



HUMAN CAPITAL

A new vision in economy beyond market, models and ethics

Human Capital and the Role of Trust

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With Seth FREEMAN, Clinical Assistant Prof., NYU Stern School of
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Crossroads: Good evening, and welcome to all on behalf of the Crossroads Cultural Center, and a warm thank you to our co-sponsor, the Christian Business Fellowship at Columbia University. Let me introduce Dr. Marco Aiolfi, who, as at the first lecture, will introduce the theme and the speaker, as well as moderate the discussion.

Dr. Aiolfi is a Principal of Platinum Grove Asset Management, with research and trading responsibilities for currencies strategies. Before this, he was a Research Scholar at the University of California, San Diego, specializing in macro asset pricing and econometrics, and in 2005 he was a Visiting Scholar for the Research Department at the International Monetary Fund. Dr Aiolfi has contributed articles to several academic journals including *The Journal of Econometrics*, *The Journal of Forecasting*, and *The Journal of Financial Econometrics*. He received his Ph.D. in Economics from Bocconi University in 2006. Dr. Aiolfi...

Aiolfi: Thank you, Rita.

As the title suggests, the aim of this series is to look at the many ways in which the "human factor" affects the economic sphere. To some extent, there is a tendency in our culture to think of the economy as a fairly impersonal process that can be understood in "scientific" terms. Accordingly, public policy often faces economic questions like engineering problems, to be solved using appropriate fiscal, monetary or regulatory instruments. Similarly, economic debate in the academia and in the media focuses on topics such as the role of the market, or mathematical modeling, or even the need for ethical guidelines, but mostly in a manner that is fairly abstract and removed from concrete human experience.

In our opinion, all these approaches, while certainly useful, are not enough. Economic processes cannot be understood in separation from the reality of the people who work and produce. Ultimately, all economic systems reflect the desires, talents and skills of the people who participate in them. Human beings are not ants, and economic construction is not a mechanical process, but a truly human event which involves reason and freedom at every step. This is why we titled our lecture series "Human capital: A new vision in economy, beyond market, models or ethics."

It is interesting how this reality has come up both in the recent Papal Encyclical and also in the work of this year's winners of the Nobel Prize in Economics. In the first lecture titled "Work and the Person: Toward a New Education," Mr. Bernard Scholz introduced the concept of human capital defined as the set of skills, knowledge and abilities acquired and those still incompletely expressed or even those that have not been discovered yet, during the life of an individual who seeks to achieve social and economic growth. We have been reminded that

the protagonist of every economic initiative is a human being who lives work as an expression of his or her own desire to transform reality and make it more suited to the ultimate demands inscribed in our nature.

The content of the first lecture is well summarized by what Mr. Scholz said at the end of his talk, “What is good for a person is also good for the economy.” The description of what sets a person into action (desire) seems to challenge modern economic theory according to which every individual should maximize his or her own utility. No advanced economy could operate without a complex network of human relationships based on trust and shared values.

The second lecture is entitled “Human Capital and Trust.” Our speaker tonight is Professor Seth Freeman. Seth Freeman is a Clinical Assistant Professor at NYU's Stern School of Business and an Adjunct professor at Columbia University, where he teaches courses on negotiation and conflict management. He's also taught at programs around the world, such as the Bordeaux Business School, the World Economic Forum, and Sun-Yat Sen University. His columns have appeared in *USA Today*, *The Christian Science Monitor*, and *The New York Times*. A former corporate lawyer, he holds a degree in economics from Cornell and in law from the University of Pennsylvania. He is currently working on a book, *Solutions to the Trust Problem in War, Business, and Everyday Life*. Professor Freeman.....

Freeman: Thank you, Marco, and I want to start by thanking my hosts for this evening, Crossroads Cultural Center, and specifically Angelo and Marco for their graciousness throughout their work as hosts, and for their vision. I've had the privilege of working with them before and hearing their passion for the subject of bringing an edifying and humane cultural program to New York, and to enriching the life of the city in the process, and I really sing their praises. They're the good ones; they're the ones who we want to prize and cherish here in New York City, and thank for their generosity. And I also want to thank my host who collaborated with them, and that is the Christian Business Fellowship here at Columbia for their kind welcome to me. It really is a privilege and an honor for me to be with you here tonight.

What I want to do to start is to ask a very simple question: Where does prosperity come from? And let me make that a very human question by telling you a story of a woman by the name of Suffia Begham. She was a very poor woman living on the fringes of Bangladesh in a town called Jobra. She was the mother and sole caretaker of three children. She lived in a small hut, and she was barely eking out a living making bamboo stools. She was actually very good at doing this, and she sold whatever she produced, but she was not really making it. The reason is she simply could not get enough bamboo. She simply didn't have any money to purchase more bamboo, and the only hope that she had of getting that money was to go to the awful, awful money lenders who preyed on people like her. Now the banks simply would not even consider lending to someone of her sort because she was illiterate. She simply could not read or sign a legal contract. She simply had no money or wealth of any kind that she could put up as collateral, and she had none of the right connections that might permit her to get the voucher of someone the bank respected, and so she was really stuck. In essence, what she was struggling with was not a lack of wisdom or initiative or knowledge; she was struggling with the lack of trust. She simply did not have the trust of people who could be counted on to lend her the money that she needed.

Her problem is not unique to her. Her problem is the problem faced by millions, hundreds of millions, arguably even billions of people around the world, in a two-thirds world that even I usually don't know much about. And if we can't help her, if we can't help the hundreds of millions of Suffia Begham's around the world like her, then we really haven't got much of an answer to the question: Where does prosperity come from and how do we realize it? So for her sake as well as for our own, I'd like to start hunting for some good answers.

Our first stop in that search is the current understanding of economics as presented by neoclassical microeconomic theory. And so, what I'd like to do to get into that is to play a game with you. It's called *The*

Ultimatum Game. I think you'll enjoy it. It's very quick and it's very fun. In order to play I'd like to start—this is just the set up, I'd like you to turn to someone sitting next to you and greet each other with your first name. "Hi, I'm Bob." "Hi, I'm Steve." That kind of thing. So go ahead. [People greet each other.] Okay, well done. We're rolling. So of the two of you, if your name comes first alphabetically, I'd like you to be Player A, and if your name comes second alphabetically, you're going to be Player B. So for example, Alan, you're Player A; Won Chi, you're Player B. Okay? So I'm going to give your pair the chance to win and divide ten thousand imaginary dollars. Let me emphasize the word *imaginary*! Player A, in a moment I want you to propose a division of the ten thousand dollars to Player B. She would get this much, and you would get the rest. Okay? Now Player B, you can either say, "Okay, I accept." Or "No deal." And if you accept, if you say "okay," you'll get the amount that Player A offered, and Player A will keep the rest. But if you say, "No deal," neither of you gets anything. Now here's the thing: there's no negotiating, no discussion, there's no anything. It's just offer, accept. It's as simple as that, straight, no discussion. It should be done in thirty seconds. Okay? So go for it. See what happens. [Players exchange offer/acceptance]

Let me just check and see what happened here. First, how many here reached an agreement? Raise your hands. Okay. How many here did not reach an agreement? Raise your hands. Okay, stay tuned now. If you reached an agreement, how many of you here who DID reach an agreement, agreed to a 50/50 split or something really close to it? Raise your hand. Okay. Who agreed to something very different from the 50/50 split? Okay, just a couple of us. All right, let me speak now to those of you who did not reach an agreement. Raise your hands. Okay. Now, [speaking to player] which side were you on? A, and who was your B? What were you offered? \$4,999.00 and you said "no"? Why did you do that? It was almost, but that wasn't enough? What would have been enough? You wanted exactly half. I'm going to come back to you. Who else? Player B, what did she offer you? \$3,000.00. And you said no? Why? It's not fair? Let me get this straight. You're going to go home tonight, and a loved one is going to ask you, "What happened at that Columbia talk tonight?" And you're going to say, "Somebody offered me \$3,000.00." And she's going to say, "Really? What did you say?" And you're going to reply, "I laughed in her face." And your loved one is going to say, "Well, what did you get instead?" And you're going to reply, "Nothing." And she's going to say, "What are they teaching you at this Columbia program? You had a choice between \$3,000.00 and nothing, and you walked away!" Why? Is it fairness? So say you? Is this the reason? One dollar and that wasn't enough? Am I getting this right?

Let me talk to the ones who reached an agreement, 50/50. If you are Player A who offered 50/50 and got a deal, raise your hand. Mam, why did offer 50/50? You didn't know what it was for and you wanted to split it equally. Why offer him so much? Wouldn't he be just as content to get 100 bucks? 100 is better than nothing, right? You're going to be generous with imaginary money, but with real...

Sir, you're a Player A and you offered 50/50? Why did you do that? Why not offer him 100 bucks? Why would he be likely to say "no" to 100 bucks? 100 is better than he started with, right? You think there's an intuitive sense of justice? You lost a lot of money here! Is this the way you guys were thinking? What's wrong with you people? Those of you who went 50/50 gave away a lot of money. And those of you who walked away lost thousands of dollars.

I speak from a certain experience. I'm trained in economics, and I've taught it at the graduate level, and I can tell you that what has just happened here is that we have a room full of irrational people. By definition, economics would say that you have been irrational. Economics says that you are rational if you maximize your material wealth, and you didn't do that. You either took zero or you gave away half the store! And what's the problem here? I'll tell you what the problem is—it's not you. It's the theory. What you've just done is dramatize a fundamental flaw in economic theory. Economics simply cannot make sense of something you've known since you were an infant and which you've dramatized very well right now, and that is we don't just care about maximizing our material wealth. We care about other things too. We care, among other things, about justice and fairness, and when we perceive that we are being treated with disrespect, with unfairness, with

injustice, it doesn't necessarily matter how much wealth materially we're being offered, we will walk away. Now that's irrational if you buy the definition of rationality that economics has been selling for a couple hundred years now. But there's nothing irrational in the more general sense. You are perfectly logical, wise, bright, capable people. What's really lacking is the theory's ability to understand human nature. And that I suggest is the starting point for suspecting that economics as a presently used practice has a fundamental flaw at its center, that at its heart, economics simply does not understand something. It has a fundamental pretense that is simply provably wrong, that the main way that we make our decisions is by maximizing our material wealth, and that's simply not the case.

But let me now tell you another game to dramatize another problem with economic theory. I'm not going to ask you play this game; I'm just going to describe it. It's a game that's been used around the world. I've used it with many of my students. It's called *Win as Much as You Can*, and here's the idea: Imagine that you're going to take out a coin, and three other people around you are going to do the same thing. In just a moment you are going to count to three and reveal a head or a tail. Now you're not going to just do this randomly. There's a choice and a strategic one to make. If you all go "heads," I'll give you one thousand dollars each (imaginary). But if one of you goes "tails" and the rest go "heads," the one who went "tails" the one who in effect cheats, you're going to get three thousand dollars, and the rest lose one thousand. But everyone has that same opportunity. And if you all go "tails," each of you loses one thousand dollars. So what would you do? On the count of three—one, two, three—and then you look very nervously. Whether you do this one time or ten times, really interesting things happen because at the heart of the matter is the question: Can I trust these people? Are they going to cheat me? And they are asking the same question about you. Now what often happens is that people really struggle with this. They often don't cooperate. They often find that even if they all would do pretty well if they cooperated, given the circumstances, they often wind up killing each other. But that isn't hugely surprising.

Here's the thing that just blew me away: I majored in economics at Cornell, and one of my professors was a gentleman named Robert Frank. He's one of the top economists. He's a best-selling author, he's published in *The New York Times* regularly, he's a regular on *Planet Money*, and I studied with him. A few years after I graduated he published a study of this very game, and what he found was that the more economics training you have, the more you tend to cheat in this game. If you just have one semester of economics, you cheat sometimes in the coin game. If you have a full degree in it, as I did, you're a real jerk. If you're a graduate student, you're a total jerk. This is him describing this. Now here's the weird part—who wants to work with someone like that? Who wants to work with someone whose reputation is being so self-centered that he tends to just go for the gold and really cheat you. Well, there's something self-defeating about that. And Frank argued that that's a clue that the whole pretense of economics, that its self-seeking aspect, the way that it inculcates that self-seeking wealth maximization is the goal—there's actually something self-defeating here. And we don't have to go far for specific examples of this.

Let me tell you about a guy I know who went to Harvard Business School, and while he was there, he, of course, studied economics, he read a book by Richard Dawkins called *The Selfish Gene*, and it changed his life. It reinforced all the things that he had learned in economics, and affirmed to him that we are basically designed to be self-seeking and aggrandizing in genetic ways, and also by extension in economic ways. And so when he had the chance to actually lead an organization, he instilled his whole organization with that principle. In fact, he said, "I've really thought about this very carefully and I've concluded that incentives and money is the only thing that matters." You may have heard of him. His name is Jeffrey Skilling, and he was the CEO of Enron, which for a while was highly respected, but which, as you know, collapsed in flames and turned out to be a total fraud. Jeffrey Skilling is now doing 25 to life in a federal penitentiary for massive fraud that ruined the life of thousands and thousands of people. Now his is an extreme case, but it sort of dramatizes that if you take this idea of self-seeking wealth maximization too far, it can ruin you, defile you, and many people around you.

There's something self-defeating, as my professor, Robert Frank, so aptly demonstrated with this simple game. So that's the second strike against this economic theory.

Let me give you a third—the economic crisis of 2008. In November of 2008, just a year ago, Queen Elizabeth went to London School of Economics and she asked this rather shocking question: “How is it that all the economists missed this?” And you could've heard a pin drop. Do you see the irony? This isn't the Emperor who had no clothes. This is the emperor revealing that everyone around her had no clothes. She was pointing out that none of the economists really saw this coming. Where was their expertise? Where was their ability to predict? And the truth was that they lacked it. I've actually met a seasoned economist who, at a conference said, “I no longer call myself an economist because I've realized from this last year that we simply don't know what we're talking about. And I'm ashamed to admit that I'm in this field.” And he's not alone. Consider Paul Krugman, Nobel Lauriat in economics last year, and what does he say? “The last thirty years of macroeconomics may have been a waste of time at best.” That's pretty damning, and yet often give a high level of confidence to what really is a pretense of knowledge about this field we call economics. We call it a social science, and it's inspired for the last two hundred years by the idea that we can do at the social level what Isaac Newton did at the physical level—the ability to discern scientifically rules that can predict what happens in the world around us. Well, it's ironic because Isaac Newton himself did not believe the economic project. In 1728, Isaac Newton himself was ruined by another economic crisis, the South Sea Bubble. He was wiped out personally, and afterwards, the man who basically started the Enlightenment, or inspired it, was asked, “How did this happen to you?” And he famously said, “I can predict the motion of the heavenly bodies, but I can't predict the madness of crowds.” Well, that's apt, but economics holds out the hope that it really can “predict the madness of crowds,” and as we've seen in the last year, it really can't. Virtually almost nobody actually called this one. And that suggests that our pretense of science for economics is actually misplaced. It doesn't mean it's without any insight whatsoever, but it does mean that it's time to look anew at these questions of prosperity.

If economics is like this, if what we've seen the last few minutes is true, then perhaps we need to change if we hope to help Suffia Begham and, for that matter, ourselves. Perhaps it's time to suspend our over-hyped reliance on economic theory as it's now held. Perhaps it's time to put away loaded, faith-based terms like “rationality” as they use the term. Perhaps it's time to begin exploring the richer, more remarkable and subtle nature of prosperity. Perhaps that means that self-interest is a part of the story, as they would hold it is, but it's not the whole of it. It's only a part. What else matters? What else can give us a clue about prosperity?

Before I delve into that, let me just suggest that ultimately the answer is that it is a mystery, that we have good reason to be humble in the presence of a question of that scale, and despite decades, hundreds of years of striving, we really are, as the last year has demonstrated, pretty much in the starting blocks of trying to discern what we can predictably say causes so much of the wealth that we enjoy today. It doesn't mean that we're without any ideas, but much of it remains a mystery, which is good news because it means we have reason to be humble and grateful and to respond to that gratitude in ways of gentle service, and that's why I'm talking about Suffia Begham because if we are prosperous and we're not sure why, then maybe we have reason to share more than we have.

So with that, let's venture out and see if we might be able to find at least some new clues beyond the usual bounds of economics. What I'd like to argue to start with is that at the very heart of the problem of cooperation and collaboration—working together in economic life—is the problem of trust. How do I know that you're going to be fair to me? How do I know that you're going to be decent to me? How do I know that you're going to be able to keep the promises that you make to me? All of these and more are trust problems. They are different facets of the same question: Can I trust you? I'm going to argue that that is at the very heart of our economic lives together. If we cannot find a way to wisely trust each other and be trusted in turn, then we can forget about our ability to cooperate efficiently or in any other way. We're just going to grind each other into a powder, or as we've seen in the last year, when trust disappears, the markets freeze up, nobody wants to invest,

nobody wants to borrow, nobody can borrow, and the economy dries up. This is a deeply crucial part, and indeed it was at the very heart of the problem of Suffia Begham's situation; she was not trusted and therefore she was destitute.

So how do we solve this problem of trust. Well, let me show you. Before I even answer that, indeed how central this question is to our economic lives together. I'm going to argue that if you think about a firm, one of the most basic parts of economic life, think of a firm for a moment, I'm going to argue that it exists entirely of credible promises and trust. That is the sum and substance of what any firm comes down to. That may seem strange to say because when you think of a firm, what do you think of? You think of oil wells and office buildings and furniture and accounts receivable and money and computers and all the rest of it, right? I'm going to argue that that's all in a sense smoke and mirrors, that really at the heart of the matter is something much more ineffable and immaterial, something very amorphous. Let me show you why I say that.

Let's imagine that you have indeed got a firm, and I come to you and I say, "What's the most clearly valuable, straight up asset you've got?"

And you say, "Well, that's got to be money, pure money. I've got money; our firm's got money."

I say, "Great! Can I see it, please?"

And you say, "Sure, let's get our coats, we'll go down to the bank because that's where we keep it."

"Okay, great."

So we go and now here we are, we're talking to your banker and we say, "Can we see the money, please?"

And your banker taps a couple of buttons on the computer and prints out a piece of paper and says, "There, there's the number."

And you hand it to me and I look at it and I say, "Okay, but where's the money?"

And you and your banker look at each other and you say, "Well, that is the money."

I say, "No, it isn't. This is a scrap of paper. Where is the real money?"

And you say, "Well, come on, don't you know? We don't actually have it lying around here. It's all been loaned. Oh, we have a few dollars stacked away here for immediate needs, but if you and everyone who's deposited here actually came in and asked for the money at once, we couldn't give it to you."

And I say, "Wait a minute. You told me you have money, but now that I press you, you tell me that all you've got is a scrap of paper and a hope that when you ask for it this money is going to show up? What is that? That's not money; that's a promise, and that's really all you've got. Your firm really doesn't have money as such."

And indeed economists know this, and the federal banking system recognizes that essentially money is little more or less than a set of promises, and to the extent that you have faith that your bank really will deliver that money, to that extent you have wealth. But if you start to doubt it, and others around you do, and they all converge like they did with Jimmy Stewart in *It's a Wonderful Life!*, the bank goes away.

Well that's the story of money which seems to be the most clear, tangible form of wealth there is, and suddenly it just disappears on contact. Well, what else is there?

Think about accounts receivable, promises that others have made to you. Let me show you how critical the role of promises is to our entire financial system. Consider Citigroup. Do you know that up until a few months ago, Citigroup, the largest bank in America, one of the largest in the world, was a zombie bank. Or to put it another

way, it was undead. What I mean by that, it had on its books promises from people that it lent money to to buy houses, and let's say that amount was 100 billion dollars, as long as Citibank went around claiming that it had 100 billion dollars waiting to draw from these borrowers, it was in good shape. But the truth was that in the last year, those mortgages had basically become worthless, or at least a large percentage—20, 30, 40 percent were under water and were likely to go into foreclosure. And if those numbers were truly recognized on the books of Citigroup, if it was actually acknowledged by Citigroup that those promises were now in-credible, it was bankrupt. It was alive only in appearance, but functionally it was dead. That's why it was called a zombie bank. And the only way that it was able to survive was because the government stepped in and made new, better promises that put aside the need to rely on these bad promises. And that's how our system survived. Now that's another clue—our banking system, that at the heart of any company that has accounts receivable, it's relying to a large extent on promises.

But not just accounts receivable. What about Coca-Cola? Coca-Cola's single best asset, far and away, is its trademark. As you know, Coca-Cola is the most recognized insignia in the world, and it has tremendous good will. It's worth billions of dollars. But what if it starts to become believed that a bottle of Coca-Cola has arsenic in it? That insignia and the good will behind it, the credibility that the public has in that insignia will suddenly become worthless, and with it Coca-Cola will cease to be worth a great deal of money at all. There again, good will, the trademark, there too it's the promise or credibility or trustworthiness of this company that defines what its wealth really is, and you can go down the whole list of assets and liabilities that make up a company, and do exactly the same thing. You can even do it for things like real estate and office furniture and office buildings. Aren't those tangible and aren't those material things? That's real wealth, isn't it? But wait a minute. How do you know that you really own them? How do you know that people who operate them for you are going to operate them correctly? How do you know that you're not being ripped off from your warehouse right now? All of these questions that really make or break the utility of these assets to you, they all depend on promises—the promises of sellers, the promises of the government around you, the promises of the employees, and if any of these promises fall, so too does the wealth behind those assets.

And go further. How about the morale of your company, the employees? If they're not getting along well, if they don't trust each other, your company is going to grind itself into a powder. And if you can't trust your counterparts in major negotiations, your joint venture partners, your suppliers, the people you supply to, if there's a distrust there, you can forget about your ability to do business. In short, your business and everyone's business is largely not stuck in the material. It's grounded on something profoundly immaterial, and that is something relational. The relational is the foundation for the material. The immaterial is key to our material prosperity, which is a happy coincidence because we are here tonight to talk about human capital, to talk about something that is human, that's ineffable, that's relational, that's (dare I say it) touchy-feely, that may be hard to measure, that may not fit in very well to an economist's formula, and yet here we are finding that, oh my gosh, just as we saw in the first segment, now we're seeing as we look at a firm itself that the immaterial really is at the heart of the matter.

But how are we supposed to make credible promises? How do we know that we can trust each other? If we over-trust or under-trust, if we trust unwisely or insufficiently we've got a problem. Suffia Begham has a problem because she wasn't trusted enough. Our economy has a problem because people over-trusted—they gave money to people who clearly should not have been given tremendous amounts of money. Do you know there's a guy in Southern California who's a \$14,000.00 a year worker; he worked as a migrant worker picking strawberries, and he was loaned \$700,000.00 to buy a house for that amount of money three years ago. Now that's too much trust. So how do we make wise choices about the promises that we're making to each other? Over or under-trusting and we're ruined. So what do we do?

The first answer is that we use something that I'm going to call *soft sources of trust*. We use the things that we usually think about when we're talking about human capital. We rely on our identity as members of the same group. Hey, we're from the same fraternity, the same factory, the same family, the same country. Those

connections are deeply important to us in different ways, and they help build morale and trust and cohesion—those are good norms. Group wisdom, networks, friendships, common goals, the very things that we usually associate with human capital, they are central to our ability to get along, and if we don't have them we struggle, so much so that there is an entire field in academic life now, that's been basically growing for the last fifteen years, and it's interestingly a similarly named field—social capital. Essentially what it holds is that an economy, a firm, a community cannot function unless group connection, network, the stuff that we usually associate with human capital is strongly present. And this is reassuring to us—those of us who are interested in the subject because it does indeed affirm that yes, at the heart of the matter the *soft* stuff, the human stuff, beyond just mere calculation rationality, those things matter.

But there's a problem with that too. Often, as wonderful as these human elements are, they are not enough to create sufficient human capital to solve the trust problem. Let me say that again because it's really at the heart of the matter. Group connection and networking and friendship, as important as they are, may not be enough by themselves to create sufficient human capital for us to solve the trust problem. Let me show you why I say this.

I'll tell you a story. I want to take you on a trip to Hungary. A couple of researchers went there back in the early 1990s, and when they went they wanted to find out how firms that were in the Soviet Block, how did they actually function? What was it like now that the veil has been lifted and we can actually go and see? And they looked at a variety of firms, and they settled on one that seemed particularly symbolic or representative of what so many of the firms they looked at seemed to be about. It was a glass making firm in Hungary that had actually been in existence since the 1700s, and it had clearly been well-influenced and it had been operating and influenced during the Communist period. Now I don't know about you, but I would have expected that this firm, and the researchers would have expected that this firm would have been suffocating under stolid, Soviet-style bureaucracy—lots of rules and regulations and overseers and endless bureaucratic intrigue, all the stuff that drives us crazy about organizational life. That wasn't what happened. What they found was quite the opposite, that the firm was really free functionally from any bureaucratic oversight. What actually was going on was that it was strictly relational, that the only thing that really seemed to matter, that really shaped how this firm was going to function was the relationships among the workers themselves—their group attachments, their networks, their relationships, the stuff we were just talking about, human capital. And how was that going for them? It was *Lord of the Flies*. They were killing each other, almost literally, because it turns out that the way this firm worked was that you got your job because somebody in the firm whom you related to, had been there before and could speak well for you. And it was actually a legacy that went back in some cases generations. Once you were in, you were part not just of the firm, but of a tribe, and as long as your tribe was big and powerful, you were set, but if your tribe was small and weak, look out! It was almost like *West Side Story*. And if you were one of the few who just happened to not be part of one of these tribes, you were fair game. And people who were fair game could see that their car tires were slashed, they would have their stuff stolen, they were subject to harassment. And even if you were part of a small tribe, the same thing could happen. Morale was terrible. Absenteeism was soaring. There were a lot of people in the big tribes who never showed up at all; they were just feather-bedded. There was a tremendous amount of cronyism and corruption. And where were the bosses? They were virtually unseen.

Meanwhile the researchers did something rather noteworthy—they went to find a contrast. And where did they go? They went to Southern California and they looked at an aircraft manufacturer. And I know this is America, it turns out this was the one that was the bureaucratic story. They had all these rules and forums and papers and overseers and bosses. They had merit reviews and they had to pass exams to get in. It was a very bureaucratic kind of place. What was morale like in that firm? It was great. Not only was it great, it was very low absenteeism, morale was very good, there was never any hint of people stealing from each other, there was certainly no tribalism, and people were from different classes and regions and races—they got along famously; they really trusted each other. They had high degrees of trust for each other. And when you asked them why they would tell you, "Because the people are just nice, good people."

“Now wait a minute! Don’t you think that maybe the rules, the regulations, the bureaucracy and all that, is keeping you guys honest to a degree that the Hungarian firm is not being kept honest?”

“What are you talking about? These are just nice people.”

It turns out we have good empirical research that suggests that that’s actually the way we tend to respond to protections. And I’m going to give a name to the second kind of solution to the trust problem, these protections. I’m going to refer to them as *trust mechanisms*. And by trust mechanisms what I mean is something that enables us to reassure ourselves that the other person is going to keep his promise. By trust mechanisms I mean any arrangement that strengthens your confidence in the trustworthiness of the other person.

Let me illustrate it with a story. (Some of my listeners may recall this from another venue.) I was out one day at the beach with my nephew Jason. He’s six years old, and we were frolicking in the water, and at one point I turned to him and said, “Jason, let me throw you into the water. Let me flip you in.”

And he said, “No!”

And I said, “Okay, okay, I won’t flip you.” But now he doesn’t want me to touch him. And I said, “Jason, I promise I won’t flip you.” But even though we have known each other since the day he was born, six years earlier, and we love each other with the whole family to draw on, he wasn’t buying any of it. I couldn’t play with him anymore. And I was now face to face with a trust problem, what to do? Well, I could have appealed to our human capital. I could have appealed to family and relationship and good norms and networks and all the rest. It wasn’t working. But then I said nine words, and when I spoke those nine words, everything changed. The nine words were these, “Jason, I promise I won’t flip you, and if I do, I’ll give you ten dollars.”

And instantly he said, “Okay.” And we were back, and we were frolicking, and I never flipped him, and I never paid him the ten bucks.

Well you might say, “Freeman, that’s your big payoff? You bribed the kid. How can you live with yourself?”

Actually, I didn’t bribe him. I gave him something else. I gave him a trust mechanism. And what I mean by that is I gave him a way to reassure him that my promise was reliable. Now I could have given him one of several different kinds of trust mechanisms. One thing I could’ve done, I could’ve said, “Look, Jason, let’s get your mother here. You trust her. If she vouches for me, that’s your reassurance.” That might’ve worked. Or I could’ve separately said, “Look, Jason, I promise I won’t flip you, and let’s go get the lifeguard and ask him to watch me, and he’ll protect you.” That might’ve helped too. In this case, I gave myself a penalty and I gave him an incentive. If I broke my word, he would get rewarded and I would be penalized. And that worked.

Now it turns out that trust mechanisms don’t just work for six-year-old boys. They work around the world. And indeed, if you think about it, they’re everywhere. They include things like monitors, rules, reputation reports, power sharing, incentives, penalties, collateral, guarantors, references, arbiters, bi-laws, bureaucracy, mediation—there’s a vast array and we squeam at it. Often we don’t even notice that it’s present, and that’s the remarkable thing.

If you wisely choose trust mechanisms, they can unobtrusively nurture human capital and trust. Let me give you a few examples of this. Our country. Do you know that in 1786 our country nearly fell apart? There was a rebellion in Western Massachusetts and it was about to take over the country, and the national leaders in Philadelphia realized that if they didn’t raise an army, the country was ruined. So every state committed, promised to put up money to raise an army and go put down the rebellion, and then they all failed to pay a penny. And but for the grace of God, the rebellion would have continued. It was actually put down privately. But afterwards James Madison said, “If we don’t take this seriously we’re dead. We simply have to solve the trust problem.” And so he and others got together that next year and they came up with a set of trust

mechanisms to solve the problem, and we call that set *The United States Constitution*. *The US Constitution* is essentially a response to the inability of the states to live up to their promises. Had we not come up with that array, we would not have a country together. Now we usually think of our country as being a matter of patriotism and group love and connection. Of course we have red state, blue state, but there is a sense of deep cohesion to the United States that many countries envy, and that is wonderful, and that is to a large extent driven by human capital, but not exclusively. The presence of reassuring, unobtrusive trust mechanisms allowed our country to continue at a time when it would have otherwise fallen apart.

But it's not just there. It's also the California defense plant that I was just telling you about. Were it not for the basic bureaucratic processes that had been introduced, they might have easily become the Hungarian glass firm. They could have been driving themselves into *Lord of the Flies*, Part II. But it turns out that this also helps us understand Adam Smith better. Adam Smith's project in *The Wealth of Nations* was precisely to solve this same problem, the trust problem. He wanted to know, how is it that selfish people can be convinced to be cooperative? And his answer was largely free-market incentives. That's why he famously said, "The butcher makes the meat and the baker makes you bread." And that's true, but it's only part of the story. And in fact, Adam Smith knew that. Did you know he wrote a prequel to *The Wealth of Nations*? It's called *The Theory of Moral Sentiments*, and there he says that people are actually motivated by more than self-interest. Economics has forgotten that. But Adam Smith was really addressing a larger question: How do we get along with the trust problem when we're not sure we can trust each other? And part of his answer was free-market incentives and that is one example of trust mechanisms, but it's only a part.

Indeed, you've actually experienced what life is like with a trust mechanism. Do you remember the game that we played at the start of this, *The Ultimatum Game*? What if I had given ten thousand imaginary dollars to just Player A and said, "I hope you'll consider sharing this with Player B." How much would Player A have likely shared with Player B? But because I put in place a fair rule, and I enforced it with my authority as the game master, you had a much stronger chance of cooperating fairly, and you did. That's another clue that an unobtrusive rule, a trust mechanism actually fosters the very thing that we aspire to in our series—human capital.

Now it's absolutely true that there are dangers and limits to trust mechanisms, but there are dangers and limits to not living with them too. This then is the paradox, the paradox of our economic lives: To work, an economy depends on the immaterial—fairness, decency, trust, the stuff of human capital, yet to work, human capital needs to be nurtured by something mechanistic—trust mechanisms. So there are implications to all this. Are task is "to be savvy as a serpent, as harmless as a dove." It's to nurture human capital with a mix of soft and firm sources of trust—both the human relational stuff on its own basis, and trust mechanism in wise combination to foster prosperity for all.

Let me show you as I conclude how you do that to transform lives because that ultimately is the name of the game. Let's remember again Suffia Begham. She, as you recall, had a trust problem. No one believed her promises and so she couldn't rise out of poverty. Standard economics of the day simply had no answers for her. But then one day a stranger came to her village and he spoke to her, and he said, "I would like to make you a rather strange offer. I would like to lend you money, but I will not expect that you will put up assets as collateral, nor will I expect you to sign a contract. Instead, I'm going to ask you and four of your neighbors to come and sit in front of me, and I'm going to make a promise to lend you, Miss Begham, a sum of money, and I will give that to you immediately. And I will give your four neighbors the promise that I will lend money to them if you pay the money back. In return I'll ask you to pay at a certain rate of interest, I'll ask you to meet my monitor when she comes and checks up on you, and I'll ask you to live up to certain good living principles as basic rules of operation. And if you're willing to live up to these rules, I will lend you this money."

And Suffia Begham said, "I accept." And so did her neighbors.

Well, why would this make any difference? It turns out it was critical. Suffia Begham did indeed pay the money back. She started a new business and she used the money to raise her family out of poverty. She paid the money back so then did her neighbors receive their money. They also were raised out of poverty, and so began the Grameen Bank which was founded in the years after by Muhammad Yunus, the stranger who first approached her in the story, and Muhammad Yunus went on to win the Nobel Peace Prize a few years ago for his work, inventing what we now know as *microfinance*.

Now microfinance is often characterized as a simple story of trust, but it's actually more subtle than that. If you look closely at Suffia Begham's story, check out what was going on. She was relying on the soft sources of trust, the peer pressure and encouragement of her neighbors. We refer to that as *social collateral*. She didn't want to let them down. This program actually tapped beautifully into the native human capital of her village, but it didn't stop there. It also created incentives. "If you don't pay me back, your neighbors get nothing." And we have monitors in place—people checking up on her, and we have rules. What are those? Those are trust mechanisms. In short, the genius of microfinance and Muhammad Yunus is that he blended the pure forms of human capital—soft sources of trust, together with unobtrusive firm sources of trust—trust mechanisms, in a way that revolutionized the lives of tens of millions of people.

And so here's my conclusion: Where does our prosperity come from? Ultimately, contrary to economic theory, it is a mystery, which means we have reason to be humble and grateful in its presence. But we do have clues, and they are not necessarily the orthodox ones. The real clues are that prosperity and cooperation depend ultimately on trust, and trust depends on human capital and the things that can strengthen human capital, trust mechanisms. So there's a subtle interplay. In our gratitude then, let's humbly cultivate both sides of the equation, soft and firm sources of trust alike, to better our own prosperity and the prosperity of those around the world.

Thank you.

Aiolfi: So trust is one of the factors whose existence cannot be explained by the operationality that is behind modern economic theory, but that turns out to be essential to the functioning of the economy, and tonight we are very grateful to Professor Freeman for helping us to better understand the relationship between human capital and trust.

Thank you very much.