Safi Bahcall: Loonshots and Other Crazy Ideas

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Safi Bahcall: Loonshots and Other Crazy Ideas

Welcome to Brainfluence, where author and international keynote speaker Roger Dooley has weekly conversations with thought leaders and world class experts. Every episode shows you how to improve your business with advice based on science or data.

Roger's new book, *Friction,* is published by McGraw Hill and is now available at Amazon, Barnes & Noble, and bookstores everywhere. Dr Robert Cialdini described the book as, "Blinding insight," and Nobel winner Dr. Richard Claimer said, "Reading Friction will arm any manager with a mental can of WD40."

To learn more, go to RogerDooley.com/Friction, or just visit the book seller of your choice.

Now, here's Roger.

Roger Dooley: Welcome to Brainfluence. I'm Roger Dooley.

I'm super excited by this week's guest, because his insights into business success, not to mention lack of success, look at the factors that motivate behavior in organizations. And those motivations aren't what you'll learn in business school. Beyond that, he offers advice on how to choose outrageous ideas that can end up as home-run products. Our guest is Safi Bahcall. You might've expected Safi to be an eminent physicist. His parents were both physicists and he earned his Bachelor's in Physics at Harvard and then his PhD in the same subject at Stanford. His publications dealt with topics like Superconductivity, Random Matrix Theory, Quantum Hall Effect, and Particle Astrophysics. Instead of pursuing that though, he joined McKinsey before leaving to co-found Synta Pharmaceuticals. That firm went public

in 2007 and merged with Madrigal Pharmaceuticals in 2016. And Safi is the author of the new book, Loonshots, How to Nurture the Crazy Ideas That Win Wars, Cure Diseases and Transform Industries. Safi, welcome to the show.

Safi Bahcall: Thanks Roger. Delighted to be here.

Roger Dooley: Yeah, so Safi, I have to ask, you earned your PhD at Stanford. You were working with incredible mentors there and ultimately decided to join McKinsey. Did your scientist parents think you were going over the dark side?

Safi Bahcall: Oh yeah, yeah. I remember actually one time I was at a sort of a cocktail reception. There was some friends of the family being married and my parents were talking to some old family friends from town and I was right behind them. They couldn't see, they didn't notice that I was right behind them and they asked ... So the academics asked my parents, "What's Safi up to now?" And they said, "Well you know, he's left the field but we think he'll be back." You know, it's just like I changed religion or changed sexual orientation like it was some horrible ... Some thing that there was just, they couldn't process, but were sure I would change my mind on very, very quickly.

Roger Dooley: Yeah, that's funny. I'm sure that 99% of the parents would be bragging about their kid's new slot in McKinsey, and where in your case, "Well, you know, it's not working out exactly as expected, but it'll be okay probably, eventually.

Safi Bahcall: They went and they found a family friend who was a businessman, a very well known businessmen, and asked—they came to him very concerned, "We have a

problem. Safi seems to have abandoned science and gone into the business. Well, can you explain this business world thing to us? What is this company? Should we really be concerned here?" He just laughed and told them, "No, I think he'll be okay."

Roger Dooley: That's great. What kind of work did you start doing at McKinsey?

Safi Bahcall: I did a lot of different types of projects. I worked, actually worked on a trading floor in an investment bank for a while. I worked with some private equity firms, some technology companies, mostly on strategy and operations.

Roger Dooley: So how did you go from there to being a biotech entrepreneur?

Safi Bahcall: Well, McKinsey is sort of like a halfway house for academics. If you've done a lot of problem solving and sort of in the academic context, but never really set foot in the real business world. It's sort of pathway in between. You spend some fair amount of your time problem solving, but some fair amount of your time on a skill that they don't train you on in the academic world, which is how do you work well in teams? How do you influence people? And that of course is as a lot of people in business know, one of the most important ingredients to success is influencing people. Whether it's your ideas or your products or getting a team aligned. Influences is a skill set that's incredibly valuable and not taught in the academic world.

So McKinsey kind of gives you this little halfway space to figure out if you are made for it and what you want to do. And once I got the hang of it and enjoyed working on teams and found that I was actually reasonably good at working with people and influencing people. You kind of decide if you want to be an advisor for the rest of your life, and that wasn't what I wanted to do. I got excited about building things, but I also got more excited about doing something that was bigger than just me or one person or one idea.

I wanted to do something that could give people the idea, especially when my father was getting sick, the idea that I could do something that would give people more time on earth with their loved ones was very personally motivating. And that was the kind of thing that fired me up to get up every morning and go to work and get people excited about a big goal. So that's when I transitioned from kind of solving standard business problems and before that, solving academic problems to trying to build something that could change the world in a way that give people more time on earth with their families.

Roger Dooley: You know, how did the origin of the book come about Safi? Did you take your own experience and see that replicated elsewhere? When did you say, "Well, gee, this isn't just me. This is a phenomenon that keeps happening over and over again."

Safi Bahcall: Well, the first piece of it, actually to go back to my parents was when, not long after I started this biotech company to develop new drugs for treating cancer, my father got diagnosed with a rare type of leukemia and I figured, "Well, now I'm in the field. I can do something about this."

And I was, I was an insider. I had access to all the latest stuff in science and technology and scientists, but fortunately nothing I could do made any difference. And he died not long afterwards.

And then over the years as our company grew and we went public, everywhere I looked inside small companies or big companies trapped in the basement of those organizations where promising ideas that could have helped my father. And I just wanted to see if there was something I could do that would help liberate those ideas because it was clear that it wasn't because any of the people were bad people.

Everybody wants to go home and to their families and loved ones and talk about how they're making a difference. It was something strange that had to do with when people come together in a group, they keep sort of killing these great ideas and it really came down to this question of, "Why do good teams with excellent people and the best intentions kill great ideas? Why do good teams kill great ideas?" And that kind of mystery sort of nod at me for quite awhile until it become an odd thing. I didn't notice that everywhere. And then I was asked to work with president Obama's Council of Science Advisors on national research. And then the first day I joined, the guy stood up, the chair of our committee said, "Your job is to write the next generation of the Vannevar Bush report." And I had no idea who Vannevar Bush was or what his report was.

And I probably did the first thing that anybody would do, which is like try to figure out how to get off that committee and off that project. But then I looked at it and found that

Vannevar Bush was a guy who at the start a World War II quit his job, moved to Washington, talked his way into a meeting with president FDR and told FDR, "We're going to lose this war. This coming war and on the brink of world war II, it's 1939, so we're going to lose this war because the army and the Navy are too far behind Nazi Germany in the science and technology that's going to make a difference and we'll never catch up in time."

And he'd also understood that there are all these promising ideas as there were trapped inside the basements of these larger organizations. And he came up with kind of an astonishing system, a new way of thinking about how to design teams and companies and nations better to innovate astonishingly fast to liberate those ideas. And that's where sort of the germ of the idea, the germ of the idea for the book came from.

Roger Dooley: Let me thank you for your service by the way, to the government. I know that often the government employees or people working for the government are perceived of as being perhaps sort of dead-end folks who couldn't find a job in industry. But there are obviously many, many examples of really committed smart people. You served in that role. My friend Matt Cutts was one of the early employees at Google and now he is still working for the government I believe, in trying to make some of the digital processes more citizen friendly, which is quite a task, but somebody's got to do that. So thank you.

But let me ask you, "You distinguished between a couple of types of disruptive ideas or Loonshots, product and strategy and use the illustration of the airline industry for that. Why don't you talk a little bit about Pan-Am's, both

ascendance and then failure and how that shows the different types of innovation.

Safi Bahcall: Sure. Well you can think of the two types of Loonshots as a product type and a strategy type, and it might sound like an artificial distinction, but here's why it matters. There's so much focus today if you read the magazines or these glossy covers that talk about great innovators on product, product, product, product, product, and that can be a disaster. The example of Pan Am and American Airlines is just one, but the problem is that people have a blind spot for one or the other. And if they're too much focused on product, product, product, they're going to miss for example, a small change in strategy that can make a huge difference.

You mentioned Pan-Am and America, another simple example of this change in strategy is a young guy who when he was 32 years old wanted to open a store and he did what all his advisors said, "Well you know, you need to go where the foot traffic is. So you'd go to a big city."

And he did. But his wife actually put her foot down and said, "No, I don't want to live in a big city, any town, as long as there are less than 10,000 people, that'll be fine." And this guy liked like selling stuff, but he also like being married. So he decided to listen. And he also liked quail hunting. So he put his store in a small town in Arkansas called Bentonville, right where Four States met, and appointedly you could have quail hunting season all year around in those Four States at four different seasons.

That store of course became Walmart. That young guy was Sam Walton. He didn't create any new product, he

didn't create a new technology. He just shifted to a place, a strategy which everybody said couldn't work, which is open a store in rural America, far from the cities and boom, that store wiped out the retail and the rest of his retail competitors.

So that's an example of a small change in strategy. Now in the case of the airline industry, why it's so important, or in the case of Google we can come back to, it's kind of similar. The case of the airline industry, Pan-Am was started by a guy who was this product, product, product guy. He kept designing better, better planes, bigger, faster, better. He's the guy who brought radio navigation to the airlines.

He's the guy who brought jet engines, created really the first commercial jet aircraft and he led the world into the jet age. He brought cultures close together. He was an incredible product innovator, but Pan-Am went bankrupt. Went bankrupt because he kept focusing on bigger, faster, better planes, bigger, faster, better products. And by the time he, after the 707 and the 727, and the 737 he built the 747 and at that point airline deregulation hit, and he was flying these giant super fast, super powered planes with no passengers, and pretty soon Pan-Am went bankrupt.

Meanwhile, he had a counterpart named Bob Crandall who was not at all a product guy. He'd worked at Hallmark greeting cards. He was sort of a finance guy. But for American Airlines he came up with these subtle changes in strategy. For example, "Hey, let's fly, instead of flying direct between every two airports, let's do a hub and spoke model. We fly into hubs and then go from spokes.

Hey, why don't we try this thing called frequent flyers?" Or, "Hey, you know we have this reservation system that we used internally. Why don't we just give it away to all the travel agents in the world?" All of those changes did not involve creating a new technology. But when airline deregulation hit every airline, there are 300 major airlines in the U.S., went bankrupt, except for one, American Airline. And that shows you the power of understanding both types of thinking, of strategy thinking.

Google for example, people say, "Oh, they created a great search product." Well, there had been dozens of search projects before them. In some ways they came up with ... What they created was great strategies. The first strategy was prioritized by number of links. That was kind of a pretty big shift in strategy. They came up with another strategy, which is, people say you can't make money on search, it's just the yellow pages. And they came up with a strategy, well, I would say actually took from another company called Overture. They said, "Well, suppose we auction off the real estate next to a search." Again, that technology was already out there. They just combine those things. And finally they came up with a strategy which everybody thought was crazy, which is, let's buy a little software company and then make that software free. Give it to everybody.

What was that software called? Android, operating system. And people said, "That's crazy. You know, you sell software, it's a product. Products you're supposed to pay something and then your customer pay something more. That difference is called your profit margin. What are you guys doing giving it away for free?" Well it's a pretty brilliant strategy. Android's obviously then by far the

dominant mobile operating system and of course is a backbone for searches.

So the importance of those two types of strategies is that most people think of innovation or think of the glamorous part of creating or invention is product, product, product. But in the business world you need both. And if you can do both, you become immensely powerful. And that's a pretty rare skill.

Roger Dooley: You know Safi, I think you could probably argue that both Amazon and Uber are really processed innovations. I mean, Amazon didn't invent e-commerce or mail order certainly, that comes back a long time, but they sure brought a different customer experience to it. And really Uber, although there was technical innovation involved in what Uber did to some degree, they simply provided a more convenient taxi service. They changed that customer experience in ways that made it a lot more convenient for customers.

Safi Bahcall: In many of the great business successes took stuff that already existed and just thought of a new use. So it's really a new strategy. So Uber took smart phones and GPS and came up with kind of a new use for it. Amazon, people think of it as a retailer, but the majority of his profits, pretty soon probably close to two thirds of his profits, right now over half of his profits come from Amazon web services. Nothing that you or I or any retailer sees, not from selling diapers online. It comes from this weird strategy of, "Hey, we figured out some stuff in the cloud and we put our stuff in the cloud and we have this technology to do it. Maybe, maybe we could do that for companies. Maybe we could be their back office provider.

Maybe we could all that hassle of owning computers, and servers and having a big IT department. Maybe we could just host their stuff for them."

That was a pretty wacky strategy and now they have won, they're the number one player in this a hundred billion dollar a year web services market, which you know, retailers don't see very ... I mean you or I who are shopping online every day and Amazon don't see it. But that's more than half their profits are coming from that change in strategy.

Roger Dooley: Yeah, and just recognizing that thing within their company that they could monetize to such a great degree. You know, I think certainly there are other companies out there that probably have some technology or something that they do, some process that they're really good at, but they just treat it as well as something that we do for our own convenience and perhaps miss out on some opportunities.

Safi Bahcall: Yeah. And people also get this message a little bit off in this sort of in the ... Like the history of Steve Jobs. Obviously a very famous guy to the point of almost a cliche. So many articles written about him. But people keep writing about him as if he was this great product innovator. But in some sense he was almost a classic example and he thought about product, product, product. It was a complete disaster, almost every product that aside from doing pretty well on Apple too, which they were in the right place at the right time for sure, they were ... At his first day in Apple it was rapidly eclipsed within 24 months, 36 months by all these other personal computer

companies, whether it was Commodore PET or the IBM PC or the TIC.

And he started his next company as a product guy, he was going to build a bigger, faster computer, the NeXT computer and that was a flop. He bought something from Lucasfilm called the Pixar Image Computer. Tried to sell that and that was a flop. So when he was doing product, product, product, it was pretty much a flop and he really ignored all sorts of strategy changes. He ignored for quite a few years people at NeXT telling him, "Hey, your product and hardware, it's just not selling, but that software that you built for it, it's actually really pretty good."

And he resisted for a long time doing anything with it, but in the end it was the software that got him back to Apple because they needed an operating system and when he got back to Apple he did pretty well, obviously was hiring good product designer like Johnny Ive who created all these beautiful designs. But his biggest contribution, in addition to kind of the structure he created internally managing and balancing the kind of artists, working creative stuff for the soldiers, delivering stuff on time, on budget, which is he did a very good job on that was his main skill.

Something we can talk about if you like and I talked about with some other people, but specifically to the point of these kind of two types. One of the things, the first things that he did, and you have to remember, this was in the beginning days of music piracy is he said, "I think we want to open a store and sell songs online for 99 cents each." And people said, "That's a crazy strategy." There was no

new technology there because of course you could download. They said, "That's a really dumb strategy, because anybody can download. Piracy is everywhere. Everybody's downloading stuff for free, all the money and everybody knows there's no money in that." Said, "I think I want to try it."

And then he built the iPod and then the online music store, they downloaded 7 million songs or something in the first 24 hours and it was a huge hit. And so his biggest contributions and biggest successes came because he was able to do both. He came up with these very impressive, very thoughtful strategy wound shots that everybody said were a little crazy and they worked.

Roger Dooley: Yep. I want to get to your physics. Metaphor Safi, most of our listeners probably have at least heard of my own persuasion slide framework that uses a children's playground slide as a metaphor for a behavior change process and it incorporates gravity and friction. So, but your metaphor involves phase change. Why don't you explain what a phase change is for any non-scientists among our listeners and how that translates into corporate behavior?

Safi Bahcall: Sure. And you can certainly understand it at the level of a metaphor, but I think one of the things that a lot of people have appreciated this that you can actually underneath that is a series of equip, first principles equations. So it's really incentives inside groups. What are people's incentives? And you can actually kind of write that down and write down an equation and see how it works.

And so the analogy that I use is with a glass of water is kind of almost an exact map of a simple way to explain what those equations mean. But here's what I'd like you to imagine. Imagine a glass of water. And when I stick my finger inside and swirl it around, the molecules just slush around my finger. But when I lower the temperature, right at 32 Fahrenheit, boom, the behavior of those molecules completely changes.

The water becomes totally rigid. The molecules freeze. Why? The molecules that are inside are exactly the same. So how did they know to suddenly change behavior? There's no CEO molecule with a bullhorn saying, "Oh, I think it's 33 Fahrenheit. Everybody just slush around. No wait, wait, everybody, it's 31, everybody line up." No, they just do it.

So what I show is how understanding the answer to that question gives us a new way to think about, well how the Allies won World War II, how the U.S. led the world on science and technology ever since, and what it means to be better managers and leaders. It gives us a new way to think about the behavior inside groups and how we can manage and control those behaviors. The way it works is that you can think of culture as the patterns of behavior that you see on the surface.

The molecules are slashing around or they're totally rigid. Groups are embracing wild new ideas or they're rigidly rejecting them. It helps us understand that strange question, why do good teams kill great ideas? And the way you understand it is by understanding kind of the underlying force of this. So in a glass of water, there are two forces on a molecule. And one of them wants to make

stuff run around, be free, and one of them wants to make the molecules line up and be rigid.

And whenever you organize people into a group where there's a mission and a reward system and incentives tied to that mission, you also create two competing forces. One of them is your stake and outcome, your equity, how much do you gain if the whole project succeeds? You know, in a small company that's huge, a large company it's kind of tiny.

The other is perks of Frank. How much do you get by focusing on politics and getting promoted? So again, at a small company that's tiny, but at a large company, that's huge. And so that helps us understand as companies grow, why are these structural shifts there? Why did they suddenly appear? Why does a company change as it grows from embracing wild new ideas to rigidly rejecting them, even as the people inside, even when the people inside are exactly the same.

So by working through those forces, you can actually identify what are those forces in people? What are those behavioral changes? You can think of those behavioral changes as the patterns of behavior that you see. You can think of that as culture, which is what do you see? You have for example, a political culture or an innovative culture. You can think of the incentives you create, the things that drive those patterns of behavior as structure.

If you're a ward rank, you're going to get a political culture. If you celebrate intelligent risk taking and ideas, you're going to get an innovative culture. And here's why it matters. As anyone who's been inside large companies

knows, no amount of asking people to sing kumbaya or hold hands, or watch two hour movies about brotherhood is really going to change culture very much. But a small change in structure can do it.

Just like for example, no amount of yelling at the molecules and a block of ice to just loosen up a little bit is going to get that block of ice to melt. But a small change in temperature can get the job done. A small change in temperature can melt steel. So once you understand those forces and you understand that transition, you can begin to manage it.

Just like when it snows at night, what do you sprinkle on your sidewalk? Salt. Why do you sprinkle salt? Well, because it changes, it makes the molecules less sticky. It makes them more likely to slosh around. And so you lower the freezing temperature. So when you wake up in the morning and you step on your sidewalk, you wade your foot in a puddle rather than slip on ice and end up in the hospital. So the reason this stuff matters is that once you understand this transition, want you to understand the structure that underlies culture, that drives the patterns of behavior, you can begin to manage it.

Roger Dooley: Yeah. I love your use of the phrase return on politics Safi.

Safi Bahcall: Yeah, yeah.

Roger Dooley: Because that basically says, "Okay, there is a measurable return on those things that I do basically to please my bosses and to maybe network with other people and so on, as opposed to trying to create new products, new ideas and so on."

Safi Bahcall: Yeah, that's right. And you can think of it, for example, there is this saying in business which has become kind of a cliche that culture eats strategy for breakfast. So the kinds of things we're talking about here you can think of as why structure eats culture for lunch. For example, return on politics. So I mentioned that if you imagine somebody in the hierarchy inside your organization, they're thinking about, "Well what are my incentives after the CEO leaves the conference room and is pounding on the table about rah-rah and brotherhood."

You know, after a few minutes or a few hours the people forget that speech and they start to think about, "Well where's my bonus coming from? If it's coming from sales dollars and sales commissions, then I pretty much want to get on the phone and talk customers and make some sales."

I know there's some guy with a ... In the innovation group has this new product, but you know what? If I have to spend a couple of days figuring out how it works and then it doesn't work very well and I'm putting it in front of a customer, all that's time away from the sales call. So I'd rather, screw it. I'd rather spend my time on making some calls and earning my commission. Because at the end of the month that's what I'm going to get paid on.

So understanding these incentives, that wouldn't matter. So return on politics. That's another good example that has to do with how you structure your promotion decisions. Who's making the promotion decisions? In most companies, the local office manager or the local functional manager will make that decision. Let's say

you're a coffee machine designer and you're some design company in San Francisco.

Then there's a head of design in San Francisco and there's 10 associates or whatever, and if there's a new spot to get promoted, that guy or woman will make a decision on which of those 10 associates get promoted. So what do they do all year? Well, they're sort of elbowing each other and jockeying and trying to suck up and get curry favor from that boss who's going to be deciding their fate. And so they're sort of shooting down their neighbors ideas and so forth.

On the other hand in some companies, Google is one example, McKinsey is another example. There are few, they reduce that return on politics by taking away that manager's decision power, instead of that manager making the decision on who to promote. And that's a very shocking thing. You tell a manager, "You have 10 associates, you're not going to be in charge of which gets promoted."

They manager was like, "What are you talking about? These are my people. Of course ..." "No, this is how we work here." You fly in somebody from a different office, say from an office in Stockholm who doesn't know any of the people involved and now, let's say it's a woman, her name is Jane and she flies in. And Jane interviews the other 10 associates, the partner, the clients, the customers, the people horizontal, vertical, down and forms a pretty good impression of that group and reports back to an independent committee of senior partners, who should get the promotion.

Now what happens? Well in that situation you've just reduced the return on politics. For those 10 associates doesn't make any time, any sense to spend time during the year to be sucking up to their boss in San Francisco? No. Because someone they don't know will be flying in at the end of the year to evaluate.

So instead of trying to shoot down their neighbors, which is just going to create all this friction and tension, what did they do? Well, they focus on their projects. They focus on doing a good job for their customers and they focus on collaborating well, so that the people around them say that they're good team players. And then when someone flies in at the end of the year, boom. So by doing this weird thing, taking away manager's ability to make the decision on who to promote, which can meet with resistance, people are like, "No, I don't do that. That doesn't make any sense." That actually can make for a more politics free environment. An environment which leads to better collaboration and more ideas and more innovation because people are collaborating and encouraging each other's ideas rather than shooting them down. So that's one small example of once you understand these incentives, how you can begin to manage that transition to design more innovative structures.

Roger Dooley: Hmm. And you even argued for a chief incentive officer position because it's that important as the organization grows to get the incentives thing right. Because if you don't, if it just evolves the way most businesses do, I'm sure that the incentives that come about are not going to be optimal for nurturing innovation.

Safi Bahcall: Well, exactly. Everybody has a chief technology officer who's responsible, who's given a fixed budget and is responsible for making sure everybody's got the latest products and gadgets. But if I asked you, "Which would you rather ..." Let's say you were running a company and if I asked you, "Which would you rather have, a workforce that has the best gadgets in the industry, or a workforce that has the most aligned, best incentives in the industry that motivates them the best?"

Personally I'd rather have an old generation of gadgets, but an incredibly aligned and motivated workforce compared to my competitors. And the reason, which is interesting because we have a chief technology officer, which is supposed to be strategic. You give them a fixed budget and they're supposed to get products everybody, but we don't have a chief incentive officer. We have these, sort of often have just HR rubber stamps.

Okay, well what's your rank and what's your level? Well, if I look at the data, if you're at this level, then you should be in this band and so we'll put you at 60% grade, go away. We don't spend anywhere near the sophisticated time in thinking about human motivation and human incentives as we do thinking about having the latest gadgets. But it should be the other way around, because that's a trickier problem and the return on investment in getting that right is far, far bigger.

Because what motivates people, you and I were just talking about financial stuff, but there are nonfinancial metrics that can be huge motivators. And if you have ... No manager who's busy figuring out sales and figuring out metrics and putting out crises and employees that are

blowing up and bosses that are blowing up. If you're a public company, you have investors and quarterly earnings reports that you have to deal with.

You don't really have time to sit through and think which are the five, 10, 20, 50 people in your group. What is going to really motivate them the most? And it can vary. What you want is a chief incentive officer who understands not only that is his or her first priority, but can also see across the company and create systems and plans that improve alignment both on financial rewards and nonfinancial reward.

Some people are enormously motivated by desire to recognition from their peers. Some people are enormously motivated by convenience. If you could create an office that's closer to their work, if you could design a more friendly office, some people are more motivated by choice. So if they could as a result of doing a good job, get a choice of next job. So those are the kinds of reasons you want someone who spends as their first priority thinking very strategically about incentives. Just as the chief technology officer might try to think strategically about products.

Roger Dooley: Yeah man, it is such a great idea and I don't know, perhaps so many companies has been influenced already by your ideas but I haven't encountered one yet but it makes so much sense. One other kind of HR-ish topic that I think is pretty key for our audience is that the match between individual skills and the project they're assigned to has impact in different ways. Obviously you would think, "Okay, you want people who have the right skills to work on the right project." But depending on how well

those are matched, it really sort of changes their incentives for behavior, right?

Safi Bahcall: Absolutely. That's another example of a structural question, which is you want a string that is not too tense, that is not too loose and not too tight. You want just the right amount of tension in the string in terms of a person's skill and the task that they're assigned. Because if it's too easy for them, I think the example I give is, let's say you have this world famous architect, Frank Lloyd Wright designing a coffee machine.

Well, he could probably design a coffee machine pretty damn well. In two hours it could be in the Museum of Modern Art or something. But if you put him on that task for three weeks, after he designs a coffee machine, what's he going to do with the rest of his time? Well, there's nothing he can really do on his current project, so he might as well, if he wants to maximize his bonus or incentives, go to his boss and talk about how great his project is, and PS, how kind of it seems like the person down the hall, they didn't want to say anything, but they seem to really be struggling. And they're talking to this customer and they're really kind of challenged and PS, they might be having some marital problems. Don't say I said anything.

In other words, politics, because once you're done with your project, if it was too easy, then there's not much left for you to do if the string is too loose there, other than go around and start doing politic and vice versa. Let's say you put someone who is just a terrible designer, like has no sense. I don't actually have for example very good aesthetics. So if you put me on a coffee machine design,

it doesn't matter how many hours I spent on it, I'd probably make the same lousy coffee machine.

So what happens is if the string is two tense, the gap is too big. Well there's no incentive to keep working on it because it's just going be a lousy product. So you might as well go around and politics again. So what you want is to get just that sweet spot where there's a little bit of runway. There's some tension, but not too much, not too little in the string.

And getting that right again is very tricky because let's say you run a functional group. Let's say you run a design group and you have a coffee machine designer who's not very good. What do you do after one or two tries? Maybe you fire them, they spread a lot of policy. Well maybe they were actually, they would have been great at sales or they would be great at finance. Who knows? But if you're a designer and you have an associate reporting to you who is a designer, you'd never know that. You never tease that out.

So what you really want is a chief incentives office, or a very strong central group who is looking for this project skill fit, who's looking for a mismatch and then quickly switching people out if the string is too tight or not tight enough, and finding someone else where it's at the right tension because it often can be very difficult for the individual manager to sense that about his or her people.

Roger Dooley: Great. Well, I could keep on going for hours here I think Safi, but I want to respect your time. I will remind our listeners that today we are speaking with Safi Bahcall, physicist, biotech entrepreneur and author of Loonshots,

How to Nurture the Crazy Ideas That Win Wars, Cure Diseases and Transform Industries. Safi, how can people find you and your ideas?

Safi Bahcall: Go to loonshots.com. Right there, you can send me an email there or connect on LinkedIn. Got articles there with more of this stuff. Twitter feed where my handle is just by name.

Roger Dooley: Great. Well, we will link to all those places and any other resources we spoke about on the show notes page at rogerdooley.com/podcast. And we'll have a text version of our conversation there too. Safi, thanks for being on the show. Loonshots is one of those books that will change the way people think about innovation and certainly changed mine.

Safi Bahcall: Oh, thanks for saying so, Roger. I really appreciate it.

Thank you for tuning into this episode of Brainfluence. To find more episodes like this one, and to access all of Roger's online writing and resources, the best starting point is RogerDooley.com.

And remember, Roger's new book, *Friction*, is now available at Amazon, Barnes and Noble, and book sellers everywhere. Bestselling author Dan Pink calls it, "An important read," and Wharton Professor Dr. Joana Berger said, "You'll understand Friction's power and how to harness it."

For more information or for links to Amazon and other sellers, go to RogerDooley.com/Friction.