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‘Use social science for good’

I am deeply honoured that you all came here to listen to hear me sing. [sings] "Wise men sing..." Well, maybe later.

So, a guy goes to his mother and says: "Mother, after forty years I finally decided to get married." The mother is so happy. She says: "I would love to meet your future wife. Why don't you bring her over on Friday night, for dinner?" The guy says: "Great. I'll bring her over." Then he thinks for a minute and says: "You know, mother, in the last three years I dated three other women. Why don't I bring all four women to dinner? Let's see if you could guess which of them I'm going to marry."

The guy is excited and the mother is excited. On Friday night he brings four women for dinner. The mother starts interrogating them. She talks to the first, the second, the third, the fourth. She goes back and forth, back and forth, for an hour. At the end of the hour, she points to one of them and says: "This is the one! This is the one you're going to marry!" The guy is shocked. He says:" Mother, how well do you know me? How well do you understand me? I love all these women. I'm friends with all of them and I respect all of them. But this is indeed the one. This is the one I'm going to spend the rest of my life with." And he asked: "What gave it away? What was the characteristic, the attribute, the hint? What was the thing that made it clear to you that this is the one?" The mother looks at him and says: "It's the only one I hate."

So today I want to talk a little bit about human nature. I want to tell you about two characteristics of human nature and then think about how we use them to get people to behave better. The first characteristic has to do with the difficulty we have with thinking about money. Do we think about money correctly? Well, there's a lot of research showing that we don't. Here is one example.

Image that you went out for dinner tonight. You either paid with a credit card or with cash. Which one would feel worse? The cash would feel worse. Why does the cash feel worse? Well, it turns out that one of the reasons is the timing. You see: when you pay in cash, you pay now, at the time that you're consuming, whereas when you pay with a credit card it is completely unclear when exactly you are paying. After dinner, you just sign. You are not really paying. Later on you will get the bill, together with all kinds of other things.

We can actually make it worse. Imagine that I owned a restaurant and had figured out that people eat fifty bites and pay 50 euros on average. I came to you and I told you that, because you are such a wonderful human being, I will charge you half of the price. I will only charge you 50 cents per bite. And not only that: I will give you another discount. I will also only charge you for the bites you eat. You don't need to pay for the bites that you don't eat. This will be a very efficient meal, with you paying
only 50 cents and only for the bites that you eat. I will study your dish, sit back and take my little notebook. Every time you eat a little bite, I will mark it. How much fun will that meal be?

When I teach my students about the psychology of money, I bring pizza and charge them 25 cents per bite. What do you think happens? Huge bites. And they don’t seem to learn. They sit there with the pizza and they push a little bit too much. Then they have to deal with it. And they keep on doing it.

The pain of paying, by the way, with Christmas coming, also tells us something about what gifts we should buy for each other. Think about it: what’s a good gift? One definition of a good gift is that it has a very high pain of paying. So image that you’re walking down the street and you see a store. In the window, there is a hat. You’re a not a hat person and you never owned a hat, but you’re intrigued. You go inside the store and put the hat on. It’s beautiful. It has a nice colour and a nice size. You kind of like it, but you look at the price tag and you can’t imagine paying this amount of money for a hat. So you put it back and you walk home. When you get home you find out that your significant other bought you that exact same hat from your joint checking account. How would you feel? Would you say: "Honey, thank you very much for thinking about me. I thought about this hat exactly, but I decided that this is not a worthwhile investment. So please, return the hat to the store and put the money back into our checking account." No, you would actually be delighted. Why? Because that was the kind of gift that took away the pain of paying and made you enjoy the gift without the guilt.

Of course, there is a lot more to say about the psychology of money and the way we misspend and mis think about money. But let me move to the second building block.

The second building block is the problem of self-control. The problem of self-control is the difficulty we have with delayed gratification. It's a problem that, by the way, is killing us. There was a very interesting analysis that looked at the question of what percentage of human mortalities in the US is accelerated because of bad decisions. They estimated that it was around 10% about one hundred years ago. Think about all the ways in which you can make bad decisions that would make you die a little faster. One hundred years ago, about 10% of deaths were accelerated because of that. A few years ago, it was 44%. How come? How come it went up so much?

Because as we invent new technologies, we also invent new ways to kill ourselves: obesity, diabetes, texting while driving, and smoking of course. And you know, it is very easy to think about this as being only relevant to other people, but let's look at ourselves for a few minutes.

How many people here have in the last month eaten more than you think you should? Come on. How many people here have in the last month exercised less than you think you should? Okay. How many people here - again: please be honest - have ever texted while driving? And this is Holland, so let's also include texting while cycling. Let's do both. Which, by the way, is just as stupid as texting and driving.
Two more questions. How many people here have in the last month not always washed your hands when you left the bathroom? By the way, this is kind of interesting. You just admitted that you have texted while driving. That's okay. But admitting that you don't always wash your hands… That's what we are embarrassed about. Last question. Let's see where you go. How many people here have ever had unplanned unprotected sex? Amazing: nobody. Oh, one.

The truth is that, as society moves forward, lots of temptations are increasing. Donuts are only getting better. Facebook is only becoming more tempting. Fighting temptation is getting harder and harder. Because of that, we need to think about all kinds of mechanisms to fight temptation. I'll give you just one quick example. There is something called 'Ulysses contracts'. If you remember from mythology: Ulysses knew that at sunrise, he would divert the boat and crash everybody. So what did he do? He asked his sailors to tie him to the mast. This way, Ulysses himself could hear the call of the Sirens, but he couldn’t take any action. He asked the sailors to put wax in their ears. In this way, the sailors were unaware of the song of the Sirens, unaware of temptation. There are lots of ways to think about the Ulysses Contract. We have tried in all kinds of ways to get people to eat better, to exercise, take their medication in time and so on. Given the average age of the people in the front row, I'll give you one particular example.

It turns out that in the history of the world nobody has ever woken up and said: "Today I feel like colonoscopy." So what do people do on the day that they are scheduled for a colonoscopy? They find other things to do. All of a sudden I'm busy and have other things to do. So what did we try? When we scheduled people for a colonoscopy, we said: "Would you like to give us 500 USD? If you are sharp on time for your appointment, we will give you the money back. If you miss your appointment for whatever reason, you will lose the money." This is a Ulysses Contract. This is basically saying: I know that my future self will not want to show up for colonoscopy, but let me now pay 500 USD to make that other, stingy person who will wake up in the morning three months from now and says: “I don't want to go to the colonoscopy” also feel really bad about losing the money and therefore go to the colonoscopy. So Ulysses Contracts are all about forcing our future self to behave better.

Think about those two building blocks, about how we misuse our money, and Ulysses Contracts. Here is one of the approaches we tried to get people to behave slightly better. This was a study we did in Kibera, a slum in Nairobi. We tried to get very poor people to save a little bit of money. These are people who live on about 10 USD per week. They are very poor people. There's no hope that those individuals would ever save money for retirement. What we tried to do is, so that they have a small cushion in case bad things happen. Bad and unexpected things happen all the time to the poor. Because these people live hand to mouth, they basically have no way to move down in consumption. They have no money and they have to borrow, often at around 10% a week.
Imagine that you live in Kibera and that you have a goat, which gives you 20% of your income. One day, your goat is sick. What do you do? You have no cushion, so you borrow. You borrow at 10%. Let’s say that, four weeks later, your goat is magically healthy again. That’s great news, but now you’re four weeks behind with interest. It is very hard to get out of this spiral. So, we wanted people to have a little bit of a cushion in case bad things happen. Now what would happen if we created these savings accounts for people in the front pocket of their trousers? They will spend it, right? They will spend it on a lot of things: a bit more water, kerosene, fruit - whatever.

We teamed up with M-Pesa, the online payment company, and an investments bank. We created a system where people could text money in very easily. Every night, M-Pesa moved the money to the investment bank. And now it was difficult to take it back. To take it back, people had to take a bus, go to the city, go to the bank, fill up some paperwork, wait for about an hour, get the money and take the bus back. It would take about four or five hours. We did this on purpose, because we wanted a system that made it easy to put money in and where you would take it out only in case of a real emergency. We didn’t want everything to become a real emergency.

We gave that system to tens of thousands of people. Then, on top of that, we added other inventions. Some people got only that condition: they only got this system. Some people got this system, plus a weekly reminder that said: try to save 100 shillings this week, which is about 90 cents. Another group got another message that said: try and save 100 shillings this week, but it was as if it came from their kids. The message said: Hi mum, or hi dad, this is little Joey - or whatever the name of the kid - try and save 100 shillings this week for our family. Now, just to be clear: these people knew that the message was not coming from their kids. They knew the kids did not have cell phones. It was just to remind them. So we had control, text, and text from kids.

We had a few more conditions, where we gave people a financial incentive. To some people we said: try to save 100 shillings and we will give you 10%. You will receive 1 shilling for every 10 that you save. To some people we said: we will give you 20%; 2 shilling for every 10 shilling you save. Two other groups also got 10 shillings or 10% and 20 shillings or 20%, but we did this together with what is called ‘loss aversion’. If you remember the principle of loss aversion: it’s the idea that people hate losing more than they enjoy gaining. So we said: what if we took that 10 shilling or 20 shilling and we put it in your account at the beginning of the week? We didn’t let them put in the money and then matched it; we put in 10 or 20 shilling at the beginning of the week and matched it in the same way. Then, if they did not put all the money in, we would take some of it back. The idea of loss aversion is that people would be annoyed by seeing money leave. It would be more painful and they would maximise their savings.

Then we had one more condition. We created a physical coin. It was about this size. It had a gold colour, but we told them it was not gold. This coin had 24 numbers
etched on it. We asked them to put it somewhere visible in their hut. And we said:
every week, please take a knife and scratch the number of that week. Scratch it this
way if you didn't save, and scratch it this way if you saved. Those were the methods:
- control;
- text;
- text and kids;
- 10% at the end of the week;
- 20% at the end of the week;
- 10% at the beginning of the week, with loss aversion;
- 20% at the beginning of the week, with loss aversion; and
- the coin.

What happened? What happened to saving? Before I tell you what happened to
saving: we also did some prediction experiments, trying to see what people predict.
I'm not going to ask you now, but what people predict in general is that the financial
incentives will be the most important. They predict that the 20% match will be much
better than the 10%, and that the 10% will be much better than everything else, and
that nothing else basically would matter.

What actually happened is this. Giving this system to people just by itself helps.
Having some kind of Ulysses Contract, putting money in easily and making it hard to
take it out helps by itself. Adding to it a weekly reminder helps more. Adding 10% at
the end of the week helps some more. 20% at the end of the week is just like 10%.
There's no difference. 10% at the beginning of the week, with loss aversion, helps
some more. 20% at the beginning of the week with loss aversion is just like the 10%.
And the kids, by the way, were just the same as the 10% and 20% plus loss
aversion. That is kind of incredible if you think about the power of kids. Just
reminding people about their kids is equivalent to a 20% match plus loss aversion.

But the big surprise of this study was the coin condition. Because the coin condition
basically doubled savings compared to everything else. Now, just to be clear: we did
not predict that it would be so effective. Now that we know that it is so effective, we
can ask ourselves: why was the coin so effective?

There's a beautiful piece of research, showing that when on the day kids are born
you randomly open college savings accounts to half of them and put 500 USD in
these savings accounts - not enough to pay for college - and then you visit those
kids when they turn 4 and test their social and cognitive skills, the kids with college
savings accounts perform better. How can that be? Do 4-year-old kids know that
they have a college savings account? Of course not, but their parents know. Once a
month, their parents get a statement that says: this little kid, while still in diapers, has
a college savings account. The parents maybe read to them a few more minutes a day. Maybe they buy them a book from time to time. In any case, they do invest more in the kids.

The same thing happened with the coin. When we look at the days of the week: we texted everybody on Friday. The benefit of the coin over the other method was not substantially larger on that Friday. It came from all the other days of the week. Think about it: when do we think about savings? There are two options. One is that you go around your day at the office and you say: "Let me spend some time now thinking about savings." Not a high frequency event. Option two is that you walk around and something in your environment reminds you about saving. How often does that happen? Not often at all. In fact, everything around you reminds you about spending and not about saving. There was a recent study that showed that when people win the lottery, their neighbours start spending more money. A lot more money, actually.

The point is that we are trying to figure out how we get people to change their mind and how we can use the physical environment to create reminders. On a more general level, we can think about what the digital economy is making visible, and what the digital economy is making invisible. How did people save a long time ago? In something like a goat. If you were slightly richer, you would have another goat. If we saved in goats, we could compete with our neighbours on who has more goats. If we have digital money, do we know anything about what other people are saving? Nothing. What do we know? Only what other people are spending.

There's another element to this. I was in Soweto a few years ago. This is where the idea for the coin came from. I saw a father buying a funeral insurance. In Soweto, funerals are very expensive. He bought a funeral insurance for a month. He got a little certificate, took it in a very ceremonious way and gave it to his son. If you think about it: bread winners get recognised every time they bring stuff to the family, stuff that is visible. They bring food, drinks, kerosene; whatever it is. When people save, or when they buy an insurance, this is invisible. In fact, what the family experiences, is that something was taken away from them. What this father did, was take something invisible - spending money on an insurance - make it visible and communicate this to the family. If we think about what kind of things in society we want to make visible and not, we might get people to change their behaviour.

The final point I want to make, is that in many ways the behavioural economics perspective on life is kind of depressing. We say: people are myopic, vindictive, don't know what they want, are easily confused, and so on. The good news though is that, if you look at the world, you can say to yourself how good this world is.

Do we want to think about this world as an outcome of 7.5 billion rational people? Not so much. I would much prefer to think about this world as an outcome of 7.5 irrational people, because that means that there are ways to improve things. If we think of everybody as acting optimally, it means that this is the most we can get. But if we think that people are mistaken in some way, it also means that there is room for
improvement. Especially when we move to the digital economy. As long as we had regular wallets, what could we play with? Not so much.

Now that we have, for example, digital wallets, it's up to us to decide what kind of technology we want to build. Do we want to build a technology that gets people to spend more now and save less for the future? Or do we want to think about a technology that can get people to live more in accordance to our long-term well-being? I certainly hope we will choose the second.

Thank you very much.