An Interview With Al Naqvi

President of the American Institute for Artificial Intelligence

By Lakshika Trikha

Al Naqvi does not use the word “revolution” lightly—but when it comes to developments in the space of Artificial Intelligence (AI), he believes the writing’s on the wall: every industry is going to experience a transformation of unprecedented magnitude. In this interview, Naqvi describes why successfully adapting to this transformation is going to require cross-discipline collaboration and widespread education to mitigate the significant risks. This is precisely the challenge that Al Naqvi and the American Institute of Artificial Intelligence (AiAi) are taking on—a challenge that SCIP believes all business professionals should be well-versed in. Strategy and intelligence analysts, in particular, are uniquely positioned to communicate the scale and significance of this transformation to decision-makers in the firm to strengthen competitive positioning.

Mr. Naqvi was a keynote speaker at our 32nd Annual SCIP International Conference in Atlanta last month on this important and interesting subject. This interview digs deeper on some of the topics covered in his presentation including developments in AI across industries, strategies to influence management, and implications for global growth and inequality.

At the 2017 SCIP Conference in Atlanta, your keynote presentation included a slide that stated that AI belongs in Strategy departments rather than Technology departments — could you elaborate on that?

Technology transformations usually begin in technology departments. They experiment with technology just as science labs conduct experiments, and test them in small areas to solve small scale problems. Many of these technologies are profound but stay invisible to business professionals (for example cyber security). Others are directly applicable to achieve business transformation e.g. supply chain, marketing, sales - and require functional adoption. The sooner business functions can own such business centric technologies, the better. Strategy departments need to take a lead.

AI is different because it is a transformation that directly impacts not just the competitive dynamics of the business but how business is conducted itself. If you go back a few hundred years, the first such transformation was the development of the auto industry — it completely redefined the way we live well beyond having cars. All large scale...
manufacturing is possible today because of timely transportation of raw materials. The second major transformation was the internet—you didn’t think of it just as a technology platform, but a business and e-commerce platform. On a strategic level, you risk having competition taking you out if you’re not online. Artificial intelligence will be the third such transformational change. All business models will be redefined, and businesses have to be watching developments on a strategic level to stay competitive.

If you’re a strategy or intelligence professional in a company that hasn’t really started thinking about AI, how do you steer the change and persuade management to think more about AI and its repercussions on your business?

The simplest way is to take management back 20 years and ask them what they would have done differently had they known how the internet was going to change business the way that it did. Today, before we even register a business, we look into a domain name online, and the reason we do that is because we fully understand the importance of our strategy when it comes to the internet—from marketing, e-commerce, and supply chain perspectives. It has become a window of the internet—from marketing, e-commerce, and supply chain perspectives. It has become a window of the internet—for example. There are countless ways in which it can benefit humans—we can make better choices for our health, and more easily find where our car is parked at the forefront with the internet of things (such as Michael Jackson) and that means certain musical elements are universally appealing. An algorithm will soon be able to check whether a song is likely to become a super hit after analyzing the songs that have climbed the charts. That’s exactly what’s happening, and recently an entire song composed by AI was created. In the pharmaceutical industry, AI is being used to develop drugs simply by looking at patient data. Even religious entities like the Vatican are hosting high-level discussions to consider advances in artificial intelligence. I don’t see an industry that will be left untouched by this.

Assuming AI is going to be fueled by massive amounts of data, and if the intelligence is only as good as the data as it learns form, that means companies and governments will be requiring more and more data for humans to create better AI technologies. This brings up questions of privacy that are already looming at the forefront with the internet of things and digital technologies. How do you see AI changing the conversation about privacy? Do you worry that it might be an issue?

For the most part, the premise that data will be needed to train AI is a good assumption, however certain algorithms may learn quickly without requiring too much data. But for the most part, yes, you need lots of reliable data—and you don’t want AI to be as biased as we are as humans. Data sets need to be reliable and the quality of the data is important.

All good things in life also have a dark side. The data that feeds AI can be used in many different ways to benefit humans—we can make better choices for our health, and more easily find where our car is parked for example. There are countless ways in which it can be helpful to us. But privacy issues come into play when AI uses the data that exists to do bad things, and that’s why it’s extremely important to develop ethical standards for the entities that are using the data. With the information at their disposal, companies have the capability to exploit certain natural vulnerabilities that exist in our day to day lives to influence our purchasing decisions. A fitting example comes from reports that Uber implemented surge pricing and hence took advantage of consumers. If someone knows more about us than we do about ourselves, we are vulnerable to exploitation. For this reason, one of the first things the American Institute of Artificial Intelligence (AIAl) did—before launching any courses or press releases—is lay out a governance framework so that enterprises will be able to certify that they are developing products & services in line within ethical bounds.

A research report by PwC states that AI could double economic growth rates for many developed countries as early as 2035. Are you worried about these economic gains exacerbating global inequality between developed and developing countries? How can the gains from AI & growth be distributed more equitably?

This is the ultimate question. Research also shows that we could see up to 40% productivity gains—these kinds of numbers are unheard of. We will be producing goods & services at a much lower cost and much higher efficiency. It’s true that most AI research is going on in developed countries, and unlike other areas where once you get a head start, others have a chance to catch up—we are talking about a permanent competitive advantage. For example, certain types of computer technologies that are developed in the U.S. can be replicated in India or Malaysia, but with AI, once you create a solution could be last solution that human kind will ever need. Let’s say you create an AI counselor that is a psychological advisor to you. The more people it talks to, the smarter it will get. If it acquires 5 years of experience, it will become the smartest psychological advisor in the world—it will speak multiple languages, understand all of the issues—it would be impossible to catch up to it.

It’s very important for developing countries to recognize this, and it’s part of the reason AIAI is helping governments develop an awareness of this. Inequalities will definitely deepen between countries that have it, and countries that do not. The primary way to solve this problem is through education, and particularly how we choose to educate people. We will need to create some kind of safety net program in the timeframe during which this transition will happen (50 years or so), so we will need to start thinking about our tax policy differently.

Human survival will continue to be a challenging problem. We evolved to use our own minds to take responsibility for our survival rather than depending on nature, and that is how work was born—we decided to learn how to make fires instead of waiting around. The challenges we face will continue – there will be outbreaks of diseases, natural catastrophes, etc. If we pass the step of not destroying each other with the onset of automation, we’ll need to change our focus and look at large-scale problems to solve collectively such as finding a new habitable planet and exploring space.
It seems the success of managing this transition successfully hinges on the public and private sectors working together to make sure we’re ahead of the curve and anticipating these changes correctly - what are your thoughts on the pace of this change and do you think we’re going to be able to get organized in time?

The transformation has started and it will only accelerate. Those not keeping up with the pace of change will be left behind. It’s one of the reported reasons Ford’s CEO was fired – he didn’t fit the profile to lead the way in the new world of self-driving cars and electric vehicles. This will continue to happen with other CEOs who don’t move fast enough.

There is a lag factor for social scientists and academics as well – they usually don’t want to take the risk of being proven wrong, so they will wait to study a factor and propose solutions only after. It’s the reason I run an Institute and not a University. I’m being very bold as a scientist and researcher by declaring that it’s written on the wall and what will happen. If I was in a more conservative academic environment, I may have a lot less risk tolerance to put a theory forward, and that is why social scientists lag about 10 years behind major transformations. While they’re waiting, wrong decisions are made with incomplete information.

Many claim that instead of taking jobs away, AI & robotics will allow humans to engage in more meaningful work and creative decision making. Do you agree with that?

We have to think about this scenario in a little bit of a different way. This version of the story assumes you will have a job and be able to pay your bills. Let’s think about the way the internet transformed the job market—people who were displaced from shut-down plants in central Illinois are still without a job after 7-8 years. Human potential is enormously powerful and we are capable of big thinking under adverse circumstances, but for many people, financial freedom might be extremely difficult. We have to focus and reflect on the segment of the population that will have difficulty with this, otherwise there will be widespread political turmoil, such as what we witnessed in the 2016 elections. While many blamed globalization for the loss of manufacturing jobs, the truth is that 8.8/10 of lost jobs went to robots, not to China.

Do you worry there’s a risk that our critical thinking faculties might deteriorate because we’ll be overly dependent on AI? Or will we be co-existing with machines and become even better, hybrid versions of ourselves?

The latter part is more likely for those who will be working with them. We’re confined by our own biases and demons and as a society that’s how we have justified genocides and wars. When we have an unbiased partner who is also intelligent and can help guide our decision-making, it can give us a different way to think about things. However, the big assumption is that this will be an unbiased partner. We will become better if the goal is to become better. If the goal is to exploit, we could become worse versions of ourselves and the destructive potential will be magnified. But we also need to respect the fact that before this we have never really lived with intelligent species. Since we evolved into homo sapiens, we have been the only ones—and this is the first time we will see some relative level of intelligence developing alongside ourselves. For the most part AI will be only functionally intelligent and not as advanced as human intelligence for the foreseeable future, but even within those constraints, there are risks that you will have robots that might intensify your biases by providing you with reasons to believe that what you’re doing is right.