



ECHOES BY
 ASRAR CHOWDHURY

Bayes' Theorem, With No Maths

I
EVENT 1: A crazy driver hits your car and whizzes past. You get out and see your car is badly dented. The driver has disappeared. You're fuming, but there's nothing you can do. You tell yourself, at least you're alive. It could have been worse.

EVENT 2: You drive on. You notice that driver in front of a hospital. He's standing in front of an ambulance. The driver speeds into the hospital with a patient.

EVENT 3: Your prayers are now with the patient. Your anger has evaporated.

Before Event 1, you had a clean information set. You thought what anybody would have thought based on universal experience: the driver must be careless and reckless. Before Event 2, you're happy you survived. Event 3 is based on what you learned from Event 2. Your outlook towards the driver has changed. Who knows if that patient is still alive?

As new sets of information appear, we adapt our perception. In probability science, this is known as the Bayes' theorem.

II
 British mathematician Thomas Bayes (1702-1761) proposed that our perception towards the world is based on "prior probabilities". This is the probability set we start with. As we confront new experiences, the prior probability sets also change – "conditional" to what we experience. And with it, our perception changes.

We look at the world based on existing beliefs. When we confront overwhelming



PHOTO: AFP

evidence that shatters our beliefs, Bayesian rationalists argue that our perception towards the world also changes.

Bayes didn't live to see the impact of his thoughts. His friend Richard Price published his work in 1763. Years later, it caught the attention of French mathematician Simone Pierre Laplace. Laplace introduced "conditional probabilities" and formalised the theorem in the equational form we see today.

III
 Remember the 2016 T20 World Cup final between England and West Indies? Let's

replay the last over. You have no "prior" knowledge of how the match ended.

England made 155/9. A competitive score. At the beginning of the 20th over, West Indies were 137/6. Their star batsman Marlon Samuels was at the non-striker's end. A relatively unknown Carlos Brathwaite would face England's star all-rounder Ben Stokes.

David "Bumble" Lloyd of England and Ian Bishop of West Indies were in the commentary box. Surely, West Indies stood no chance against Stokes. Brathwaite sent the first ball for a six off long leg. Bumble was

ecstatic; Bishop, silent. West Indies now needed 13 from five balls.

The next ball goes for a six off midwicket. Seven needed off four. Are you changing opinions "conditional" to new probability sets?

Third ball: six! Scores are level. Three balls remain. Minutes ago, many thought the game was sealed for England. Bumble is shouting at the top of his lungs. The rest is history – Brathwaite sends the fourth ball for a six off long-on. From nowhere, Bishop screams, "Carlos Brathwaite! Remember the name!" What Bishop hadn't dreamt of, was now reality.

As probability sets changed, alliance tilted from England to the West Indies. This is the crux of Bayes' theorem stripped of all mathematical vocabulary.

IV
 According to Bayesian logic, we change our perception as we confront overwhelming evidence. The first story supports this. In the second, even after watching a wonderful match, some people will still support England. This tells us Maths has its limitations. People don't always respond to mathematical predictions. Once we know the limits, we appreciate the beauty and the beast of a discipline.

Asrar Chowdhury teaches Economics in classrooms. Outside, he watches Test cricket, plays the flute and listens to music and radio podcasts. Email: asrarul@juniv.edu or asrarul@gmail.com

YOUTH SPEAK FORUM 2021 BY AIESEC IN BANGLADESH

Addressing the Future of Work and Youth Employability

A CORRESPONDENT

Youth Speak Forum 2021 organised by AIESEC in Bangladesh on June 4-5, 2021, in partnership with United Nations Development Programme in Bangladesh and SHOUT, The Daily Star aimed to empower young people to understand how they can contribute to the Sustainable Development Goals (SDGs) through short and powerful talks. The event sparked interest in self-development through hosting keynotes and PowerTalks about the future of work. In addition, Youth Speak Forum aimed to build capacity via case solving workshops and networking with thought leaders and co-participants.

A focus was also on SDG 8: Decent Work and Economic Growth by increasing youth employability and exploring opportunities to create more jobs, thereby increasing youth employment.

Day one started with a keynote on future of work during and after Covid-19 delivered by Narayanan S, Co-Founder and CBO



of Unschool, an education ecosystem based out of Hyderabad, India designed to bring out the best in young people by providing an easy and definitive path for keeping up with the 21st century. A PowerTalk was delivered by Ipshita Fahmin, Country Human Resources Business Partner, A.P. Moller - Maersk about youth employability, speaking about how important it is to invest the four years of university life to greatly understand what one is interested in. The day ended with a problem-solving workshop from Mirza Salman Hossain Beg, Vice President of Dtac (Telenor, Thailand).

His workshop involved a capacity building space for delegates about problem solving at work, followed by a space where delegates could address any problems faced by current consumers in the market and how they may be solved.

Day two began with a keynote about the relevance of SDG 8 during and after the pandemic by Sudipto Mukerjee, Resident Representative, UNDP Bangladesh. He spoke about how important it is for people to respect diversity and become emotionally intelligent, rather than focusing on the IQ, as is traditionally done. His space was followed by a PowerTalk on youth entrepreneurship by Shah Rafayat Chowdhury, Co-Founder and President of Footsteps Bangladesh. He spoke about how young people are slowly coming into entrepreneurship, be it profitable ventures or social enterprises. He also said that if you wish to be a changemaker, just look at the problems around you and try to take the first step towards a solution. The day ended

with a workshop from SHOUT, The Daily Star who delivered an insightful session on effective communication and team building, outlining the importance of team building for every organisation and how communication is key to delivering output of the highest quality.

The Forum was closed by AIESEC in Bangladesh outlining the global professional internship opportunities on aiesec.org and a new soon-to-be launched initiative named "EntrePower" that aims to prepare young people to be competent for jobs both in the Bangladesh markets and also via AIESEC's global internship programs.

Feedback received from the delegates were documented, with most saying this is a space they learned loads of valuable insights from and hope to come back for future engagement. AIESEC in Bangladesh remains committed to developing leadership in young people via practical experiences in challenging environments and will continue to offer more such spaces.