

BI Radio

Episode 30 – (BIR 30, Introduction to Business Analytics)

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Montage:

- There's a lot of companies who are still struggling just with getting broad-scale reporting out.
- Well, I would argue that predictive analytics is really at the heart of the smarter planet strategy because without analytics, you can't be smart.
- Typically the problem that people have is they know too much data, not too little. It's that they're caught up in a lot of variables that are irrelevant.

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Ken Seeley: Hi there, and welcome to BI Radio. I'm Ken Seeley. On the show today, a full report from Rome. Delaney Turner went to SPSS directions and information on demand, came back with latest news about business analytics and predictive analytics, as well as some insights into making predictions without a crystal ball.

We learn about the short- and long-term vision for IBM business analytics from General Manager Rob Ash. And we learn about the role of predictive analytics within that vision from SPSS CEO and IBM Vice President Deepak Advani.

But first up, the art and science of predicting the future. Delaney Turner talks to renowned political scientist and TED conference speaker Bruce Bueno de Mesquita about the core elements at play, and the key questions to ask when you need to know what's going to happen next.

Delaney Turner: Hi, I'm Delaney Turner with IBM.

Today I'm speaking to Bruce Bueno de Mesquita. Dr. de Mesquita is the author of *The Predictioneer's Game*, the silver professor of politics at New York University, a senior fellow at Stanford University's Hoover Institution, and according to *Foreign Policy Magazine*, one of the 10 most influential political scientists in the foreign policy arena. A lot of what I've read about your work and your material and your presentations is that life is a game. And the word game comes up a lot. It sounds fun, but it can also be scary. I'm just wondering if you could explain what you mean by that?

Bruce Bueno de Mesquita: Sure. People use things like they're gaming the system and so forth very casually. I take that very seriously. Games are just a strategic interactions. They're people dealing with each other, trying to anticipate how the other person will react if you do this or you do that; trying to work out what's the best thing to do. So, yes,

pretty much all of life is social interaction and so all life is a game or many games, actually.

Delaney Turner: Right. So the other interesting thing that came from your TED talk is you said most complicated negotiations are actually predictable. I was wondering if you could just explain a bit of what you meant by that?

Bruce Bueno de Mesquita: Yes. Once you identify what it is that people say they want, not necessarily what they really want, but what they say they want, you can work backwards to what would be the safest position for them to take, what would be the riskiest position for them to take. And so you can begin to build a system to infer what are they likely to do in interacting with others, and since they're pursuing their self-interests and everybody else is pursuing their self-interests, they become quite predictable.

I have modeled thousands of negotiations, trivial things, very big things. And I get about 90 per cent of them right; so apparently they're quite predictable. People are not as mysterious as we like to think.

Delaney Turner: And how do people react when you mention that? Because I sense from different corners, as you must too, a resistance. People want to think that they're special and unique. And how do you respond to that?

Bruce Bueno de Mesquita: Yes, people are skeptical, but there's a track record, and if you believe in data analysis, then look at the data! See the evidence. I guess if you're in a business scenario you're going to need that. If you could say I can predict 90 per cent accuracy what's going to happen in your particular market, that would be welcome. Or you would think, so I find it a much easier sell, so to speak, my consulting services in the private sector than in the public sector where there's not a bottom line. I don't do market research; I don't predict markets. But I do predict very complex problems. And for example, legislative environments, regulatory environments, litigation, mergers and acquisitions. But the accuracy rate is higher in those cases because the people I'm working with have pretty high quality data. They know their problem. They just don't know, they don't have a method for working out from the data where things are headed. And they're much more receptive because they do have a bottom line.

Delaney Turner: Right. Well, let's go into that method now. You said that regardless of the topic or the outcome that you're looking at, there are a couple of core elements that you need to look at in your model. I was wondering if you could just explain those for us.

Bruce Bueno de Mesquita: Sure. So first of all, people almost never come to me with a question that is a modelable question. They'll come to me in the government context to say well, is Pakistan going to be stable?

I model decisions. Nobody sits around and decides what do you think? Should we be stable this year or is this a good year to be unstable? So I backtrack, I say all right, well, why are you concerned about stability? What are the specific issues? Or somebody will come to me about a litigation. Should we settle or should we fight it?

First of all, I'm not an attorney; and second of all, the answer to that question depends on what will the settlement look like? And so let's talk about what the issues are that need to be settled. Those are things about which decisions have to be made.

So once we framed what are the questions that require decisions, then all I need to know is who are the players? Who's going to try to influence the decisions? Not just who's sitting at the table to sign a piece of paper, but the people down the line who'll try to influence it. What do they say they want? How influential could they be if they tried as hard as they could? How focused are they on the problem? That is how willing are they to try hard? How willing are they to drop what they're doing when the issue comes up rather than something else, and how flexible are they? How committed are they to coming to an agreement as being the important outcome, even if it's not the agreement they want versus how resolved are they to stick to the position they believe in, even if it means going down in a blaze of glory, getting nothing. Most people of course fall in between.

Delaney Turner: Right.

Bruce Bueno de Mesquita: So if you know flexibility, focus, influence, position, it turns out you can predict how people will interact with each other, who's willing to make more compromise, who's more rigid, who's bluffing, who's not bluffing. And you can: a) work out where things are headed; and b), more importantly you can then step back and work out ways to engineer getting a better result.

Delaney Turner: Right. These are obviously things that you can model.

Bruce Bueno de Mesquita: Yes. People know these data if this is a problem they focus on. Typically, the problem that people have is they know too much data, not too little. It's that they're caught up in a lot of variables that are irrelevant. And so they don't cut to the chase and see the fundamentals of the problem. It's very much the same problem of course in statistical analysis. You pack the kitchen sink into a statistical model. You're going to explain an awful lot of variance. You're not going to do very well out of sample.

Delaney Turner: Right, right. What are you working on now? What predictions, what can you talk about that people are coming at you with?

Bruce Bueno de Mesquita: Well, first of all, prediction and this model is not my main research area.

Delaney Turner: Okay.

Bruce Bueno de Mesquita: It hasn't been for quite a while, although I have spent the last few years designing a new forecasting model, which has this flexibility variable in it and is much more powerful than my old model. But my main research is on how governance institutions – whether in governments or in corporations or in families or in clubs or whatever – shape incentives and affect whether or not the leaders of an organization keep their jobs for a long time or a short time.

Delaney Turner: Okay.

Bruce Bueno de Mesquita: Govern well from the perspective of, so to speak, their citizens or govern poorly.

Basically, what these models indicate is that the worse the job that you do and quality of governance for a broad set of people and the fewer people who you depend on to stay in power, the more likely you are to stay in power for a long time.

Delaney Turner: So do a bad job with few people reporting to you?

Bruce Bueno de Mesquita: Bad policy is often good politics, sad to say. And that model has been applied to some quite concrete, real practical problems such as predicting corporate securities fraud, and has been very successful at that.

So that's my main avenue of research right now. I am doing quite a bit of predictive work as well for clients, and I can't tell you about any of that. Sorry.

Delaney Turner: That's perfectly great. Thanks for taking the time to speak with us today.

Bruce Bueno de Mesquita: Oh, it's my pleasure. Thank you for taking the time.

Delaney Turner: Excellent.

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Station ID: You can learn more about Dr. de Mesquita's ideas at predictineersgame.com

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Delaney Turner: Hi, I'm Delaney Turner with IBM. And with me is Deepak Advani, Vice President of Predictive Analytics at IBM, and CEO of SPSS, an IBM company. Today we're talking about the increasing influence of predictive analytics in business decision-making and business outcomes.

If you could from your perspective just let me know what are the biggest challenges that our customers are facing today.

Deepak Advani: Yes, I think if you look at customers in all industries, right, especially when the economy is tough as it is around the world right now, customers need to get really focused on who their customers are, right? Customer-centricity. They need to understand who their most profitable customers are so they can attract more such customers to their product or to their company. They need to then retain those customers. And you also need to figure out how can you serve those customers better than your competition?

All of these things require you to understand customer behaviour very well. And it used to be a lot of companies would do needs-based segmentations; and before that companies would segment customers based on the size of the company, which really wasn't very insightful.

More and more companies are now trying to figure out how to segment customers based on their behaviour. And once you start understanding, that that's when you start driving better business results. You start getting top-line growth. But it's not just a revenue growth; you're getting more profitable revenue growth.

Delaney Turner: Okay.

Deepak Advani: And of course you also need to start worrying about minimizing risk and addressing issues like fraud. So from an SPSS point of view, predictive analytics point of view, what we see is a lot of customers are very, very interested in our products and our solutions to figure out how to do a better job of attracting the right type of customers to their business, how do you cross-sell all the offerings you have to those customers, and then how do you predict when they're likely to churn or likely to leave so you can take actions and keep those customers, and keep them delighted with what you have to offer. And at the same time also look at are there more thoughtful ways to detect fraud before it happens? Are there ways to start getting a good handle on risk so you can manage risk more effectively?

Delaney Turner: So what is decision management? Is this a product that would help customers address some of the challenges that you've raised?

Deepak Advani: At the end of the day I think customers, they really need to understand how predictive analytics will help them improve their business process. How will it address a pain(?) point that they have? And what we've seen over the last several years is customers would take predictive analytics and they would embed it within their business process, so they're making better decisions.

They've done this for predictive maintenance, so how do you figure out when something is about to fail and take a proactive action on it? They've done it in the insurance industry to start detecting fraud in real time so they can take actions and reduce fraud. And there are companies out there, they've adapted. So like one company is how do I turn my call centre into a sales channel, so as calls are coming in, I can propose a right offer to the right customer.

So think of decision management as a framework that will enable you to make any decision a better decision through the use of predictive analytics.

Delaney Turner: Okay.

Deepak Advani: It has got a very easy to use GUI(ph) that enables the business users to build models. It's got the ability to not only rely on predictive models, but also simple rules. So you can optimize the decisions that you're making. It has the ability to simulate your actions. So before you deploy the combination of predictive models and business rules into production, you can also try it out to see what would the outcome have been had you deployed this model on your historical data? So there's a lot of different elements of this framework. But decision management in a simpler sense is a framework that enables you to embed predictive analytics into any point in your business process where a decision is being made.

Delaney Turner: Wow. So if we look a little broader or broadly now, how does decision management, predictive analytics fit into the overall business analytics strategy for IBM and perhaps into a big IBM vision of a smarter planet?

Deepak Advani: Yes, in order for a planet to be smart you need smart organisms. You need smart corporations. You need smart governments. You need smart cities. And in order to be smart, you need to have analytics.

Delaney Turner: Right.

Deepak Advani: So I would argue that predictive analytics is really at the heart of the smart planet strategy, or smarter planet strategy because without analytics you can be smart. And at the end of the day, in order to be smart, you need to make better decisions. And so it is really, really – and even when you look at all the messaging coming out of the smarter planet team, predictive analytics is at the core. So I believe it's a very, very good fit, and from a business analytics point of view, when you look at the overall portfolio that we've built up over the years, whether it's planning or performance management or core BI, predictive analytics elevates all of those value propositions.

Delaney Turner: Right.

Deepak Advani: Because you're not just looking at what has happened in the past and you're not just letting a human do a lot of what-if analysis. You've got mathematics that are looking for correlations in data and basically proposing what is likely to happen or what all of this data is telling you. So we believe it elevates the business analytics value proposition as well.

Delaney Turner: Why have predictive analytics up until now been sort of in the realm of the professional user? Does decision management and the future direction for SPSS within IBM, does that change the game for business users? Do they get to play with it as well?

Deepak Advani: Yes, absolutely. I think one of the reasons why predictive analytics and data mining hasn't become mainstream, one of the big reasons is because it's been the domain of mathematicians and statisticians and these deep data mining experts. And we believe in order for data mining and predictive to become mainstream, you need business users to have the ability to build predictive models without having a PhD or even a bachelor's degree in statistics.

Delaney Turner: Yes.

Deepak Advani: And so what we are really excited about is with decision management, all of a sudden now we've opened up the aperture. A business user can now go off and build models, and they can do that pretty quickly using very simple point-and-click interfaces. But the beauty of the architecture is it's using the same underlying architecture and BMML interfaces and standards; so now a deep statistician and a data miner can collaborate with the business user.

Delaney Turner: Okay.

Deepak Advani: So the business user can build models using very simple interfaces. But if you want to optimize the model further by working with a data miner, you have the option to do that as well. So we really do believe that with decision management, predictive analytics starts to become more pervasive.

Delaney Turner: So you're bringing the business reality into the world of statistics.

Deepak Advani: Absolutely. So it's like even when you go about building your predictive models and your business rules, you're doing it within the context of the industry you're in and the business problem you're trying to solve.

Delaney Turner: That sounds like it's an exciting, as you say, an exciting journey, which is getting started.

Deepak Advani, Vice President of Predictive Analytics at IBM, thanks for talking to us today.

Deepak Advani: Thank you very much.

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Delaney Turner: Hi. I'm Delaney Turner with IBM. Today I'm speaking with Rob Ash. Rob is General Manager of IBM Business Analytics.

We have a new division called Business Analytics with an IBM software group. Looking forward towards the next half of the year and beyond, where do you really see that go?

Rob Ash: Well for the next half a year and beyond, we're really focusing on really writing the business analytics strategy and a very, very broad canvas. Over the course of the last two, two and a half years through the acquisition of Cognos, the acquisition of SPSS and combined with a number of the organic activities that we've been able to pursue, we've really arrived at a point with such a broad set of capabilities across the traditional BI spectrum, new capabilities that we've brought to market, the great capabilities that the SPSS team brings to us with predictive and advanced analytics. So our first goal as we look forward, six months, but beyond that is how to make sure that we write that strategy and that vision at the scale that only IBM can operate and execute. And we all know that IBM's focused on a smarter planet, and we all know that there's no smarter without analytics. And so connecting those two things in the breadth of this platform is a key plank of our strategy.

Expanding that strategy out further, heavy focus on solutions, solutions across the business to really... I guess solutions is one way to think about it. It's really more focused on specific outcomes, specific outcomes and specific industries, functional areas. And we see that with workforce performance. We see that with sales performance, financial performance. We see that with social analytics and consumer insight. We see that with DM6, the newest release of SPSS, which while part of our set of capabilities is really a huge step forward towards trading contacts for these solutions, creating very specific outcome opportunities for these solutions. So the area, the whole focus around solutions is really a key part of how we step out.

And then thirdly, as we look to the next generation of business analytics, and as we will begin over the course of the next couple of months to start kind of talking about some future direction that we'll introduce at IOD in Vegas, the real focus on bringing business analytics into the current age of kind of user expectations for social computing, for collaboration, for the integration of some of these great capabilities, like SPSS right into the platform, further driving innovation in right in around the platform set of capabilities. I think what we're doing in the area of integration with TM1, some of the great work that's going on in TM1, which as you know has become such a critical part of our platform, and we intend it to be an even bigger part of our platform going forward. So I think Delaney, from the set of capabilities that we assembled and making sure those are broad and are large enough to step up to the smarter agenda with solutions and the

focus around addressing industry and functional areas, and with the kind of new directions around user interaction, user expectations, around social computing and collaboration, and of course the core set of capabilities of making sure that advanced analytics is completely embraced in our business analytics platform I think sets a very broad strategy for us going forward here.

Delaney Turner: Now if you think back just briefly to Rome, you were at the SPSS directions conference. You were also with the business analytics component of IOD EMEA. You met with a lot of customers, a lot of partners. What are they excited about right now?

Rob Ash: Well, I think you have two different audiences. You have the SPSS audience wondering, well, what's IBM all about? What's IBM going to do to the SPSS capability and team? And I think we did a good job in the two days that led up to IOD Vegas, which was the SPSS directions conference. And we really focused our energy on making sure that our SPSS customers felt comfortable, like our SPSS employees.

Delaney Turner: Right.

Rob Ash: And felt first of all that they played an important role in the strategy. Second of all, that we had plans to grow and enhance the capability. And third, that we were looking for their input into solution areas and how we can drive the platform and whatnot. So from an SPSS customer perspective, I think the early directions conference that we had in Vegas not long after we closed the transaction, or maybe just a little bit before we closed it. And this conference were two good opportunities to get in front of the customers to just settle them down, make sure they felt okay.

The Cognos customers that attended IOD in Rome, and those SPSS customers that stayed over, I think the feedback I got from them was, one, excitement with the pace of innovation. I was joined on stage for our keynote with Leah McMillan.

Delaney Turner: Yes.

Rob Ash: And so we walked through from the beginning to end, new capabilities, what's in the labs, some of the advanced capabilities around social analytics. And the feedback I got was first of all, embracing the strategy, that was, as I said, is analytics writ large. Excitement about the innovation, wanting to know more about the kind of innovation. I know that the response to DM6 was outstanding. And DM6, I think light bulbs go off all over the place when people see Decision Management 6 because they have such a great visualization of what our strategy is.

Delaney Turner: Now we've always talked for a long time about the business intelligence performance management, business analytics journey. If you were say a potential customer or client looking at all of these offerings, where do you start the journey now with all these new capabilities and new data?

Rob Ash: Well, I think that depends on what you're after in terms of your outcome, where you are in your maturity cycle. Fortunately, every customer is different. I always tell customers if they're new to this to start easy. Get a win. If you look at the way that we've characterized our set of capabilities from the ability to inform people about what's going on in their business, the ability to connect to that with analysis to quickly learn why and seek out trends and causal factors, the ability then to take those insights and impact process, and from there to make sure that the outcome of that really aligns with strategic goals. Those are kind of the path. And every customer's on a different part of that journey.

Delaney Turner: Yes.

Rob Ash: Some customers are gaining insights every day and trying to learn how to instantiate those insights into processes that impact the business. Other customers are still having trouble getting information out to their users.

So we all know that for a long time a lot of the traditional business analytics agenda started with just reporting, people wanting to get information to users. I think we're past that. But there's a lot of companies that are still struggling just with getting broad-scale reporting out. I think more and more we're trying to see customers that go from the line of business back into IT, so they go from the outcome, whether it be risk management, whether it be fraud, whether it be assortment planning and retail back into the platform. So I would say more and more we're advising customers let's find the business problem that's important to you. Let's work from that business problem back in to the capabilities. And 10 years ago we were working from the capabilities out.

Delaney Turner: This is what we can do.

Rob Ash: Right.

Delaney Turner: Yes.

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Delaney Turner: You can learn more about business intelligence software from IBM at ibm.com/cognos.

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Ken Seeley: Well, that's a wrap. I'd like to thank our guests today: from IBM, Rob Ash; from SPSS, an IBM company, Deepak Advani; and from Mesquita & Roundell, Bruce Bueno de Mesquita.

Thanks as well to our segment producer, Delaney Turner, and to our head producer, composer and audio engineer, Derek Schraner.

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I thank you for listening. I'm Ken Seeley. And we'll see you in about six weeks.

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