Woody, the founder and president of Strategic Economic Decisions, Inc., by contrast, is a deep thinker and something of a lone wolf, who concentrates on providing just a handful of truly insightful pieces on the markets and the economy to an elite group of financial industry giants every year. He’s just broken that exclusive mold, though, publishing a timely and very accessible new election-year book, “American Gridlock,” that dares employ rigorous deductive reasoning not only to demolish the stale arguments of both the left and the right that are paralyzing U.S. society, the economy and the government – but to show that win-win solutions to a variety of the causes of our national angst actually do exist. In



other words, it’s just the sort of great read that might actually get some civil debate restarted.

I caught up with Woody last Monday while he was on a quick visit to NYC. Listen in.

KMW

Let’s start at Square One. What inspired you to write “American Gridlock?”

I have to credit my publisher, **Wiley**. They came to me and said, “We’ve tracked your work for years. You think deeply. You’re better-known for that than anyone else.” Which is true. “The nation is bleeding; it needs a book, and you’ve got to write it.” That got me going, though it took me a year longer than expected, which was good, because it allowed Wiley to make it their election

year book. In it, I tackle topical issues like income distribution and the whole question of whether capitalism is good or bad, which is completely misunderstood. I also address how we can deal with China and stopping the bleeding of U.S. jobs and resources that people are concerned about. And what can be done to avoid a “Lost Decade.” Can we avoid entitlement bankruptcy? I push a lot of policy hot buttons to show that – without resorting to any left

**RESEARCH
DISCLOSURES** PAGE 16

Reprinted with permission of
welling@weeden FEBRUARY 3, 2012 PAGE 1

welling@weeden

Kathryn M. Welling
Editor and Publisher
welling@weedenco.com
(973) 763-6320

*Published exclusively
for clients of
Weeden & Co. LP*

Noreen Cadigan
Institutional Research Sales
(203) 861-7644
ncadigan@weedenco.com

Andrew B. Van Ogtrop
Institutional Research Sales
(617) 757-8730
avanogtrop@weedenco.com

Jean M. Galvin
Business Manager/
Webmaster
(203) 861-9814
jean_galvin@weedenco.com

Distributed biweekly,
usually on Friday
mornings, by
welling@weeden,
and
Weeden & Co. LP.
145 Mason Street
Greenwich, CT 06830.
Telephone:
(203) 861-9814
Fax: (203) 618-1752

Copyright Warning and Notice: It is a violation of federal copyright law to reproduce all or part of this publication or its contents by any means. The Copyright Act imposes liability of up to \$150,000 per issue for such infringement. **welling@weeden** does not license or authorize redistribution in any form by clients or anyone else. However, clients may print one personal copy and limited reprint/republication permission may be made available upon specific request.

Copyright 2012,
K.M. Welling.
All rights reserved.

Victor Juhasz
Page 1 Illustration

wing or right wing ideology at all – solutions to our most pressing problems *can* be found that are win/win in nature and *could* end the gridlock. That’s my hope.

That’s quite a tall order –

Sure, and I knew that without showing that there *are* answers that don’t gore you or me, I couldn’t do this book. The key was to come up with answers.

For instance?

Take healthcare. We really *can* have it all – but *only* if the supply curve shifts out to the right *faster* than the demand curve shifts out. It is a sort of Economics 101 idea that no one has ever proven formally, until “*American Gridlock.*” But fear not, all of the equations have been banished to an appendix in the back of the book. What I’m just saying is that how can anyone disagree that 1) more people need coverage; 2) more doctors and other health professionals need to be provided; more automated systems need to be provided, and 3) we want to cut the bill in half? I show that there *is* a way that can be achieved. It’s exactly what we did in the telephone industry. It’s called the rising living standard. Only in medicine do we pay more and more just to get someone to look at a sore throat. It’s just crap!

Not only. Have you paid a tuition bill lately?

You’re right. Education is another. It’s all about productivity. Cartels destroy productivity. Look at Jesuit schools – Education is the one great omission from this book, because I had to stop somewhere. But my point is, just compare

Jesuit schools with public schools. The teachers are paid less, the productivity is triple. I think your dog knows why. Yet teachers unions persist in fighting merit pay. That’s as ridiculous – I am a very bad basketball player – as it would be for me to demand more pay than the MVP! Yet liberal publications like the *New York Times* continue to reflexively support that position, instead of tearing it apart, just because it’s

a *union* position and the left wing supports unions. But that idea isn’t really left-wing, it’s absurd! That is Common Sense 101. In fact, my book is all about ideas that I think are common sense and so should *not* be very controversial.

I read, and enjoyed, it greatly. But come on, you start from the assumption that your readers – and policy makers – can and will think logically. What could be more wildly optimistic?

I know. And worse than that, people once *were* capable of reasoned debate. It was expected, if you were educated, that you had learned rhetoric; how to debate. Look at Abraham Lincoln. Today, nothing is taught. “My feelings –” Excuse me, your feelings are uninteresting. Shut up, next topic! Anyway, what I am trying to do in my book is show

how rigorous deductive logic – as opposed to ideologically driven data mining – can change the way people think about the supposedly “intractable” problems facing our society and arrive at win/win solutions that bridge the left/right divide. I demonstrate that the real choice before us is not between free market capitalism and an economy dominated by the gov-

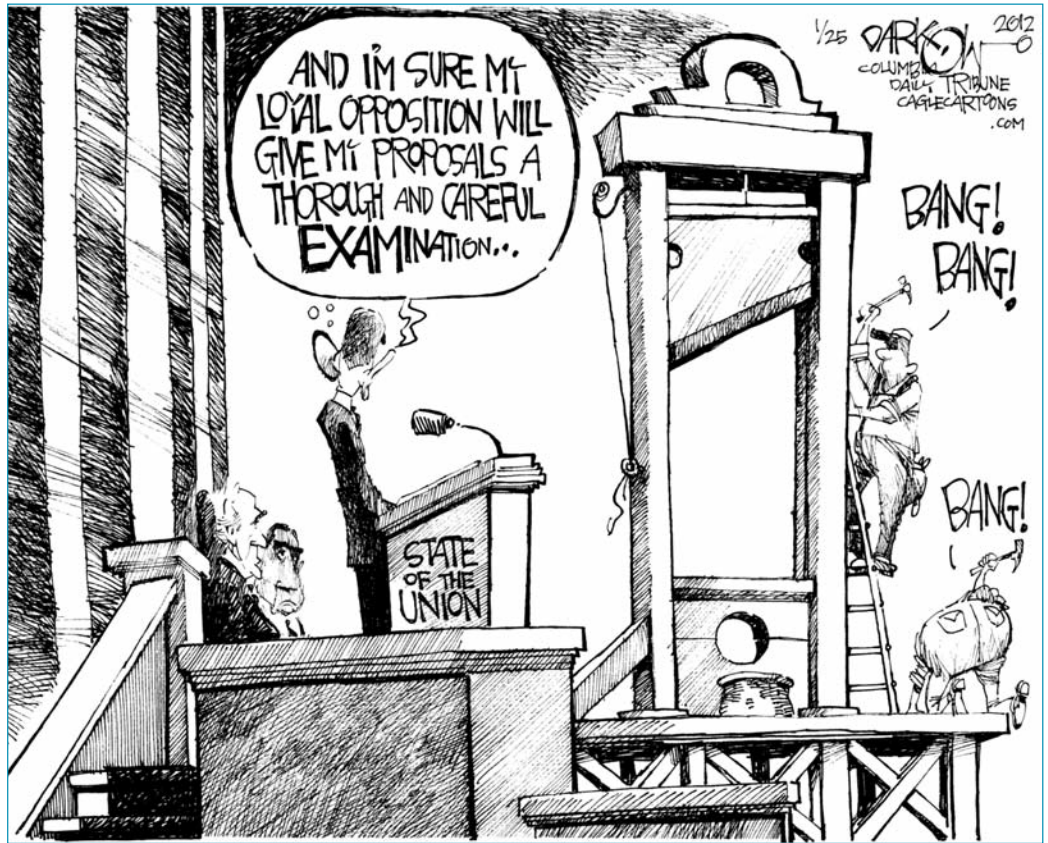
“We’ve got to get rid of this notion that only the private sector is good, or productive, and everything in the public sector is bad. Wrong! The ideal economy, as Nobel Laureate Kenneth Arrow pointed out, is one where in every minute of every day, money is being spent both by the private and by the public sector so as to maximize the return on all forms of capital, public and private.”

ernment; that's a false dichotomy set up by a common misunderstanding of the true nature of capitalism. I use high-level game theory to show that the solution lies in enacting constructive policies that allow true capitalism to flourish even as they provide assistance to those who truly need it. Now all I have to do is figure out a way to get the right people to pay attention – which is just not my expertise.

Please. You have John Mauldin recommending your book and sending out your synopsis to his millions of subscribers. That has to help your sales.

Yes. And my friend John asked me to do it in two parts, so that he can send it out over two weeks. He's never done that before, not even with **George Soros**. This is the first time, because he believes this is such an extraordinary set of ideas. But I really want to get my book into the hands of the **David Brooks**, the **Charlie Roses** and the **Jon Stewarts** of the world. I only wish I'd known earlier that publishers these days don't lift a finger to really help authors create buzz around their books. I'm really a babe in the woods on that score. Though I must admit that from Wiley's perspective, they do it right. Basically, they get 400 Woody Brocks to write books every year. They know, statistically, that there's no way they can pick out the three they should really push, so they just put them out and let 5% become big sellers. They make all their money from those few and the rest just disappear. I only wish I had thought about that a year ago. The book is being sent out to a lot of people, but my assumption is that no one reads anything anymore.

I suspect you'll be surprised. Calling for a new kind of "Gotcha!" journalism should create a stir.



I'm not joking. I want people *exposed* for the damage their policies are doing to future Americans. By damage, I mean the dollar value of foregone jobs, income and social stability. I want TV interviewers and the press in general to hound politicians on this. I want it branded on their foreheads. I want them "outed" like the Amish do. I don't give a damn about government officials' sexual or financial peccadilloes. I want everyone to know about their *policy* peccadilloes.

According to whom?

I want new graduates of the **Kennedy School of Government at Harvard** to take up the intellectual challenge; to assume the role of Platonic policy critics. It will be fun. To zero in, in the immediate future, on questions like, Does this policy make sense? Is it economically or philosophically logical? Will it result in what they are proclaiming it will result in? I want them to develop "Idiocy Quotients," a 1-to-10 scale scoring the extent of damage various policy proposals will do to our future. Then the media could widely publicize those ratings to hold officials accountable for mortgaging our children's future. All this would be part of my strategy to

To subscribe to **Welling@Weeden** or to hear about the other research products Weeden offers, please contact:

Andrew Van Ogtrop
(617) 757-8730
avanogtrop@weedenco.com

Noreen Cadigan
(203) 861-7644
ncadigan@weedenco.com

elevate the standards of national debate, and to shift towards logical forms of reasoning and debate that would lead politicians to adopt win/win policies.

You are an odd duck. You decry what you call the “Deafening Dialogue of the Deaf” that’s created economic and political gridlock, yet you say you’re optimistic your solutions could be adopted. You’re relentlessly logical, like the mathematician you are, yet you eschew data, email and most of the fruits of the information age.

Totally. But as I like to say, if you look at how Newton, Einstein, or Nash worked, they used deductive reasoning to achieve their scientific breakthroughs. I think about today’s great challenges the same way. One of the main reasons we have gridlock in America is that too many policy makers approach problems the wrong way, through the logic of induction – data crunching – and get so lost amid trees of information that they lose sight of the forest. It’s an *illusion* that with enough data, scientists can “crunch” their way to truth. In reality, data almost always undermine the truth and so inductive logic alone has led to the discovery of *very* few scientific truths. What’s worse, today, is that it’s all too often a terrible mistake to assume that someone is actually looking for the truth in data. More often than not, he – or his boss – is only looking to mine data that bolsters the deal *du jour* or his ideological prejudices.

Are you saying data – real world observations and experiments – are unimportant?

Not at all. In the first place, they get us thinking about problems and play a role in suggesting axioms, or first principles. But solutions to these problems usually have to be *deduced* from these axioms, with the assistance of little or no data. Data only reenters the process in the final stage of this scientific discovery process, when you run experiments to test the hypotheses that have been deduced. In applying deductive reasoning to topics ranging from public policy analysis to pure mathematics, the same two-step process takes place. First, you figure out a set of basic assumptions that, by their very nature, should be “transparently true.” For instance, in number theory, we must accept: “For any integer n , there is always a next bigger integer, $n + 1$.”

No controversy there.

Likewise, on healthcare reform, “A satisfactory health care system must first provide universal

coverage, and second, cause total health care spending eventually to *shrink* as a share of GDP.”

Lots of controversy there.

But don’t those two assumptions both seem as transparently desirable as mom and apple pie? In the abstract, *if* we could have them? The skill is in then deducing from those two seemingly incompatible goals a solution that’s consistent with both. Ideally, there’s only one answer that’s consistent with the axioms, but in many cases, there are multiple ones.

Before we dive into the thicket of that policy debate, let’s be clear about why you wrote “American Gridlock.”

My goals for the book are three. First, to identify five or six major national problems/crises/whatever and, more importantly, to show that by using new forms of deductive logic (things you may have read about, like the economics of uncertainty, high-level game theory, extensions of supply and demand analysis, and the new understandings of market risk being developed at **Stanford University**), *it is possible to deduce solutions to all these crises*. And second, that these solutions have the property of being win/win in nature. There’s no invocation of left wing/right wing ideology. You *transcend* that. My final goal with the book is, having shown that by using newer forms of logic you can address these issues, that this will break “*American Gridlock*” because this gridlock comes from today’s dialogue of the deaf in which left wing/right wing people merely shout at each other. Well, using my approach, there is no left wing/right wing issue at all, we can arrive at win/win policies. Since the American public now ranks gridlock in Washington as perhaps the biggest threat to the country, I think the book is very timely in this election year.

You’re making the extraordinarily optimistic assumption that anyone’s interested in rigorous deductive logic amid the election year din of negative ads?

Well, this is true. These things take time. But you have to remember that many of the “wingnuts” on either extreme are going to get voted out of office. Because, as more and more people, as I like to put it, spend more and more time sleeping in the backs of their ever-smaller cars, humor is running out and we want answers. The American people want answers. Therefore, if I can show that there really *are* answers – answers where I don’t gore you and

you don't gore me – then I think a big appetite will develop for them, even among the politicians. The reality is that cynicism today is fully justified because nobody before has said that you can have your cake and eat it, too.

Well, they've tried – but you can't fool all the people...

I'm not talking about cheap tricks. When we delve into the Medicare crisis, I will make clear exactly what I mean by that. It *is* possible to be an optimist today because it is a *fact* that you can have your cake and eat it, too. Mine is a very fresh different approach. I'm using deep theory. It's much deeper than I'm letting on, unless you go to the appendix and footnotes in the back of the book. It's very wide ranging in risk theory, supply and demand, moral theory, game theory. It's all in there and it reflects my training, my five degrees. But I didn't set out to write an academic tome. I wanted my book to be accessible to everyone, so that last thing I wanted was to fill it full of equations. As you know, publishers don't sell books by putting equations in them. As I like to joke, the only thing that frightens men more than sex is mathematics – because you can't fake the outcome. Both uniquely induce performance anxiety. I love saying that. I stole the line from **Barbara Walters** at a dinner. The point is that's how my book came to have an appendix. When Wiley saw my solution on healthcare, which is our most important long-term budget issue (a cumulative \$40 trillion of unfunded liabilities that, if not reined in, will sink the U.S. financially before the middle of the century) – and saw that I was claiming we could be more ambitious than Obama; have, in effect, universal coverage *and* more supply, and also *reduce* over the long run the proportion of GDP consumed by health care expenditures, they were astounded. They said, "This is so extraordinary that we insist on taking credit by having you publish your proof in a mathematical appendix." So I did it, but we hid it in the back of the book. Where, we hope, it won't scare off someone who picks the book up in airport. But it's all there in meticulous detail. Theorem; Lemma; Proof. Anyone who's skeptical because – I grant you – it sounds like I'm exaggerating saying you can have your cake and eat it, too, can find the mathematical proof there. It's too important for people not to know that it isn't bullshit. And once you see it, it's apple pie and motherhood. How could anyone disagree with more access, more supply and lower costs? It's a slam dunk.

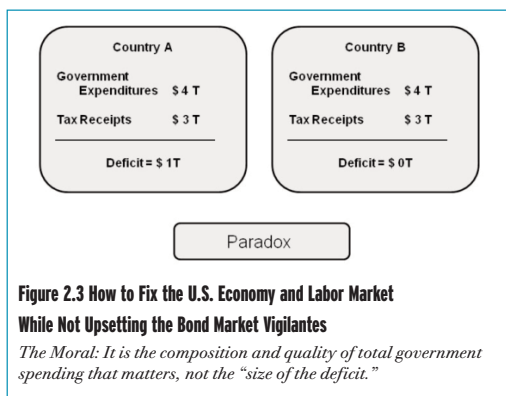
What are the other public policy challenges you take on?

Well, at first I chose five in total, but I'm now making it six, because I've realized that the first one, which I didn't really think of as a policy problem, is a great challenge in and of itself. That is, how do we end the deafening dialogue of the deaf that you mentioned? This ridiculous *MSNBC* versus *Fox News* and *New York Times* versus *The Wall Street Journal* circus. That's not the way it used to be. So the first challenge is to try to bring it to an end. That's where my own efforts to show that we can arrive at answers to our problems that aren't left- or right-wing in nature come in – and also my idea that we mentioned to get people at places like the Kennedy School to develop new programs to raise the nation's standards of debate, what we expect of our media commentators and politicians alike. My point is I want the *substance* of policies analyzed. I want people whose policies are bad for America to be outed. That is the first challenge.

The others I can list quite quickly. The second challenge that I consider is: Must we endure a "lost decade" of no, or almost no, growth and high unemployment, in this decade between 2010 and 2020? Chapter 3 takes on the explosion of future spending on entitlements. Principally the gargantuan problem of funding health care that we've touched on, but also Social Security. Chapter 4 confronts the issue of "perfect financial storms" such as the crash of 2007-2009, revealing not only what really causes them, but the one thing we could do to control them – restrict excess leverage. Chapter 5, called "Bargaining Theory 101: How *Not* to Deal with China," champions the use of **John Nash**'s theory of multilateral bargaining in both national and international political and economic relations, through the example of America's abysmal record in dealing with China on trade. Finally, in Chapter 6, I tackle the very hot topic of distributive justice, or fair shares of wealth and income in society.

No one can fault your ambition. Let's start with the Lost Decade. Most economists seem to think it's baked in the deleveraging cake.

That is what we hear. The unemployment rate remains *shockingly* high. Young people really haven't a crack at anything. But I show – using advanced economic theory, which is disguised and put very simply, but is very deep – that there *is* a solution. One that will give us what



we want – better employment, higher growth rates, more productivity, repaired infrastructure – and do so without upsetting the bond market like we’re witnessing in Europe. In fact, I show there’s really only one solution: We need a new “Marshall Plan” of sorts. We need a Marshall Plan that

invests in infrastructure at a much bigger scale than anyone has proposed – but with a qualifying difference.

Which is? This sounds awfully Keynesian–

This is *beyond* Keynes. This is something Keynes didn’t have to deal with. Keynes was not around at a time when the bond markets were about to go on strike because, “America, you have abused your borrowing power for so long.” This is a new constraint on the President and because of it; the qualifying difference about my plan is that we *please the bond market* – by continuing to borrow money and run big deficits – but *only* to fund projects with positive rates of return on capital. Back during the **Eisenhower Administration**, some complained when we were borrowing money to build the interstate highway system. But it had a rate of return on capital of 13%. The bond market just *loves* that kind of borrowing, *because it’s going to pay for itself*. What you *don’t* want is the **Nancy Pelosi**-type of borrowing, where all you do is borrow money to keep state workers in their jobs; where they don’t in any way earn a return on that money that can pay down the debt, so the debt gets piled on the shoulders of our children and grandchildren. The bond markets then say, “Wait a minute, these guys may one day say, ‘Hell no, we won’t pay!’” Then you get into the Italian situation.

Why run deficits at all in a world still staggering under its last credit binge?

The key here is to understand that the word “deficit” itself as it’s used today is a misnomer. It’s a bad term. If the government has a \$1 trillion deficit, as we do, and the money is being borrowed for unproductive spending, that’s bad because it sticks the spending on the shoulders of the kids who will have to service the debt.

Without benefitting from it.

Right. But on the other hand, if you have a \$1 trillion deficit due to borrowing money to invest in productive, high rate of return on capital projects, you’re golden. So I focus on dispelling the widespread confusion about the term “deficit.” To do so, I draw heavily on *Public Investment, the Rate of Return, and Optimal Fiscal Theory*, published back in 1979 by **Kenneth Arrow** and **Mordecai Kurz** at Stanford. This book is not widely known; it’s completely deductive and highly mathematical. Nonetheless, the work is without equal – foundational for fiscal and macroeconomic theory. It encourages a complete rethink of the meaning, the proper role and the correct size of fiscal deficits. And, it implicitly suggests that we need a new Marshall Plan.

Hold on. What are you talking about – good and bad deficits?

As I said, this isn’t really new theory, since it stems from Arrow-Kurz, but I’ve never seen it justified from first principles as I do. Very simply, consider Figure 2.3 from my book (nearby), which contrasts the fiscal status of two nations with ostensibly identical deficits.

Country A looks a lot like the U.S. today, with the government spending \$4 trillion on defense, administrative costs, interest on its debt and transfer payments like Medicare and Social Security. Its tax revenues are only \$3 trillion, so it runs a deficit of \$1 trillion, meaning its treasury has to issue \$1 trillion in new bonds – and the burden of repaying those bonds falls on future generations. As the magnitude of that debt outstanding grows, a point will be reached where the bond markets fear future insolvency or the printing away of debt, so interest rates rise, and the nation sinks into an infamous debt trap from which few ever escape.

Clear enough. But the math doesn’t seem to work on the right side of your graphic. Or Country B is run by Houdini. It has zero deficit even though it, too, is spending more than it takes in?

It’s not magic. Country B is spending that \$1 trillion on profitable investments (in human capital and infrastructure) that are independently certified to generate a positive rate of return on capital – as calculated within the venerable field of public finance. The other \$3 trillion of its spending, on the usual unproductive run of government activities, is matched by its current tax revenue. *So there is no deficit from*

unproductive spending. The other trillion that it is spending goes into “certified productive” projects that will pay for themselves over time, in the same way that productive capital investment in the private sector pays off. That’s why I show a zero deficit in the graphic. The bonds markets are placated and interest rates aren’t driven up.

And you’re suggesting that happy zero deficit place could be the U.S. with your new “Marshall Plan”?

It *would be*, if Congress were able to redirect a huge chunk of current spending – on the order of \$1 trillion a year for, say, the next decade – away from current uses and into productive projects – things historically like the highway system, the space program, DARPA (which morphed into the internet), the energy grid, water resources, R&D and so forth. Crucially, this wouldn’t mean *cutting* spending by \$1 trillion, as many deficit hawks suggest, but reconfiguring total spending to boost GDP, jobs and productivity. There would be no net layoffs; no fiscal drag at all.

I can already hear the objections that you’d be “crowding out” the private sector, though.

Not at all. Remember, the government is already spending \$4 trillion a year; we’re just talking about reallocating a big chunk of that to productive investments – in a time when the private sector business environment is so lackluster it’s actually a headwind to economic growth. Now, this *does* assume that we have \$1 trillion worth of needs in this country. The good news there is that there’s a little law of economics that says that the longer you wait to put new roof on the house, the higher the rate of return from putting one on. And the United States and Britain alike, having put nothing into their infrastructures for 50 years, radically need this type of Marshall Plan. We need it now and we certainly have the unemployed workers to put to work on it. By contrast, Japan and Switzerland maybe couldn’t absorb that much money because they’ve already got roads to everywhere. So we’re lucky, in a sense, to need new roads and bridges, new health care infrastructure, new investments in human capital. I’m *not* just talking about filling potholes.

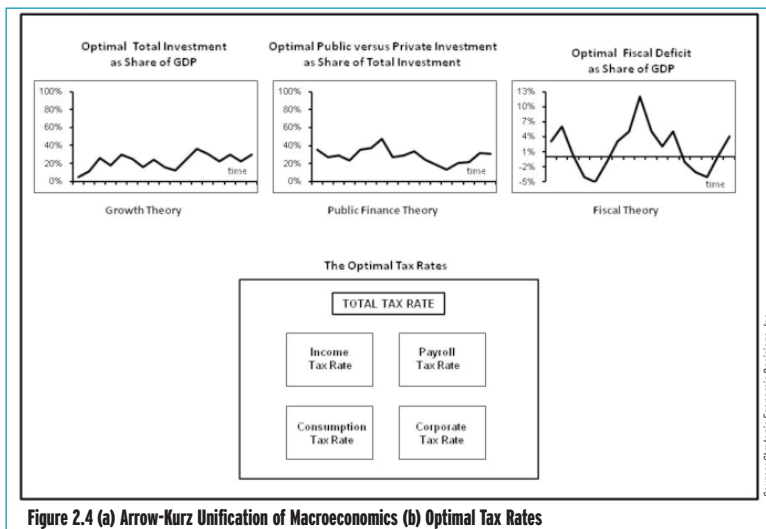
Gosh, we have plenty of those, too. Still, what in the world makes you think government can invest \$1 trillion productive-

ly? Boston’s Big Dig is the obvious demon poster child for inept, wasteful and corrupt government projects.

You are absolutely right; you’re citing yet another reason for skepticism. Given our experience, it’s very easy to be skeptical. However, let’s consider the history of the United States. As Ambassador **Felix Rohatyn** aptly pointed out in his book on infrastructure spending, the great infrastructure projects – the past Marshall Plans, the Louisiana Purchase, the subsidizing of the Erie Canal. The railroads. In our own lifetime, DARPA – all of these paid off hugely. Boston’s Big Dig – of course, it happened. **Procter & Gamble** occasionally launches new products that bomb; it’s not the only company that does. Look at *New Coke* – we can’t hold double standards here. The point is I want a new infrastructure investment bank – staffed by *really smart people* who are very highly paid, including people from Singapore and China – which will screen every proposed project. If there are 18 bullet trains proposed, they will all get assessed for their actual expected rates of return on capital. The data will be published. If Nancy Pelosi’s bullet train in California has a negative 8% return on capital, it’s “Sorry, Nancy. You’re not getting funding.” If Joe Blow’s bullet train in Utah has a return of 14% on capital, that’s where the money will go. This would be done across the board on all different kinds of projects. This is a no-brainer – we just haven’t bothered to do it.

What would go into those return on capital calculations? Public projects tend to come wrapped in externalities – would the infrastructure bank take those into account?

Absolutely. You ask a very good question. “Externalities” is an economics buzzword. It refers to the fact that, unlike when you and I start a private ice cream company and our profits are how much more we get from selling the ice cream than we pay to buy it, the way you measure the return on public investments, like Amtrak, is very different, because you have to take spillover effects, or externalities, into account. The key point here is from the theory of public finance: You have to take into account that the benefits from having Amtrak aren’t just the ticket revenues it produces. Therefore, we shouldn’t think that Amtrak has to entirely pay for itself with its revenues. The spillover benefits I’m referring to are things like the fact that Amtrak moves 28 million people to work every day in a quarter of the time that it would other-



Source: Straight Economic Decisions, Inc.

wise take them to get there. Now, the more time that people aren't stuck on a train platform or in a car, but are in the office or the factory where GDP gets baked as a pie, the more GDP growth you can have. And the more tax revenue the government collects on the extra GDP realized. In India, you can see where this sort of thing has produced dramatic improvements in people's lives, as well as in GDP. Where people used to spend four hours twice a day getting to work and back and a new train line has sliced that to an hour, total, well, that could be seven more hours of productive activity, every day.

Sure, but aren't estimates of both risks and returns on public projects awfully squishy, no matter how smart the people in your infrastructure bank? So wouldn't large discounts on their expected rates of return be in order?

Yes of course there are risks. But no, economist Ken Arrow showed long ago that, because of the government's ability to widely diversify its risks across a huge portfolio of investments, the correct "social" risk premium in this case is actually zero. Happily in our current straits, that boosts returns on public investments above returns on comparable private investment (all else equal), since significant risk premiums *are* appropriate in the private sector. Once again, you have to realize there are many different ways of measuring the benefits of these things. Public cynicism itself is a real problem. People assume we can't make progress anymore. But the human race has made *fabulous* progress in everything. I like to joke that the greatest increase in honesty of human beings in the his-

tory of the world occurred in Genoa in the late 15th century, when double-entry bookkeeping was invented. For the first time in history, people who invested their money in some enterprise could actually find out where the money was going. That really turned a lot of crooks into honest people! Cost/benefit analysis, which arose in the 1960s under the influence of some very important, future Nobel Prize-winning economists, said that we're not going to invest government money anymore, unless we have a proper cost/benefit analysis. It has done wonders. The fact that there was a Boston Big Dig scandal is more a matter of corrupt state politics in Massachusetts than it is of Washington. So I'm much more of an optimist. I prefer to think that we can do this right, since everyone knows we have need for infrastructure, whereas, conveniently, we *don't* have any need for more private sector investment in McMansions. We need to let money flow to where it's most needed. Remember, too, when these infrastructure deficiencies get addressed, the people doing the work will be private sector contractors. There's no reason why those companies shouldn't be held to high standards and work hard to make a profit.

Except that everything in Washington is political and involves big bucks – seen and unseen.

That's where my transparent and wholly objective infrastructure bank comes in, remember? What I care about is, are the contracts being well-managed and does the project make sense; does it have a high rate of return? We've *got* to get rid of this notion that *only* the private sector is good, or productive, and everything in the public sector is bad. Wrong! The ideal economy, as the Nobel laureate Kenneth Arrow pointed out, is one where in every minute of every day, money is being spent *both* by the private *and* by the public sector so as to *maximize* the return on *all forms of capital*, public and private. Sometimes that means – like when all the veterans were coming home from World War II and making babies – a massive investment in the Levittowns of America, to give those young people new houses. But once you all have houses, then maybe you need better trains, so you *shift* from investment which is mostly private-sector-oriented to investment that, because of externalities, must be public investment. My point is that what matters are the benefits bestowed by each, not the labels we apply to these things. Arrow and Kurz proved

this all at a much deeper level in their work, and I use another graphic in my book to try to make it clear [Figure 2.4, nearby]. Very basically, to maximize welfare requires first solving simultaneously for the three optimal trajectories over time in the hypothetical illustration, as well as simultaneously solving for the optimal tax rates also shown. And Arrow and Kurz provided the deductive logic to do so. They showed that it is both necessary and possible to determine all three of the optimal paths sketched in my graphs: The optimal level of investment spending over time, the optimal mix of public and private investment over time, and the optimal level of the fiscal deficit or surplus over time. And all three must be determined simultaneously because all three are interdependent. They further showed how these optimal trajectories could be achieved by simultaneously determining the right level of total taxation and the right mix of available tax revenues. And this all follows from their appealing first principle of “maximizing the greatest good for the greatest number.” What it comes down to is that there will be times when the private sector *should* run a surplus that can fund a public sector deficit, *and vice versa*.

All this does sound vaguely Keynesian, again, with spending countering the cycle –

Now you raise a point of very deep macro economic theory. Yes, there are really *two* justifications for government deficits. Mind you, when I say deficits, I mean deficits *when they are needed, which should morph into surpluses when deficits aren't needed*. But you're quite right – these are two different things. Keynes was only concerned with running government deficits when you needed to generate more overall demand on the downside of a business cycle – because you and I in the private sector, for whatever reason, had “bad animal spirits” and we just weren't spending. So instead the public sector builds the great Hoover Dam. That has *nothing* to do with the kind of story that I have been talking about, which is the swing over time between when *private* investment yields the higher return than public and the times when *public* investment has the higher return than private. Right now, we're living with what the famous economist/ambassador **John Kenneth Galbraith** called “private affluence and public squalor.” We all have our McMansions – but our public infrastructure is crumbling. So I propose in my book that what we now need to do is to take *both* of these approaches to deficit

spending, the Keynesian one based on the swings in animal spirits, which has nothing to do with where you get high rates of return on capital, and the Arrow-Kurz theory, which is just objectively about where the money is needed most, and put them together. Although the Arrow-Kurz theory was originally set forth within a “classical” economic framework of full employment and no business cycles, much more recent work by Kurz and others extends “classical” economics to include fluctuating animal spirits and business cycles, making it in principle possible to extend the original theory to include those Keynesian concerns. The result, when you put them together is that you realize that we, *right now*, are in a position in America where we have *a double need for public investment*. First, animal spirits in the private sector are, with good reasons, depressed and will stay that way for a while, as you and I deleverage. Second, the need for public investment, and its attractiveness, in terms of rate of return on capital *is much greater* than the need for, or prospective return on, private investment. It doesn't *have* to be that way – it just *happens* to be that way at this time. Which means the notion that we should cut our government deficit to zero is *completely misplaced*. We should continue to run a very large deficit. The changes that *must* be made are in *how* the money is spent, and *on what* it is spent – *not* in how much is being borrowed. If you borrow lots of money for good, profitable projects, hallelujah.

All the research cited by conservative economists that they say shows nations self-destructing when their debt goes over – pick a number, 120% of GDP – doesn't give you pause?

People who are anti-deficit, and I'm sympathetic to that view myself, to a certain extent, do pick these magic ratios. And they're absolutely correct that there are certain cases when those ratios are very scary. On the other hand, to be very academic myself for a moment, it's well known that the actual debt ratio doesn't matter at all. What matters are how it's changing over time. The U.S. debt ratio went to 126% of GDP by 1945, as we borrowed with war bonds to pay for WWII. Well, after that was over, we grew rapidly through the '50s and the '60s and the thing went down, by 1970, to 25% of GDP. It's not the size; it's the dynamics. The key, and this is what the conservatives miss and a lot of liberals also miss – is that this whole obsession with

deficits is misplaced, once you understand the great work of Kenneth Arrow and Mordecai Kurz on this subject and forget words like “private” and “public.” What matters is that every night when we go to bed, capital is being invested, whether private or public, in whatever generates the highest good for the people, or the highest rate of return. Or, as the Victorians used to say, “Waste not, want not.” And the point of my book is that there is nothing either left wing or right wing about that. What *is* wrong is to waste resources, whether in too many McMansions or in too many corrupt Big Digs. You want the right mix of the right projects.

Easier said than done, alas.

I know, I make it sound simple, but it’s not, by a long shot. Kenneth Arrow is the most important economic theorist alive by a factor of 100. He was my tutor – and he told me he never thought of the kind of blending of his Arrow-Kurz work with Keynesian animal spirits which I just loosely described. So I painstakingly worked it out formally and included it in an appendix. That’s the kind of deep work behind everything in the book; I just don’t show it off.

Okay, Woody, let’s turn back to your claims about solving the health care crisis, by having our cake and eating it too, which are likely to arouse more skepticism than anything else in “American Gridlock.”

Well, in chapter three, I do offer the most remarkably precise answer to what should we do about the entitlements crisis that threatens to bankrupt the nation over the long term. And it is an answer that is so good that you almost can’t believe it. Social Security actually is not such a big problem.

How so?

The “unfunded liabilities,” as they call them, are less than \$10 trillion. We can fix that by raising the retirement age; after all, we’re all going to now work until 70 anyway. What’s the big deal? The public understands that very well. We could also change the inflation indexing rates so that the liabilities don’t rise as fast. Then the thing would be solvent for another 85 years. The real problem is Medicare. Our total healthcare expenditures today, not just Medicare, come to 18.3% of GDP, which is double the ratio in other developed nations.

Yet we have worse outcomes, by many measures.

True, but what’s really scary is that healthcare’s share of GDP could easily rise to 30% or 35%, which effectively means bankruptcy, because you couldn’t afford a Defense Department. At least not unless you taxed away 75% of people’s incomes, so that they might as well be slaves. So it’s a major crisis. Bankruptcy for Medicare, a \$40 trillion-plus unfunded liability for in Washington’s own books, *must* be dealt with. Now, Obamacare was the first big effort to deal with this, and President Obama finally succeeded in passing his reform act. But it has a lot of problems. The more we look at it, the more most people now agree that – because it extends more coverage to more people – Obamacare is going to cause the nation’s total expenditures on healthcare services to rise, *not to shrink*. Obama set out to push the *growth rate* on health care spending down, not to reduce the total amount of spending. They talked about “bending the expenditure curve.” But the bad news is that prospects of that are looking terrible. So I took on the challenge from first principles and came up with my approach showing how you can have your cake and eat it, too.

So you’ve said. But how in the world?

This is a remarkable thing. The first principles in this case are virtually axioms. 1) I want coverage increase a lot, almost to the point of being universal coverage. I believe people *should* have access to healthcare. Basically, like other countries. So I share that view with Obama, incidentally. Axiom 2 focuses on the fact that if you’re going to have an awful lot more *demand*, you’d better have a lot more *supply*. If twice as many people are going to be going to doctors, you’d like to have twice as many doctors or automated systems that replaces doctors. That is where Obamacare gets in real trouble. It is very light on the supply side. The problem is – let’s say we’ve all now got insurance. Great. We call the doctor and his phone doesn’t answer because he didn’t like the part of Obamacare that said he’s going to be paid less for a procedure. He just dropped out of business.

Not good.

Especially not with something like 26% of physicians set to retire in the next 30 years. Which is simply a demographic fact. So my second axiom makes sure that universal access isn’t an empty promise by requiring that the overall (aggregate) supply curve of health care

services must increase at a rate faster than the growth of the demand curve. It's common sense. My third axiom is the one that everyone finds astonishing. I want the 18.3% of GDP that we now spend on healthcare to drop back down to, say, 10% of GDP – despite universal coverage, more services demanded and more supplied. I want the nation's healthcare bill to drop.

Woody, it sure sounds like you're demanding a free lunch –

Well, what I show is that there is a policy – and only one policy – whereby the nation can satisfy all three assumptions. That condition is that, every year, the so-called supply curve of medical services as a whole shifts out, increases at least slightly more rapidly than the demand curve does – regardless of how fast the demand curve increases. That's what's remarkable. [Figure 3.4, nearby.] As long as the supply curve shifts out more rapidly than the demand curve (which is what I show in that mathematical appendix hidden in the back of the book), what happens is that total expenditures on healthcare reach a peak and then decline toward zero. It's almost too good to be true; so unless you see the mathematics you're not going to find it very credible. But let me return to the real world example I mentioned, the phone system. If you take the number of phone calls that were made in 1983, on the eve of telecom deregulation, and what we spent on those calls, and scale those totals up just by the GDP growth between then and today, what you find is that the cost of an equivalent number of calls today has dropped by over 90%. Repeat: Dropped by over 90%.

And not because the phone companies suddenly felt charitable.

Scarcely. We got rid of the monopoly. I like to say that Ma Bell was gang-banged by the Baby Bells and then we had the competition which led to innovation. And bingo! Likewise, the new \$19,000 Taurus is 19 times safer, I read recently, than Elvis's Cadillac Eldorado. Air fares cost an eighth of what they did when my father used to fly for Pan Am. This is called progress. Why don't we demand it from the medical profession? Another important point is that 90% or 95% of the reasons you and I ever visit a doctor, are completely replicable – the nurse knows, when you walk in, what the doctor will prescribe. We should be designing expert systems to handle routine care.

Expert systems?

Yes. I built reputedly the first expert system in the field of finance 25 years ago, Interest Rate Insight, and learned firsthand about the extraordinary potential of this field; I know what they can do. So I want MIT students given million dollar paydays for developing good ones – platforms in which the expertise of the best doctors in any field is encoded and then utilized in an

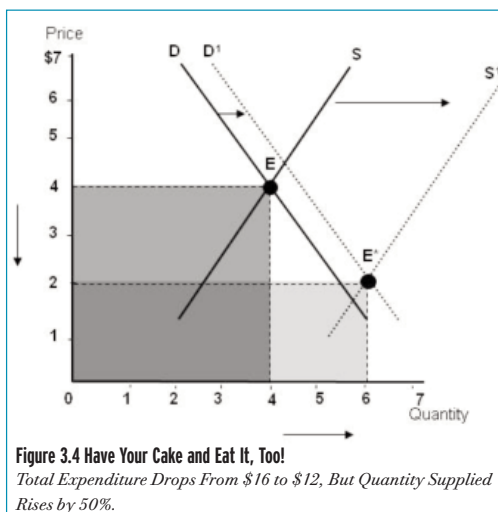
interactive manner. The result would be an automated expert “there” to diagnose you 24/7, to have a discussion with you, to ask you highly sophisticated questions, to consult with other professionals, to test you, and then to tell you exactly what to do next. Let's get this done.

I can imagine doctors not being thrilled with the idea; protesting that no computer is capable of the practiced and imaginative inferences made by skilled practitioners of the medical arts.

We have no choice but to increase the supply of medical services if health care costs aren't going to be allowed to drive us into bankruptcy. There are only three ways you can shift the supply curve out faster than the demand curve: Deregulation, decartelization and innovation. Let me repeat. When you have a cartel that says Harvard Medical School and all the other medical schools will only graduate a certain number of doctors every year and that's the way it is – and when you don't have the equivalent in medicine of paralegals; when you basically don't need to innovate aggressively because of the coziness of your life within a cartel, it's a problem. We know from history that the way you get productivity out of cartelized industries is to deregulate and innovate. And that's exactly what can be shown to push the supply curve outward faster than the demand curve.

Okay, so explain to me how you've come to the conclusion that controlling leverage is the key to preventing any more financial “perfect storms.”

Well, I grew up spending summers in Gloucester, Massachusetts, which is where that



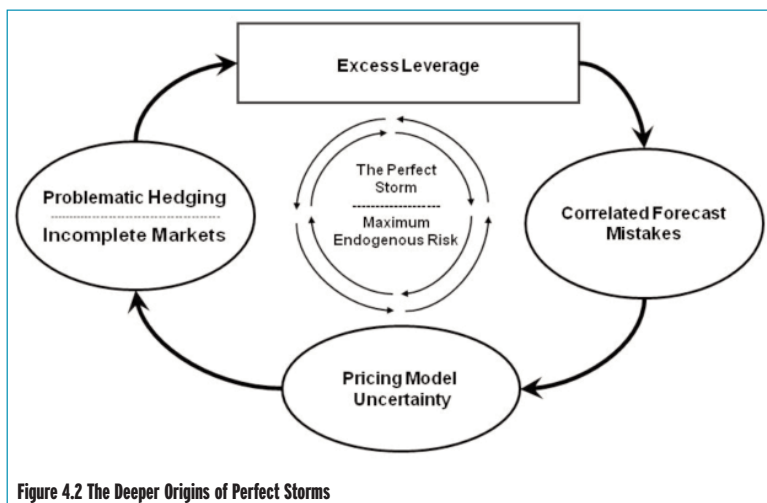


Figure 4.2 The Deeper Origins of Perfect Storms

movie was filmed, so I'm very familiar with perfect storms. And we certainly did have one, with the housing and credit crisis. What I've found here isn't as startling as my conclusions about health care, but is pretty important.

You say it wasn't merely greedy bankers, lax regulators, devious lobbyists, pliant politicians, daisy chains of complex sub-prime derivative securities, serial no-doc mortgage flippers, fraud, greed and the sheer stupidity of the herd that dragged the global economy to the edge of the abyss?

Well, it's easy to observe malfeasance everywhere – self-dealing mortgage brokers, greedy bankers, stupid regulators, some corruption here and there. And of course, once you've lost your home, and you're mad as hell, you want to blame *someone*. So we have ad hominem attacks on all these corrupt and evil people. Plus, people understand that there *were* some very bad deregulatory moves, such as **Bill Clinton** getting rid of **Glass-Steagall**. But the question is what do we do to prevent these kinds of perfect storms from happening again. And the tendency is to try to pass laws *legislating behavior*.

You're not a fan?

Oh, there's nothing really wrong with that in many cases. You can say to people, "If you do something that you used to get a slap on the wrist for, you're now going to get hard time." That's going to work to some extent.

But?

The real opportunity here is that very new work done at Stanford University by Professor Mordecai Kurz now permits us to understand the fat tails of market risk much better than we

ever have before. This is a real revolution. This is like going from standard uncertainty in statistical mechanics and physics to quantum uncertainty, which is a *completely* different ballgame. What Kurz has done is show that the standard story on risk, which was that news from outside was what moved prices and caused volatility – external events, like earnings shocks, meteor attacks or whatever – actually can explain only about 20% of total volatility. The additional volatility comes from far more complicated phenomena lying *within the system*, rather than from external noise buffeting it from outside. So we call this "endogenous" risk, and Kurz has been able to show that it explains some 90% of the observed volatility in the markets. (Endogenous comes from "endo" meaning from within, just as exogenous, from "exo" means from without.)

You're saying perfect storms are somehow an inherent part of the market?

Not necessarily. The basic point here – and let me make this crystal clear – is that if you ask the question, *could* there be perfect storms even in a perfect world with no malfeasance, no crooked people and no greedy people, the answer would be yes. Malfeasance simply amplifies the storm.

And the global financial crisis clearly didn't lack for amplification –

No, as I see it there were four principal sources of the GFC: Poor economic theory, misguided theories of market deregulation, pathological incentive structures and excess leverage. But for my money, poor economic was the biggest culprit. Rarely has bad economic theory ("the Efficient Market Theory or the theory of rational expectations") exacted such a large price from society as it did during the GFC. It led to the creation of financial weapons of mass destruction, to irresponsibly high levels of leverage, to an arresting underestimation of risk and to a smug "markets know best" philosophy of deregulation that combined to produce the perfect storm. But the reasons perfect storms happen go deeper.

Okay Woody, what's the essence of Kurz's new work? Where does all that extra risk come from? And how do we end up with perfect storms?

Kurz shows that not only *can* you have a perfect storm without malfeasance, but when and why you will have it. That's what I like – the causali-

ty. So in my book I show his four conditions leading to perfect storms in a diagram [Figure 4.2, nearby].

And they are?

Correlated forecast mistakes, pricing model uncertainty, problematic hedging/incomplete markets and excess leverage. Now, what's critical going forward is that three of those conditions cannot be legislated away – but one can be: Excess leverage. But you asked where all the endogenous risk comes from. The first place it comes from is the fact that when you and I make our bets on future prices, the probabilities that we use are wrong. That is to say, we look back after reality is known and we say, "Damn it, why did I bet 70/30 on such and such? It should have been 50/50." The statement, "my betting odds were not right; had I known more, I would have used different ones," is the correct way of saying, "I made a mistake."

It is?

Now, you may find this surprising, but the famous efficient markets model – for which, this year a Nobel Prize went to **Tom Sargent**, *assumes* that there are never any mistakes; that the betting odds we use are always correct and they're moreover attainable simply by punching up historical data. Now, that was an extreme assumption that was introduced 40 years ago, and Kurz decided to see what would happen if he dropped it. He said, "Let's see what happens when actually history won't yield to you the true probabilities. Say, global warming comes along and so the historical data on rain in China every July 28 will look a lot different than what happens this year because of this curve ball God throws called global warming or the rise of OPEC or the discovery of derivative securities by Kenneth Arrow in 1953 or the rise of China. Suppose there are structural changes. So *now*, there is no certainty. You'll end up with your view about the future, she'll end up with her betting odds and I will have mine. And most of us, since there's only one right, will be wrong. Yet you will not find the word "mistakes" in any book on modern finance. You may find that hard to believe. But Kurz's theory is all about the impact of mistakes on volatility.

That's nice. But what does it have to do with those four conditions that can produce a perfect storm that you cited?

Here's my first main point. Let's suppose there are 100 of us. We're all wrong in our forecasts. Let's say 50 of us had a mean forecast 15%

above what reality was and the other 50 were 15% lower. When the truth became known, we'd all adjust our portfolios. The *quantity* of trades would jump, but *price* wouldn't change at all because for every buyer that was high there'd be a seller that was low and they'd cancel out. So Kurz concluded that maybe what causes big problems in volatility in perfect storms is when everyone is wrong *in the same direction*. Of course, the greatest example of such correlated mistakes was the housing market. No one dreamed that anything like home prices plunging could happen for one second. So when everyone is wrong in the same direction not only does the quantity of trades jump, but price goes to hell in a handbag. The second condition for setting off a really bad market jolt is a little bit more theoretical but understandable.

Okay, I'm braced. What is it?

Standard efficient market economics assumes that every risk in your life can be optimally hedged – and that once you have a hedge the hedge can never melt down the way they all did on the afternoon of Black Monday 1987. Well, we now know that 95% of all desirable hedges can't or won't exist because of the cost of setting up the hedging market or what we call "Moral Hazards." Moreover we know that in financial markets, when there's a crisis, hedges tend to become correlated. Which means is that in hedges that are supposed to work because asset price A goes up when asset price B goes down – well, they both go down. The whole thing comes unstuck. So when you have a violation of the ability to hedge, when no screw ups are allowed, and when you have correlated mistakes, the surf is getting high. But now comes the *real* story.

Let me guess, excessive leverage.

So in addition to everyone being wrong, suppose that households and banks both have the highest leverage in history. *Oh - my - God!* Yet in Efficient Market Theory, where people don't make mistakes, leverage is really besides the point. If everyone knows the true probabilities, why would anyone leverage up to place a big bet to try to beat someone else? But, my God, in a world where *my* theory is better than yours and I'm going to take a big bet, well, when you have a correlated mistake and hedges melting down, and banks are leveraged not 10:1 but 50:1 – the result is a *perfect storm*. People forget – Leveraging banks 50:1 is not five times worse than 10:1 but 5,000 times worse, measured on the appropriate hyper-geometric

scale. My point here is that the toxic combination of being very leveraged, very wrong, and un-hedged is a perfect storm. And while it would be nice to be able to legislate a requirement that we all hedge every risk, it can't be done. No more than we legislate away greed, malfeasance, stupid regulators or rapacious bankers. We might as well try to legislate away teenage horniness. But the one control variable that we *could* adjust is leverage. I suggest in my book that we appoint a new leverage czar, completely separate from the Fed.

Another czar in Washington?

Yes, the Fed was never supposed to be involved in asset markets. The Fed is supposed to adjust the interest rates to promote price stability and employment on Main Street. Controlling leverage in asset markets should be a job for someone else. Once upon a time, in the autumn of 1958, my father walked into Smith Barney to be told that, rather than the 50% margin he was used to putting down for stocks, he needed to put 90% down. "Mr. Brock, there is a stock market bubble. Mr. Brock, we're putting on your seat belt. You are drunk." Can you imagine, that in a *far worse* example of a bubble, Greenspan and Bernanke said, "Mr. Brock, we're taking off your seatbelt. Why don't you put down *even less* on the house?" To the point that millions of people had infinite leverage on their main asset. This was insanity cubed. So I want a board of leverage czars looking at each of the seven main asset markets. The minute one gets bubbly, up goes the margin requirement.

That will incite more howling from the banks than the Volcker Rule.

Well, the financial sector doesn't like that idea because a *terrible* thing would happen then. Partners' incomes drop from \$100 million a year to \$10 million and I'm very sympathetic to those people – because they will face immediate divorce suits. I mean, what woman do they think can survive on \$10 million a year?

Try me! But perhaps we should move on to China. You have some pretty pointed things to say about how inept we been in dealing with China, especially on trade issues.

My first thrust is even deeper: The world is going to become much more politicized. It used to be there was a market, if we needed to buy more oil. No more. In the future, China is going to control markets and you and I are going to have to get permission slips to buy our quotas. In other words, "Res Politica" will trump "Res Economica." And if that's true, we have a problem, because everything we're used to in our world of "Economic Imperialism," is markets and economics. The irony is that they are becoming less and less relevant as political power is asserting itself. Now, I happen to think that political philosophy is the most needed discipline today, because it's governance that's not working anywhere, not markets. But political science, unfortunately, is a second- or third-rate discipline, when compared with economics today.

It's perceived as rather mushy, not much of a science. Though economics isn't really all that much better –

So let's ask why is economics so successful? The answer is that they not only have a core theory – the law of supply and demand – but it works. There is no Economics 101 without supply curve, demand curve, price, quantity – Yet in Political Science 101 there's no core. It's just a pastiche of topics and results. The irony is that the core model for political science and theory that we need has existed for 45 years and never been drawn upon. This model known in Game Theory as the model of an *n*-person, multilateral bargaining game, where you have a group of people who can form coalitions and make threats against each other and they end up dividing the pie, according to some allocation that comes out. This model of rational bargaining with coalitions and threats and all the Christmas tree decorations happens to have been developed between 1950 and 1970 by John F. Nash, Jr., John Harsanyi and Reinhard Selten – the last two of whom I worked closely with. All three shared the 1994 Nobel Prize in economics. This model is far more all-encompassing than the model of supply and demand, which is trivial by comparison. What I show in the book is that once they understood this model, they could use it to arrive at more amazing contributions. John Harsanyi's work shows there is a way of measuring the relevant power of people and nations; developing a relative power index. Which I then use in this chapter to review the sorry history of U.S. - China trade bargaining over the last 30 years. I show that, measured by four of Harsanyi's five dimensions of power during the last 30 years, when the U.S. has lost basically every negotiation it has with China, we have actually had a good four times as much power as China. That we've always come home empty-handed suggests either that someone is extremely incompetent, or that we got what we deserved. Because the fifth dimension of power is the relative risk-averseness of the players. This was the great insight of Nash and Harsanyi. If you and I are bargaining over a pie and the outcome, if we can't reach an agreement, is that we both go home empty handed – and you have two starving children and I just ate a hot fudge sundae, obviously you're going to be very risk-averse in pressing your claims against mine. Because going home empty-handed is a worse outcome for you than it is for me. That's why I can bargain you down to a quarter of the pie and keep three-quarters of the pie for myself. So, given that we know we were more powerful than China on four of the five dimensions, game theory analysis tells us we got an F in Bargaining 101 because the State Department was extremely risk-averse. Can you imagine Hillary Clinton, whom I admire, ever thinking of doing what John Nash proved that you have to do to win these games – make rational, enforceable, credible threats?

Not likely. Nor her predecessors.

It's so obvious. For example, how dare we let China into the World Trade Organization and not demand that they do something about an exchange rate which is today half of what it was in 1990, when theoretically, it should have risen

at least 300%? Or, as **Paul Samuelson** wrote in his last published article, “How dare we not take action against their egregious theft of intellectual property?” The whole notion of free trade is you make widgets better than we do; we make maple syrup better. So we trade widgets for maple syrup. But the Chinese come along and say, “We’ll buy your maple syrup only if you sell us Vermont. We’ll buy Intel products only if you give us the design specs.” This undermines comparative advantage which is the whole point of trade, but we have just wimped out. And only people with pigeon brains think it’s wonderful because, “Look at how many cheap TVs Americans are getting because of the cheap Chinese currency.” Excuse me. You do not measure the wealth of a nation with cheap TVs. What about the four million U.S. manufacturing jobs that were unnecessarily lost? Or the huge trade deficits we’ve run up. Net-net, we were screwed.

Now what?

My point is that game theory analysis is very useful because not only can it highlight what went wrong, it can then make clear that in future negotiations you had better be prepared to make clear threats that you stand behind. As the Ancients said, “If you want peace, prepare for war.” Then you will have peace, not war.

Still, that sounds pretty hawkish, especially next to the title of your final chapter, “Beyond Democratic Capitalism” –

We’re running out of time, so I’ll make this quite brief, but the last is my most ambitious chapter, given my goal of showing that there are lots of win-win policies we could adopt instead of falling victim to the dialogue of the deaf between the left and the right. Because in it, I tackle the question of fair shares. Let’s be honest. Karl Marx set the stage with one of the most famous statements in the history of political thought: “From each according to his contribution; to each according to his needs.” So the left wing, especially academics, focus on the fact that certain people are much needier than other people. Therefore, they claim, the needy have a claim on the resources of those who are less needy. And they present good reasons to believe that this is the case. But on the other hand, the right wing says, “Wait a minute. I’m MVP. I’m the reason the Bruins won the season. If you don’t pay me four times more than you pay other people, I’m leaving” And the fact is, it’s well-known within market economics everybody not only *is* paid, but *should* be paid his market worth. If you’re paid more than your worth at your company, the company goes broke, under the zero excess profits assumption. If you’re paid less, you leave. So we all get what we’re worth. “Goddammit, I built that company; I’m worth a lot. It’s my money. How dare anyone say it should be redistributed?”

You’re claiming you bridge that divide?

As I said, this is the most ambitious part of the book. The way to think about this is to realize we want to factor the problem into two parts. First, we want to ask what does capi-

talist economics itself say about the issue of distribution? Most people will say it has nothing to do with it. That’s up to the moral philosophers. So second, we ask, what do moral philosophers say about distribution? The most interesting answer is that – coming from very different directions – both capitalist economics and moral theory end up saying, yes, there *should* be very considerable redistribution.

Moral philosophy, sure. But where do you find that in the theory of capitalism?

In the case of economic efficiency, one of the great discoveries in the history of economics was a 1953 theorem, once again by Kenneth Arrow, who asked a question no one had ever asked before: Will the “invisible hand” of **Adam Smith**, the price system, the efficient markets, *work* when there’s uncertainty about the future? When we don’t even know where our supply and demand curves are going to be sitting? We know the probabilities at best. What’s market efficiency mean?

Arrow proved that all the classical concepts of efficiency and market equitability go through untouched when there is uncertainty – *provided you augment the system with a whole new group of securities markets known as Arrow Securities Markets*. Each of these Arrow Securities was essentially a security permitting you to hedge *any uncertainty in your future* of any kind – rain of 48 inches in Iowa in a summer versus rain of 46 inches. Provided everything is hedgeable. This is known as the Complete Hedging Market Assumption which was inherited by Efficient Market Theory 20 years later.

Demonstrating once again that academic theory can be totally out of touch with reality and still exert tremendous influence – unfortunately on Wall Street as well as in ivy-covered halls.

As we noted, the reality, as Bob Schiller at Yale has shown, is that 90% -plus of those theoretical hedges can’t exist. You just can’t insure against certain things, like what will be the value of my house the day I retire and need to annuitize my wealth? So, here is my point: Arrow’s theorem shows that you will *only* have capitalist market efficiency, which is what conservatives love, if *everybody* is hedged against *every* risk. And here’s the sleight of hand. Being hedged means that when you’re unlucky, you get paid off by the people who are lucky. By someone whose house, say, didn’t burn down. What this means is that in a perfectly efficient market, there is a *massive* ongoing *redistribution* from the lucky to the unlucky. This would flatten enormously distribution we now confront, which occurs in a winner-take-all world, where there never was any hedging of the risks, except in extreme cases like life insurance. Therefore you could argue that from an efficiency standpoint – and note that I haven’t even mentioned the words “fairness” and “ethnics” – that the government can replace these missing “Arrow Securities Markets” by taking the distribution of income and flattening it to become more like it would have been under true, full Arrow/Adam Smith capitalism.

You're saying capitalist market efficiency actually requires income redistribution?

In so many words. Then we can turn to moral theory and ask what it says about income distribution. There is very important new thinking on this subject, that I explore. There have been three magisterial theories of justice written up in the International Handbook of Game Theory Economics. One was **John Rawls'** famous theory of justice, very left-wing, very left-wing, very redistributive. One was John Harsanyi's a re-derivation of the greatest good for the greatest number, known as utilitarianism. The third was a theory I developed on the back of those two when I finished my work at **Princeton**. What it did, which hadn't been done before, was to say, "Wait a minute; if we're talking about fair shares, let's get one thing clear: This is a double-headed Janus. Everyone knows fairness means that if I have worked harder and contributed more, I deserve more. That's contribution fairness. Then again, there are other cases where none of us did work harder. Mother Teresa appears. We're all sick. Some of us need expensive drugs and some of us need cheaper drugs. Mother Teresa allocates aid on the basis of to each according to his needs rather than according to his contributions. What my theory does is show how to combine *both* those approaches optimally within moral theory. Therefore, I can argue that I've even been able to bridge the left/right divide because I'm saying it's not needs (left-wing), or greater contribution, (right-wing) that is correct. It's *both in their appropriate domains*. My theory achieved that. This is my great life work.

Excuse me, but that sounds like a miracle beyond even Mother Teresa.

The mathematics are hugely elegant; you can't imagine, and I did not include them in the book. But very basically, I took the bargaining allocation from Nash's rational might makes right bargaining theory – took its generalized harmonic mean – and flipped it, to get the answer to what is to each according to his needs. That result followed from discovering – and proving – that "relative risk aversion" so crucial in bargaining theory is formally equivalent to "relative neediness" in moral theory. Since bargaining theory awards pieces of the

pie in inverse proportion to relative neediness (the more risk averse you are, the more you are bargained down), the result implies that the more needy you are, the less you receive. It thus turns out that the inverse of the ratio of sizes of the two pieces of pie awarded by bargaining is the appropriate measure of relative need.

Hmm. Something's reminding me it's lunch time, despite all that food for thought. Thanks, Woody.

Weeden & Co. LP's Research Disclosures

In keeping with Weeden & Co. LP's reputation for absolute integrity in its dealings with its institutional clients, w@w believes that its own reputation for independence and integrity are essential to its mission. Our readers must be able to assume that we have no hidden agendas; that our facts are thoroughly researched and fairly presented and that when published our analyses reflect our best judgments, not vested pocketbook interests of our sources, colleagues or ourselves; w@w's mission is strictly research.

This material is based on data from sources we consider to be accurate and reliable, but it is not guaranteed as to accuracy and does not purport to be complete. Opinions and projections found in this report reflect either our opinion (or that of the named analyst interviewed) *as of the report date* and are subject to change without notice. When an unaffiliated interviewee's opinions and projections are reported, Weeden & Co. is relying on the accuracy and completeness of that individual/firm's own research disclosures and assumes no liability for same, beyond reprinting them in an adjacent box. This report is neither intended nor should it be construed as an offer to sell or solicitation or basis for any contract, for the purchase of any security or financial product. Nor has any determination been made that any particular security is suitable for any client. Nothing contained herein is intended to be, nor should it be considered, investment advice. This report does *not* provide sufficient information upon which to base an investment decision. You are advised to consult with your broker or other financial advisors or professionals as appropriate to verify pricing and other information. Weeden & Co. LP, its affiliates, directors, officers and associates do not assume any liability for losses that may result from the reliance by any person upon any such information or opinions. Past performance of securities or any financial instruments is not indicative of future performance. From time to time, this firm, its affiliates, and/or its individual officers and/or members of their families may have a position in the subject securities which may be consistent with or contrary to the recommendations contained herein; and may make purchases and/or sales of those securities in the open market or otherwise. Weeden & Co. LP is a member of FINRA, Nasdaq, and SIPC.

W@W Interviewee Research Disclosure: Dr. Horace "Woody" Brock is President and Founder of Strategic Economic Decisions (SED), Inc. and author of *American Gridlock: Why the Right and Left Are Both Wrong - Commonsense 101 Solutions to the Economic Crises* (Wiley; January 2012). This interview was initiated by Welling@Weeden. The current opinions expressed herein are based on information from private and public sources we consider reliable, but we cannot guarantee the accuracy or completeness of this information. Such opinions are subject to change without notice. This interview and all information and opinions discussed herein is being distributed for informational purposes only and should not be considered as investment advice or as a recommendation of any particular security, strategy or investment product. Information contained herein has been obtained from sources believed to be reliable, but is not guaranteed. In addition, forecasts, estimates and certain information contained herein are based upon proprietary research and should not be interpreted as investment advice, or as an offer or solicitation for the purchase or sale of any financial instrument. No part of this interview may be reproduced in any form, or referred to in any other publication, without express written permission of Welling@Weeden. Past performance is no guarantee of future results.