

Interview with Dr. Jay Rao, Professor, Strategy & Innovation, Department of Operations and Information Management, Babson College

Crisis & Innovation – a Perspective on Business Management

By Japan SPOTLIGHT

To discuss the connections between crises and innovation, we set up an interview with a distinguished expert on business management theory. Dr. Jay Rao, author of the book *The Discipline and Culture of Innovation* (2011), teaches extensively in Babson College's Executive Education Programs with a focus on corporate entrepreneurship. His research has been mostly on innovation.

(Interviewed on March 24, 2021)

Self-Introduction

JS: Could you briefly introduce what sort of research you are doing at Babson College?

Rao: A lot of my research is in four focus areas – strategy, innovation, entrepreneurial leadership and culture. Without entrepreneurial leadership, there is no entrepreneurship or innovation. And strategy, innovation and entrepreneurial leadership are always in the context of culture. Culture plays a huge role in whether companies are innovative or entrepreneurial or creative. So that is my basic area and my four key areas of focus.

JS: Could you tell us about Babson College? Is it a special college focusing on entrepreneurship?

Rao: It is a 100-year-old college founded by Roger Babson, and he was an entrepreneur. He started this place specifically for the sons of business executives and business owners, family businesses. In the last 30-35 years, Babson has focused specifically on entrepreneurship. Nearly 20% of our graduates go and start companies and that is much higher than most other big universities. We also have a very deep bench strength of faculty in entrepreneurship, bigger than most schools.

Crisis as Catalysts for Innovation

JS: Why does a crisis situation catalyze innovation and creativity? And why do you think entrepreneurial leadership is about problem-solving?



Dr. Jay Rao

Rao: Crisis situations focus our attention. During crises the problems get defined much more clearly. There are many ways to innovate; there is process innovation, service innovation, business model innovation. The purpose of innovation is to change the game in the market, or to create value for society. It is only limited by your creativity and so there are many forms to change that game in the market. But we have to be very careful about the word innovation because it has been overused, especially in the West.

At the heart of innovation, the only thing that is common to every form of innovation is structured problem-solving. What do we mean by “structured problem-solving”? We cannot understand problem-solving unless we understand the distinction between risk, uncertainty and ambiguity. Everybody uses the word risk but rarely uncertainty or ambiguity. Risk is about the past, about history.

We have data from old iPhones, and we have spreadsheets and make decisions based on spreadsheets and incrementally improve things. But uncertainty we cannot calculate because we don't have data – it is about the future. In a crisis, your past data may become irrelevant, and you are suddenly facing a situation where you will have to create new data. You create new data by acting first and then analyzing. We are good risk managers and uncertainty navigators on the whole, but it is a spectrum. At times we are risk managers; at times we are uncertainty navigators. Most times we are analyzing and acting incrementally, but at other times, especially during crises, we need to act and then analyze.

Entrepreneurial leaders do this well; depending on the situation – crises or regular – they are able to move into the future in this way. In order to innovate and change the game in the market, we have to define the problem. All problems will have known and unknown

variables – customer behavior, technology, competitive moves and so on.

JS: The most important qualification for entrepreneurs in a crisis might be courage.

Rao: Courage is very important because you need to trust your instincts. When you don't have data and you need to take decisions and act, you need some courage; absolutely.

JS: Also a strong will to achieve some goals, a commitment to some specific goals.

Rao: Essentially, entrepreneurial leaders are looking for opportunities. They are hyper attentive to opportunities and they are very good at identifying, developing and capturing opportunities. That is something innate to them, and they have a very clear understanding of themselves. They are good at identifying opportunities; essentially gaps in the competitive market place. They also have the ability to energize and bring others towards these specific opportunities. One of the fundamental differences about many such leaders is that they are able to impact change with little resources. They are also good at attracting resources rather than asking for them. They can mobilize people and money from either inside an enterprise or from outside investors. This enables them to change the game in the competitive market.

JS: Is the courage to fail an important element of being an entrepreneur?

Rao: Nobody likes to fail. It's not about wanting to fail; it is the ability to quickly try things and to experiment. When you are trying to learn very fast in an uncertain environment, you are bound to fail. You will have to experiment and test. Entrepreneurial leaders have a good hypothesis, and they test it and see if it is valid. It is a lot about learning and uncovering those unknown variables. One is courage, the second one is to have a little humor as they will fail, and will have to pick themselves up and try again.

Specific Examples of Innovation Catalyzed by a Crisis

JS: Turning to the real world, could you give some specific examples in the real world of a crisis catalyzing innovation and creativity?

Rao: Starting with a big example, when the Soviet Union collapsed, Cuba lost nearly one-third of its food exports, from \$8 billion down to \$2 billion, which collapsed their economy. But they decided to

throw open their beaches for private development, and this was going completely against their values at that moment in time. So they had to compromise some deep-seated beliefs just to survive.

After World War II, Boeing went through a huge crisis because all of that effort was in war to build planes for defense. When the war was over, they lost 90% of their revenue and had to lay off thousands and thousands of people. But they started a new project that embarked on revolutionizing travel and the history of air travel – that was the Boeing 707 jet engine project.

Another smaller example is a hospital in Bangkok. Just before the Asian economic crisis, they spent more than \$100 million on upgrading the hospital with really fantastic facilities and targeting high-end customers in Bangkok. But when the crisis hit, they lost the majority of their customers, and at that moment, because they had invested in a lot of very sophisticated equipment and hired lots of sophisticated doctors, they opened it for medical tourism. Even today Bumrungrad hospital in Bangkok is regarded as the number one medical tourism hospital in the world, treating patients from many different countries. So these types of crises are able to precipitate decisions that lead to creativity and innovation.

Innovation Under the Pandemic

JS: The current crisis is a pandemic. How do you think this pandemic could bring about innovation and entrepreneurship? Vaccines or IT used for medicine could be examples of this.

Rao: There is going to be innovation in many sectors. I think the media is focusing on healthcare and IT right now and that has impacted on our lives much more than other sectors, but I am very positive that the airline industry is not going to be the same. The tourism industry is going to be very different. The cruise industry will really have to re-think their entire way of approaching it. Before the pandemic, for entrepreneurship in the United States there was some kind of concern that it was going down. But in the pandemic, the number of businesses being created has jumped up significantly, and that seems to be a bright spot. In fact, when you go back to the genesis of the modern day entrepreneurship, it was during the first downturn after World War II. Most of the jobs that were being lost were in large companies. Yet, cumulatively, the US was adding jobs. All the new jobs were being created by ex-leaders and managers who had lost their jobs in large companies and they had become entrepreneurs and started creating companies that created the new jobs. That is how entrepreneurship in the US came to be recognized.

JS: Could you give any specific examples of entrepreneurship not in pharma or IT but in some other sectors?

Rao: Education. We never believed that we could teach online, and for many years faculty resisted teaching online. However, during this pandemic we seem to have made a huge shift especially in postgraduate and undergraduate education. There is a component of IT in there that has helped us make that shift, and we never believed that young kids could do it, but schools are also doing it now.

Even in the restaurant industry, which was hit very hard, there is an example of a restaurant in Medellin in Colombia – three very high-end restaurants – and when the pandemic hit, they immediately had to change their entire menu. So they revamped the menu for comfort food, what people eat at home every day, abandoning all the fusion and fancy food, and moved towards comfort food, which generated long lines for orders. Even in industries where it is very difficult, they are able to switch.

JS: Do you think that regardless of corporate culture, a crisis would encourage innovation? Some companies are very good at creating innovation and entrepreneurship, but some are not. It might depend upon the country. Regardless of national or corporate culture differences, does a crisis always encourage innovation?

Rao: Let's take Ford and GM in the US car industry. For many years they fought electrification and some executives even abandoned these markets. And what has happened is that during the crisis, they are going to invest in electric cars. Now they have made a big commitment to go electric, and one of the executives who killed the electric car program in one of these companies is now running an electric car program.

Within a couple of weeks, GM was able to build ventilators very quickly. They were able to jump and change things very fast which is not something you would expect from a traditional company like GM. At the same time, there are companies like BestBuy – an electronics retailer. They were testing for almost a year curbside pickup and they were testing in one or two locations, but when the pandemic hit they were able to go nationwide within two or three days. So the crisis kind of forces you to make rapid decisions and you don't have the luxury of arguing or wanting to do more and more testing and re-testing; you have no choice but to take action. During good times we have the luxury to analyze but in crises we do not have that luxury and you are forced to act.

Innovation in Post-Pandemic Society

JS: Looking at a post-pandemic society, many economists are concerned about the economy going into a very stagnant situation due to declining demand and the difficulty in getting it back onto its

previous track. So can we expect innovation to sustain economic growth in a post-pandemic economic society?

Rao: Innovation will never go away. It's not like you are going to start and stop innovation. If you look at the investments that are going into R&D, just after the big economic crisis 10 years ago, R&D from the top 1,000 companies globally actually went up. Some of the best companies invest during these crises to be ready when things turn around.

But I also look at it from the demographics side. We still have huge populations around the world lacking basic things such as education and healthcare, even nutrition. There are so many things they want – to go from bicycles, to motorbikes, to cars – and they want to travel. Which means that the opportunity for growth is huge, and environmental crises will give rise to so many problems that need to be solved. Take fast fashion – it has destroyed the environment. Companies need to find ways to make more eco-friendly clothing. The problems never go away, and there are huge opportunities in all sorts of industries and countries, so I am more optimistic about it. The world still has a long way to go in terms of bringing people out from poverty.

JS: Could you share your views on the study of entrepreneurship and innovation after the pandemic?

Rao: I think that the next 20-30 years will be women-led entrepreneurship. In the US, more women are entering and graduating from universities than men. There are some indications that women leaders have navigated this pandemic better than male leaders. Even today, the number of women in top leadership positions is very few, and it is a global problem. They will have great education, great experience and the abilities to create innovation, so that alone will be a big difference that we will see. Not just entrepreneurship but also at board level and senior leadership level. We are under-utilizing 50% of the global human potential. Women entrepreneurs and leaders understand much better what half the population needs. Men designers design cars for men. Once you let women design things for themselves, they will probably do a much better job!

JS

Written with the cooperation of Joel Challender who is a translator, interpreter, researcher and writer specializing in Japanese disaster preparedness.