



## Transcript for Session 016

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### Transcript:

Hello there and welcome back to chandoo.org podcast. This podcast is dedicated to making you awesome in data analysis, charting, dashboards and VBA using Microsoft Excel.

Welcome to session 16 of our podcasts where we are going to talk about **‘Three must-have books for aspiring Analysts’**. These are the books that I have been reading that are incredibly useful and really well-written. I thought I would share them with you along with a short review so that you could benefit from reading these books.

Before jumping into the session, I would like to share a couple of announcements with you. The first one is very happy news. Last week, that is between 27th and 28th of July (about ten days ago now), I have completed my first ever 200 km bicycle ride! That's right - my first ever 200 km bicycle ride! I'm feeling really happy about this achievement. It's actually something that I've been hoping to finish one day for the last 8 or 9 months. It all began sometime back last year when I read a book called **'Free Country'** written by **George Mahood**. He and his friend (both aged about 25 or 30 years old) go to one corner of the United Kingdom where they leave everything that they have with them there in their cars and they step out of their car with just their briefs! And, their aim is to reach the other end of the United Kingdom cycling but they don't want to spend a single penny of their money. So, they beg and borrow and hope that people help them. And, somehow, that day itself they acquire 2 really used, old and rusty bicycles and they finish their entire ride from one corner of the United Kingdom to the other on the bicycle. This is a really funny book. It sounds like an epic adventure which of course it is. The way they have presented this entire thing is really a good way to explore how people think and the beauty of humanity, the kindness of strangers and the humor of it all. The way they manage to figure out where to stay overnight, since they don't want to spend any money, is interesting. They either have to stay for free or they have to do some work to get food and stay overnight in return. Their bicycles keep breaking down - the chain breaks off or they have a flat tire or some mechanical problem - and they have to solve the problem. In between all this, they themselves don't get along very well for parts of the travel and they keep fighting. All of this is a really nice exploration of what would happen if you rely on the kindness of others to finish an epic journey like this.

I read this book almost a year ago and it was a very beautiful and well-written book that motivated me to take up a long bicycle journey. To be frank, I did not do anything about it for almost 6 or 7 months. Early this year, in March or April, I read a couple of travelogues of people who have been through a lot of strenuous bicycle journeys. I don't want to take names because I have already talked about this on the blog. These travelogues along with the 'Free Country' book motivated me to consider biking as a serious thing. So, I did that. I dusted off my old bike and started riding it on a daily basis. Once I reached a point where I was performing very well and I could feel confident about my biking, I upgraded to a



better bicycle. The one that I had been using was one that I had been using for the past 4 or 5 years to run errands and get some exercise once in a while. My primary mode of exercise until that point was going for a morning walk or jog. To cut a long story short, I purchased another bike a month ago and I've been riding it ever since. Last week, I felt that I finally had the confidence and the necessary physical strength required to finish a longer bicycle ride. So, I took up the 200 km ride. I went to a small town roughly 120 km away from my house. I finished that ride in one day. And, the next day, I rode back home. I did not finish the entire ride; I stopped after 88 km because I just wanted to do 200 km and did not want to push my body all the way through because I haven't ever done something like this and I didn't want to be in a situation where I would be bed-ridden for 5-6 days after the ride!

Thankfully, none of that happened and I happily finished the ride and I have been feeling alright ever since. I haven't had any pains or damage. I wanted to share this news with you because it is the most incredibly uplifting and confidence boosting experiences of my life. Now, I feel even more eager to take on bigger challenges like maybe doing a 500 km ride spread across 5 or 10 days. Maybe it'll happen by this winter or early summer next year. That's the first announcement.

The second one that I just wanted to remind you about is that my upcoming **live Master Class in Houston** this September is almost filled up. We just have a few spots for the **Advanced Excel and PowerPivot classes** separately. If you would like to join, please go to <http://chandoo.org/session16/> where all the show notes to this podcast will be and where I will also paste a link to the Advanced Excel dashboards Master Class for 2014. Remember, this class is happening between 15-18 September in Houston, Texas, USA.

Likewise, I am also speaking at an **Excel user conference called Excel Balooza in Dallas, Texas** from 21-24 September. I will be speaking about **Advanced Charting and Dashboard Design**. I am doing the same session on two days. The same thing will repeat on both days. If you would like to attend, please visit <http://chandoo.org/session16/> where I will paste a link for the Excel Balooza conference. You will receive a 10% discount because you are awesome and we would like to offer the discount to you if you attend the conference. Again, I am super excited about this conference and I will share more news about the conference, what I am talking about and what the response is in another podcast episode once it happens in September.

That's about it for the announcements. Let's now jump into the topic for our podcast which is '**3 must-have books for Analysts**'. Before we talk about the book names, I would like to clarify that these are not the only three books that an Analyst should have. These are just 3 of the books that an Analyst should have. You have to read lots of other books if you want to be a successful Analyst, but these three books are the ones that are on top of my book pile, that I have been reading for the past few months and I really enjoy them. So, I thought that I'd share them with you so that you could also enjoy these books.

The first book that I am going to talk about is called '**Data Smart**'. This is a book **by John Foreman**. As the name suggests, it talks about how to analyse data in a smart way. We will talk about it in detail a little later. The second book that I am going to talk about is called '**Ctrl+Shift+Enter**'. This is a book about array formulas in Excel written **by Mike Girvin**. The third book that I am going to talk about is called '**Think like a Freak**'. This is a book authored by **Steven Levitt and Stephen Dubner** who are also the authors of the Freakonomics and Super Freakonomics books and the hosts of the Freakonomics podcasts which are quite popular.



Let's go into each of these books.

The first book that I have for you is called '**Data Smart**'. This is a very useful book for anybody who is aspiring to get into serious analytic work. I am saying serious because not every Analyst gets to do serious data analysis work. Most Analysts, at least when they start out, would end up doing simple summaries or reports or filling up standardized template style dashboards or scorecards or some really simple analysis like counting, summing, averaging, making pivot tables etc. They aren't really exposed to situations where they have to model complex business problems or solve tricky optimization situations using some sort of business problem model. However, eventually, every Analyst would get to the point where they have to do some sort of complex analysis. If you don't believe me, my personal experience itself should be good enough for you.

When I joined as a Business Analyst right after my MBA, I was practically doing nothing for the first several weeks. I was doing some work but most of it was simple Excel and PowerPoint work. I would dump data in Excel and create some presentations and shoot them off to my boss. She would be happy or not happy with me, but that would be the end of the story. But eventually, I think about a month and a half into my job, I was put in a situation where I had to really roll up my sleeves and think hard about the problem at hand. This is the problem I faced. - I used to work in an IT industry as a Business Analyst and many IT companies categorize their business by various verticals. We were an IT services company and we provided services to various industries like banks, insurance companies, financial services companies, manufacturing firms, media companies, retail companies and lots of other companies. My job was to focus on the insurance clients. So, I was working as a Business Analysts in an IT company and my focus was to understand the various IT needs of insurance companies and how we could fulfil them. Quite early on into my job (about one and half months), the question that my boss asked me was, "Right now we are targeting all insurance companies the same way. When we approach them for a prospective project or an upcoming IT solution that they are looking for, whether we approach very big companies like MetLife or AIG, or a local company focusing only on one or two states or a company that focuses on a small country like Sweden or Denmark, we approach them the same way." She wanted to know whether we could segment or cluster these companies into some sort of meaningful groups so that we could target them in a better way.

In pure marketing terminology, what she was asking me for was a way to cluster the customers into smaller chunks so that we could fine tune our marketing efforts towards them in a better way. Obviously, a common sense approach would be to cluster them based on the amount of business they are doing. For example, the way to approach a large insurance company like AIG, Aviva or MetLife that has large global operations and regularly churns out millions of dollars of revenue and profit has to be different as opposed to targeting a small time company, a one state company or a one country operation. So, one option is to cluster them based on size. But, this is not as simple as it sounds. She really wanted me to do some in-depth analysis of various quantitative parameters of these companies like their size and the number of employees they have as well as various qualitative parameters like their future vision, the plans in their pipeline, the things they are talking about in their annual reports, their goals and where they are planning to go in the next 5-10 years and cluster them based on that so that we could tailor custom solutions for these individual segments.

This is a really tricky task because when we want to segment something we obviously need to



understand a lot about the data and only then figure out some sort of a meaningful clustering mechanism. That's what it really is. Eventually, I kind of brushed up my statistics and marketing concepts from my business school days where we were taught how to do segmentation and how to cluster, and then I applied a similar logic to Excel because that's the only tool that I had at my disposal. I could produce some meaningful segments and test them and eventually present my understanding to my boss. All of this happened just six weeks after I joined my work. Most Analysts might get into a tricky situation like this at quite an early part of their career while some Analysts might not have a question like this thrown at them for several years into their careers and then suddenly they might be asked to do this and might not know how to approach such questions.

That is where John Foreman's 'Data Smart' book comes in really handy. I mean I have done that work very early on in my career, but just like everything else on the technology front, if you do something but you don't do it again for a couple of years then chances are that you will forget it. If you ask me today how to do clustering or segmentation analysis, I have no idea how to do it! Now that I have read John's book, I might be able to do it better, but 6-8 weeks ago (when I hadn't purchased the book) I wouldn't have been able to answer the question very convincingly. That's where John's book helps. To speak a little bit about the author, John Foreman works at a company called MailChimp. You might have heard about it but no worries if you haven't. It is a company that helps businesses manage their customers and email campaigns. This is something that not many of us are very familiar with because it is something that happens entirely in the background and you don't even see it. But, let me give you an analogy. Let's say that you are shopping on Amazon and you've browsed the site and looked for some DVDs of the latest movies. You browsed for the DVDs but you didn't make any purchase. You stopped there and you closed your browser window and resumed your work. A week later you get an email from Amazon saying, "Hey, you took a look at these five DVDs. Would you like to purchase them? They are on offer. If not, these are 10 more DVDs that people who looked for those DVDs also consider and maybe you'd like to purchase these." It's a pure marketing email that Amazon is sending you which are a part reminder because you haven't finished the purchasing action but they are also part marketing because they are also introducing you to new movies that you have not considered yet. This is what we see as a customer or a user. But, how is this happening in the background? This is happening because Amazon has some sort of an email server or email solution in the background that is like a black box that constantly watches all the action on the website and triggers or takes some action that have some business rules behind them. For example, there could be a business rule within the Amazon ecosystem that goes something like - "if a customer browses for item X, but they don't purchase it, send an email after 7 days". This could be a simple rule in their system. MailChimp is a solution that can help you do these kinds of campaigns, send emails, manage your customer data and profile them, segment them and target them accordingly. There are many other companies that provide similar services like AWeber, MailChimp etc.

John works at MailChimp and he routinely handles data to the tune of millions of rows. Obviously he is somebody whose job requires a lot of hard thinking about data problems and how to solve them. In the midst of all these experiences, John wrote this really wonderful book where he takes us through a sample of business problems that are faced by a lot of Analysts and how to solve them. That's a little bit about the author and what the book aspires to do. Before we talk about an example chapter, let me just talk about the authoring style of the book for a minute. In this book the style taken by John is more like friendly banter. It's almost as if he is sitting across you on a table and you're having a beer or coffee with him and he's explaining some really arcane statistical, analytical and technical concepts in plain English



with easy to understand examples, while you're enjoying the coffee with him! That's the style that John uses in the book and it's incredibly fresh because I have been trying to re-learn statistics and some of these advanced analytical concepts for a while. I have purchased several books and I've been to several websites to acquaint myself with those techniques but I almost always come up a little frustrated and overwhelmed. For example, the concept of segmentation is easy to understand in layman terms but the moment you want to actually use it, you have to have a strong understanding of the statistics behind it and how it applies to a tool like Excel. How do you convert that statistics to functions, formulas and screen features in Excel? Only then can you do segmentation. But, whoever is explaining the concept ends up making it too technical and bland. I always feel like I understand part of it but not all of it and so I leave it there.

However, when I read the first few chapters of Data Smart, I instantly realised that I have a new friend in my journey of learning these advanced analytical techniques. That's where the style of writing really helps. It's just like a friendly banter where some really advanced concept is being explained to you in really simple terms. Let me just take you through an example chapter. The book has about 10 chapters. The first chapter is really a nicely put together small introduction to Excel and some advanced concepts of Excel. The title of the chapter is "Everything you ever wanted to know about spreadsheets but were too afraid to ask". Again, the title itself sets you at ease. That chapter is more or less about Excel, so I don't want to talk about it very much. Then there are 8 chapters which are really focusing on one business problem per chapter. The second chapter is about cluster analysis. This is similar to the insurance company analysis that I explained to you a few minutes ago. The chapter is called "Cluster Analysis Part 1" and in this chapter the concept of cluster analysis is explained using a technique called K-means. There are many ways to cluster a bunch of data.

Then there is a chapter on naive bias and the incredible lightness of being an idiot. That's the title of the chapter! The light hearted humor and the incredible energy and enthusiasm that John has put into the book make it easy to understand the concepts and apply them to your day to day work. There are many other chapters including one focusing on optimization, cluster analysis using network techniques, how to use regression forecasting, outliers and many other ways. Various important statistical concepts are kind of re-introduced to you through standard business problems along with the ways to solve them.

Let me take you through one chapter briefly. We'll discuss the 'Cluster Analysis using K-means'. This is where the style of the author really shines. Obviously all the chapters are like this but this chapter is one of the very first ones that you are going to read so you will be seriously impressed by the delivery of content in this book when you read the second chapter. The entire thing starts with a typical prom dance where people are dancing on the floor and he explains the entire clustering process through that. Imagine a prom dance floor with a bunch of boys and girls dancing. In movies and on TV, you get to see a prom as something that is heightened and shown with a lot of fanfare. In reality, I didn't have anything as a prom while growing up as it is not part of Indian schooling or high school culture. But, I can say for sure that none of the boys in my class had any courage to talk to any of the girls in our class. I would imagine that even the girls are like that. They don't really feel the necessity or the courage to come and talk to any of us boys. If there were to be a prom in my high school days and if we were all put in a room and asked to dance together, the way it would have happened eventually would be that all the boys would be at one corner of the room and they would be making their lousy moves and dancing and all the girls would be in the other corner of the room and they would be dancing elegantly. This is the kind of thing that happens, and when you look at that room from the top you can clearly see two clusters -



one is a cluster of shy boys and another is a cluster of shy girls who don't want to mix with the boys! This is the way he explains the clustering analysis in the beginning of the chapter.

Eventually he goes on to explain how the K-means clustering works and how all of this can be implemented in Excel very easily using a bit of formulas and using solver and things like that. So, this is just one chapter and in this chapter you get to learn about various advanced statistical concepts like what happens when you are using K-means. K is just a number, so basically you are using 3 means, 4 means or 5 means clustering and how to improve the clustering analysis performance. If the values within the cluster are not close together you could eventually further break them apart. But, with each increase in the cluster size, eventually you will be in a situation where you will have too many clusters and you are not able to do any meaningful analysis. How the optimum cluster size is decided and how to analyse cluster performance, how to understand the data and how to use it for your business problems are explained in beautiful, clear and simple detail. The Data Smart book is one book that I would recommend to anybody who is starting their career as an Analyst or anybody who has been working for a few years but hasn't had a chance to learn some of the advanced analytical techniques and is struggling with their job.

I will place a link to the Data Smart book in the show notes on <http://chandoo.org/session16/>.

Let's talk about the second book now called **Ctrl+Shift+Enter**. Those of you who are familiar with Excel already know about formulas. I can safely assume that you are in the top 5-10% users of Excel since you are listening to our podcast. So you already know quite a bit about formulas. But, you may not have heard about **array formulas**. The concept of array formulas cannot be explained very well on a podcast medium. Let's say that you are writing a simple SUM formula and you say:  
`=SUM(1,2,3)`

The SUM formula just takes the individual elements and retains the total. The total is 6 because you're asking the SUM formula to add up 1, 2 and 3. This is all clear and there is no confusion. Here we are passing on a bunch of values to the SUM formula and it is returning a single value as the result. Let us talk about some technical terms. We are passing on a bunch of values which are called an array in computer terminology. We are passing an array of values to the SUM formula and it is returning an output of one value. We are giving an array and the output is just one value. This is a typical standard formula.

Most of the times the formulas we write go like this. We are passing an array of input values and the output is one value. This is the typical framework through which we are writing formulas and getting results. But, there are also other frameworks that can happen. There is a framework whereby we can pass an array and get an array back. You might be wondering, "Hey, when will that happen?" Don't worry; I will take you through some examples later in the podcast a few minutes down the line. So, there is a scenario where you pass an array and you get an array back. There could also be a scenario where you pass a single value and you get an array back. Likewise, there could also be a scenario where you pass a single value and get a single value back. The single value in and single value out scenario is not of much interest to us because it is the same as the multiple values in and single value out scenario. But, the scenario of passing an array and getting an array back or passing a single value and getting an array back are somewhat interesting. Together with these two and the scenario of passing multiple values and getting one value back can be called as array formulas. Now you might be wondering, "Hey Chandoo,



isn't the SUM(1,2,3) formula a simple formula? It's not an array formula." Well, it is not because the SUM formula naturally expects arrays. When you are entering values into the SUM formula, it is already thinking, "Hey, you are going to give me an array." So, it is not really an array formula in that sense. But, there are certain other formulas where an array is not expected but you're giving it and you're expecting that function to work with that array. That's what we call array formulas.

As I said up front, trying to explain the concept of array formulas in an audio podcast is really difficult. Believe me, even face to face, in a presentation or a live demonstration through Excel, I find it hard to explain this concept to people who have never experienced array formulas. So, if you don't understand it, it isn't your fault and it probably isn't my fault either! It is just that the nature of array formulas is like that. Let me give you a simple example where array formulas can be useful. Let's say that we are looking at the sales data of your company and the data has two columns namely product name and total sales. Some of the product names repeat since it is running data, so the same product purchased on multiple days appears multiple times. And, I just want to calculate the average sale for a particular product. So let's say that I want to calculate the average sale where the product name equals A. How do we do that? We use a formula called AVERAGEIF because what we are really doing is calculating the average if the product name is equal to A. This is a very straightforward formula and we understand it. But, suddenly your boss says, "Hey, this is fine, but what is the maximum sale for product A?" Now he/she is asking you to calculate MAXIF but the sad thing is that Excel does not have a MAXIF formula. It has SUMIF, COUNTIF and AVERAGEIF formulas. So how would you calculate it? Would you go back to your boss and say that it's not possible. Well, you can say it but that is the kind of answer that nobody in the professional world would appreciate. If you go back to your boss and say that this not possible, your boss would wonder why they are paying you! This is where you would use array formulas. There are some other helper column based solutions too but an array formula is a little more elegant and simple. We would write something like:

```
=MAX(IF....
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So, essentially, we are constructing our own MAXIF formula. The syntax and other things are not so relevant here but the important thing is that this kind of formula is an array formula because it is forcing the MAX and IF formulas to take arrays and process them so that we can get our result. We know that the MAX formula just like SUM, AVERAGE and COUNT, is expecting arrays already. But the IF formula is not designed to work with arrays. It is designed to work with single values. You are passing an array to the IF formula, so to make it work, when you finish typing the formula you will press Ctrl-Shift-Enter. This is your cue. You are telling Excel that you've typed an array formula and Excel should process it differently. That's what the Ctrl-Shift-Enter means. That's the name of this book that's written by Mike Girvin. If you don't know him, he's the one who runs a very popular YouTube channel called 'Excel is Fun'. That channel has tons of videos which are really useful, incredibly well explained and very powerful techniques. He runs that channel and he wrote this book to explain some of his favorite array formula techniques. So, if there is ever a book that helps you wrap our head around array formulas and understand them better, then this is the book.

Through fighting and learning the hard way, I kind of figured out how array formulas work. When I was first asked to write a MAXIF formula, I didn't know what to do. I didn't know how to google search for it either. Eventually I figured out some of these array formulas myself and then I kind of learnt them a little more through various blogs, forums and articles. But, if I am starting today, I would immediately go through this book so that I can get a better grasp of various array formula techniques in Excel. The book



is really well written. The style of writing is more or less explanative. Mike wastes no time. There are several chapters and each chapter showcases one particular array formula technique or one particular very tricky business problem and shows us how to solve that problem using array formulas. It takes us through the formula and then the explanations are really beautiful. Every step of the formula is explained with lots of detail. And the way it is explained involves a lot of repetition so you don't lose track of what you are learning and at each point he solidifies your understanding. Array formulas are something that we won't be able to understand on our first brush with them. Often you have to repeat the same formula or re-understand it before it implants in your head. That's what Mike does. He takes you through one formula and explains it. And the next formula is just a slight variation of the first formula and he again re-explains the whole concept so that you don't forget the importance or relevance of that formula. It's a very useful book and it's something that you could keep as a companion in your Excel library and refer to it from time to time. I have gone through half the book. Again, this is the kind of book that you don't really want to finish in one sitting. This is the kind of book that you want read to learn a couple of techniques, go back to your desk and practice them and then when you have some more free time or you're feeling a little dull in your brain, you'll want to open up the book and it'll instantly challenge you. This is a very good book and I highly encourage you to buy this. The book is named '**Ctrl+Shift+Enter**' and it's written by **Mike Girvin**. I will place a link to this book in our show notes page on <http://chandoo.org/session16/>.

The last book that I have for you as a recommendation is called '**Think like a Freak**'. This is a book that is not at all about Excel. But, it is a very relevant book for anybody who is working as an Analyst or anybody who aspires to be an Analyst. Let me first explain why I am recommending a non-Excel book here. I view Analysts as problem solvers. We are a tribe who are working hard to solve various business problems on a day-to-day basis. We may not be solving very tricky, very big or very challenging problems everyday but we are in a profession where it is our duty to solve problems so that business decisions can be taken with ease. The way I view it, an Analysts' job involves **4 D's**. The **4 D's** that come to my mind when I think of Analysts are:

- Digging
- Discovering
- Discussing
- Deciding

We **dig** data to figure out what is there. And, we eventually **discover** something like a trend, outlier or some other buried information. Then, we **discuss** this information with our peers, colleagues or bosses. And eventually a **decision** will be made.

On a typical day, maybe you don't see all the D's. But, in the long run, as an Analyst, you will see that your career is filled with these 4 D's all through. This is where the problem-solving mind set is really important. If you are working as an Analyst but you are not a natural problem solver or a natural thinker who likes to frame problems and approach them and solve them, then you might have a really hard time. That is where 'Think like a Freak' really helps you. The book gives you a framework to think in many unconventional and non-traditional ways. The book has a lot of chapters and I am only half way through the book, but I feel compelled to tell you that this is a book that we should all read and appreciate the freakiness that is required to solve problems. That is really why I am recommending this book.





For me, Analysts are really problem solvers. And, in order for us to solve problems better, we need to have the freak attribute as well. If we are just traditional, conventional thinkers and we approach every problem the way textbooks tell us to, then we won't be able to solve them in a very elegant, beautiful, powerful way. We would probably be able to solve a lot of problems, but we would also struggle solving tricky problems. That's where a little bit of thinking like a freak is required. As I told you earlier, the book is authored by Steven Levitt and Stephen Dubner. They are very famous authors who have written a couple of books called Freakonomics and Super Freakonomics. Both of those books have been global bestsellers. And, many people have been asking them if they will be writing one more book in the series etc. They figured that instead of explaining how problems were solved, they could also explain how problems should be solved - more like a guide so that anybody who wants to think outside the box and solve tricky problems - has a handbook or a route map to it. That's where the 'Think like a Freak' book comes into the picture and you can google the authors or their website <http://freakonomics.com> where lots of information is available.

Let me just take you through one sample chapter so that you get a feel of this book. The book explains some of the traits that you should have if you want to think like a freak. For example, the very first chapter is 'What does it mean to think like a freak?' They set the context for the entire book there. The very first trait that a freak should have is that they should learn to say 'I don't know'. They say this in the second chapter, the title of which is 'The 3 hardest words in the English language.' Most of us would naturally think that the three hardest words would be 'I love you' or something like that! But, the authors say that 'I don't know' are the 3 most difficult words to say in English and this is really right. Especially as a child, you are expected to say 'I don't know' a lot. But, as we grow up, there is this entire pressure from outside which kind of forces us to say 'I know everything.' Imagine yourself in an interview or on the first day of your job or even today if you walk into your boss's chamber or your client's presentation and they ask a question, you don't really want to say 'I don't know'. Even if we don't know, we would like to put up a brave front and fake something there. That's the kind of thing we are forced to do because we believe that saying 'I don't know' puts us in an awkward and not so useful place. In reality, a freak should always assume that they don't know much and then start from that point. They say that if you have to think like a freak then 'I don't know' is the best way to start it.

The third chapter talks about 'What's your problem?' This is really their way of saying that most of the time the problem is not the same as what we imagine the problem to be. For example, if we are thinking about a business problem and if we are thinking on the same lines as everybody else, we would frame the problem in the same way. But, if we step outside a little and try to frame the problem in a different way then we might arrive at a better solution. As an example he gives you a story of a hot dog eating world champion. His name is Takeru Kobayashi. I hope I have pronounced it right! He is somebody who wants to compete in the Coney Island hot dog contest that happens every year in U.S. Prior to the year in which he competed, the world record stood at 28 hot dogs. He entered the contest and broke all records. He ate [I think] 50 hot dogs! The authors explain how all of this happened. They interview Kobayashi, understand his approach and watch various firms etc. Eventually, they arrive at the conclusion that in all the years till now, the people entering the contest have been defining the problem of hot dog eating in one way. For example, they have been defining the problem of hot dog eating as 'eat the entire hot dog, chew it and then go for the next one.' But, Kobayashi approached the problem in a different way. He approached it as if he has to process [eat] these hot dogs more like a factory rather than an individual. So, if I am eating a hot dog and I am hungry and I just walk up to a stall and purchase one, the way we would eat it is that we would take the bun and hot dog, put some ketchup or



condiments on top and then just put everything in our mouth and eat it. This is how we eat it. But the way that Kobayashi approached it was entirely different. He defined the problem in an entirely different way. Everybody else was asking, "How do I eat more hot dogs?" They were asking this because that's what the contest was about. But, Kobayashi was asking, "How do I make it easier to eat the hot dogs?" Once he looked at it from that perspective, he started defining various things. For example, instead of eating the bun and hot dog together, we could separate them and then eat the bun separately and the meat portion separately. Likewise, while eating the bun, instead of eating it alone since it is a very sticky thing and you'll feel thirsty while eating it and your mouth will feel that it is chewy and hard, he would dip the bun in slightly warm water, squeeze all the excess water away and then put that into his mouth. This way he was able to eat a lot more than his competitors.

And, that's the kind of thinking that we need in order to conquer the tricky and difficult problems that we face in the business world every day. Again, many of the business problems are not like hot dog eating but you get the point. If you are thinking like everybody else, then you are bound to face the same difficulties like everybody else. So if you start thinking a little bit like a freak, somebody who has an outside edge, and someone who has a little bit of randomness etc. then your chances of succeeding will improve drastically. That's what the authors argue. There are lots of different techniques, ground rules and thumb rules that you can apply to activate the freak inside you and think about problems differently. It's a very entertaining book. The authoring style is really interesting. I bought the book and I was waiting at a mechanic shed where my bicycle was being serviced and I started thinking, "Hey, why am I sitting idle here." I went to the car and took out the book that I had just bought and while waiting there, I read 50-60 pages. It's a really easy book and you can read it in probably 2-3 sittings. It's also the kind of book that you want to read, give a little time to understand and maybe implement 1 or 2 of the techniques that they are suggesting for your next problem so that you can get a good feel of how that works and where you may have to improve. That's the third book that I am recommending. It's called 'Think like a Freak.' Again, it's a very powerful and useful book for us Analysts.

Those are the three books. The names of the books again are:

- Data Smart by John Foreman
- Ctrl+Shift+Enter by Mike Girvin (the book's subtitle is 'Mastering Excel Array Formulas')
- Think like a Freak by Steven Levitt and Stephen Dubner

Now, I have a small free gift for you! If you enjoy the podcast and if you would like to have one of these three books, I have set aside roughly \$30 as the budget for this give-away. I will give away an e-book copy of any of these three books (you can ask for the one you want) for those of you who leave a comment at <http://chandoo.org/session16/>.

Before you dash off and start commenting, let me tell you that only comments along the theme of 'what is our favorite book for Analysts' will be considered. So, in your comment you should tell me what your favorite book for Analysts is and why you like it. If you just put a comment saying, "Hi Chandoo, thank you", I won't be considering your comment! Rather, go ahead and tell me what the favorite books for Analysts according to you are. I am always looking for new book recommendations and I like to read a lot, so if you suggest a good book I might go ahead and buy it or borrow it from a library and read it. So, I want to hear from you what your favorite books for Analysts are. Three lucky commenters will get one of the three books. You can pick which one you want and I will buy that e-book copy for you so that you can read it in your e-book reader or browser. Three books are up for grabs! Go ahead and comment on



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