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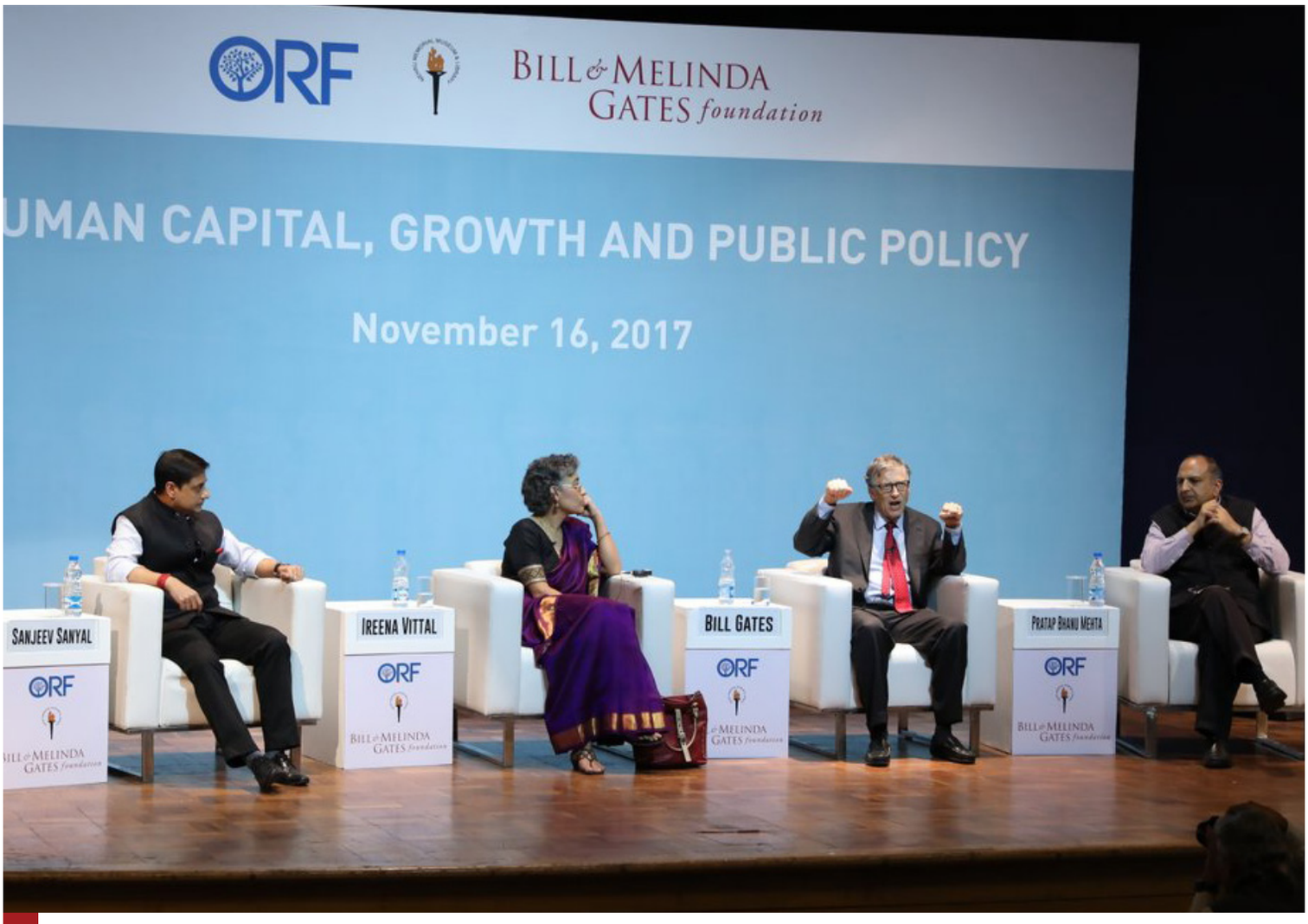
samvād

Samvād in Sanskrit means dialogue

THE NEWSLETTER FROM ASHOKA UNIVERSITY



Human capital, growth and public policy

In a discussion organised by the Observer Research Foundation in New Delhi, Pratap Bhanu Mehta, Vice Chancellor, Ashoka University, engages Bill Gates, Co-Chair, Bill & Melinda Gates Foundation, in a freewheeling conversation.

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PBM: Mr Gates, you have made a case for the fact that India needs to pay attention to the development of its human capital. India has also been a second career for you. So if you were to look back, what would you count as the most promising thing about India in this journey of human capital?

BG: India's at a pretty exciting point with huge potential. If you look at the world and say, "What can we do to raise people up to middle-income levels or reduce poverty"? India's it! Not only because it has 1.3 billion people, but because it has a dynamic democracy and a lot of native talent.

China for the last 20 years was the economic miracle. It is a middle-income country and, of course, we don't just want to look at economic figures, but equity as well. Though in terms of democracy, China scores poorly, their focus on poverty reduction on equity issues has been impressive. They have a plan to take the final 43 million that are very poor and use income policies and cash payments to solve that.

If India, over the next 20 years, can achieve a 7 per cent average growth and do that in an equitable way, that's a miracle for the country and for the world. The question of what are the enabling factors that might hold that back is something that should be talked about. The two most prominent factors, I think, are education and health (including nutrition).

The Indian health picture is a glass half-full. There have been improvements over the last 15 years—such as adopting new vaccines, thus bringing down the mortality rates substantially—but the health levels relative to the income levels already achieved are far lower than they should be. Perhaps we made a mistake that we always talk about deaths. Many children die too and that is a very important issue, but maybe we should have always considered with that the health of the living, because 94 per cent of kids do survive into adulthood and a lot of these disease episodes and lack of nutrition are determinant in terms of their capacity.

> "If India, over the next 20 years, can achieve a 7 per cent average growth and do that in an equitable way, that's a miracle for the country and a miracle for the world."

> "Indian philanthropy will grow four or five times. And I'm not just speaking about billionaires; it can be a growth path for the economy."

PBM: Jawaharlal Nehru would say there are three conditions under which the formation of human capital can take place. First, you need a capable state. Second, you need some commitment to equality. Third, you need an enlightened public culture, where the joy over jumping 30 ranks in the ease of doing business is matched by the joy of jumping up in the HDI index by 5 points. What India is doing is a Band-Aid job in the absence of political conditions that make for successful human capital formation. How do you respond to that scepticism?

BG: I'm more optimistic now. The primary healthcare system has improved substantially. We do a lot of work in Uttar Pradesh and Bihar. When we started, Bihar had less than 20 per cent vaccine coverage. We haven't achieved perfection, but we're up over 75 per cent. That maps directly to lives saved and to the health of the survivors being a lot better. Today 18 per cent of India's GDP is collected in tax, and as the economy grows, you get GDP to grow. So that's more resources. Most countries go from 18 per cent to 30 per cent (GDP), so you get a huge set of resources. If the government is smart, then the education and health quality can grow fantastically. Nehru's three conditions are absolutely right, and we can't let the fact that those things are so imperfect today, make us pessimistic.

India has improved dramatically and some states have become serious about malnutrition and the standards on food fortification. It's a little unfortunate that the health is mostly in the headlines where there's a cluster of deaths or something similar, turning that into a systemic focus on why aren't the jobs filled? Take the National Rural Health Mission. If they didn't bring in that, the health spending would have fallen as a percentage of GDP. And you know some of that money actually was well spent—lives have been saved.

PBM: You mentioned there is a public perception that the state doesn't function. In part that is due to the representation in the media, right? But when citizens see the state depending on philanthropy for its core functions, does it, in the long run, increase their confidence and whet their appetite to pay more tax to the state? Or is there a possibility that, under certain circumstances, it corrodes the legitimacy of the state or people's confidence in it?

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> "The hard thing about philanthropy is that in most of its programmes, it has to help build state capacity and make sure that it is not overreaching in terms of its role."

BG: Philanthropy in the US is 2 per cent of the economy. In India, it's not even 0.2 per cent. The private sector isn't going to focus on helping the poorest. We invested tens of millions of dollars in helping consultants come in and, hopefully, that becomes an enabling element, encouraging a new rotavirus vaccine which we funded. Now Bharat Biotech makes it at a very low price. That is philanthropy. Yes, if governments were totally enlightened, they might have done those things, but departments of education don't do much R&D and are stuck with the status quo. So philanthropists can shake things up. They can bring IQ and better measurement in, but philanthropy is never the long-term funder of the basic rights of the people. The thing that we wish philanthropy was good at, and sometimes it isn't, is helping delivery systems work better, helping teacher training work better and helping healthcare worker tracking. And most of the money we spend in the country is to try and help these delivery systems work more effectively.

Indian philanthropy, I think, will grow by four or five times. And I'm not just speaking about billionaires, I'm talking very broadly. But it will still be very tiny, so the resources and legitimacy for the long-term behaviour in health and education—need to come from the state.

PBM: For a country like India, is there a critical choice to be made about the relationship between technology, education and employment that we are not thinking enough about?

BG: Well, the quality of the education system sometimes depends on whether you are optimising for the teachers or the students. It's interesting that the US is not some wonderful exemplar—our education is good relative to what we put into it, but we should be a lot better. We have equity problems because the cost of tertiary education is going up. Technology has so far not had a broad impact on education—maybe 1 or 2 per cent of the smart kids really use these things, but it hasn't hit the mainstream yet.

Getting the GST passed was a fantastic thing and the opportunity it creates over time as gets digitised to raise the compliance rate of tax in general. Digitisation, whether digital money or attributed digital money like the payment bank structure, will be an ally in terms of broad tax collection. Therefore, the perception that the GST is fair and that people should pay their fair share, all those things will trend in a positive direction and give the government a chance. How quickly digital technology will get into K-12 and make a big difference is hard to predict, but I'm still very much a believer.

PBM: In your second career, what is the most remarkable execution story that you've seen in India, which makes you say 'this gives you hope'?

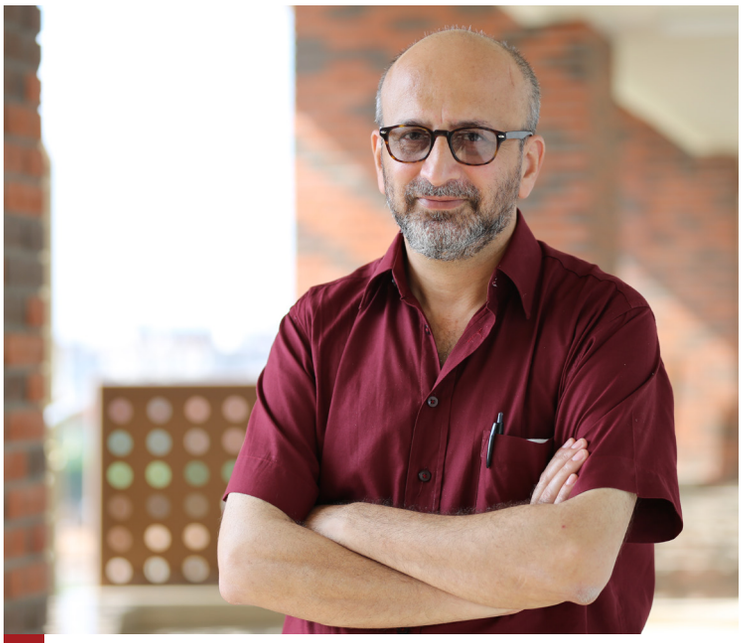
BG: The first big project we did in India was called Avahan. It was to make sure that the HIV epidemic didn't get into large numbers in India like it had in Thailand and in many places in Africa. Our primary measure was making sure that the commercial sex workers didn't get highly infected. Our tactic was to create communities of health workers, so they could come talk to each other and then trust each other to insist on safe practices and so by getting a critical mass, it would make a difference. The project was very successful. The benefits were probably even larger in that the workers would talk about violence and exploitation as well. I cried every time I visited one of these communities. It's also a story where the Indian government did quite well.

PBM: India's tax GDP shows we're still a low-income country, but one of the big debates is about the architecture of our health system. If you were to look 15-20 years ahead, what trajectory do you think India should follow in this regard?

BG: We (the US) spend about 18 per cent of our GDP on health and no one is even close to that. There are a lot of middle-income countries such as Turkey, Brazil and Thailand, and their basic architecture is pretty clear. There are basic things with vaccines and pregnancy that should be in the public health system and there the quality can go up. When you get to this growing burden of non-communicable diseases, the idea that it's going to be purely the public sector is not the best approach. The best approach is that the government causes the insurance markets to get to critical mass and then a set of private providers come along, who compete on cost and quality of services they will provide.

> "One of the problems of democracy is for politicians to say the other politicians are idiots. So who talks about progress?"

Watch the complete conversation at https://www.youtube.com/watch?v=ZBoAs2lQx8Y



Physics at Ashoka University

Bikram Phookun is Professor of Physics.

The life of an undergraduate begins with one crisis and ends with another. The first is precipitated by the question, "What do I do in college?", and the second by the question, "What do I do after college?"

Choosing Physics

The first question is typically answered by Indian students in the final year of school. No situation could be less favourable to making a wise choice. The pressure of impending board examinations is overwhelming, students are herded onto well-trodden paths, little informed advice is available, and there are few opportunities to meet peers who've made choices differently.

At Ashoka, on the other hand, students are not expected to have made a decision on their major at the time of joining. They are free of the pressure of the final year of school, sample a range of disciplines through the foundation and gateway courses, meet peers from a wide variety of backgrounds, and get to talk to informed faculty on what it means to choose a certain subject as a major. We have every expectation, therefore, that those who choose to major in physics at Ashoka will find it well-suited to their inclinations and abilities.

Doing Physics

Doing physics is not easy. Even experts will agree that it is an extraordinarily challenging discipline. The reason for this is that it requires one to constantly bring together two ways of thinking – the intuitive and the formal – that are often at odds with each other.

Our intuitions about the world evolved in the circumstances peculiar to life on earth and so are severely limited. What appears obvious to us may be correct within the domain of our perceptions, but can be completely wrong outside it. Perhaps the most dramatic example of this is the world of the very small. It is impossible for us to imagine that an object can move without having a well-defined path – but we find that that is in fact true for objects like electrons! Physics tries to overcome these limitations by using observations and intuitions to construct mathematical models, exploring their ramifications, and comparing them with phenomena. These models in turn inform our intuitions. The constant interplay between intuition-driven thinking and model-based thinking has proved to be extremely powerful – it is this that a student of physics is expected to master.

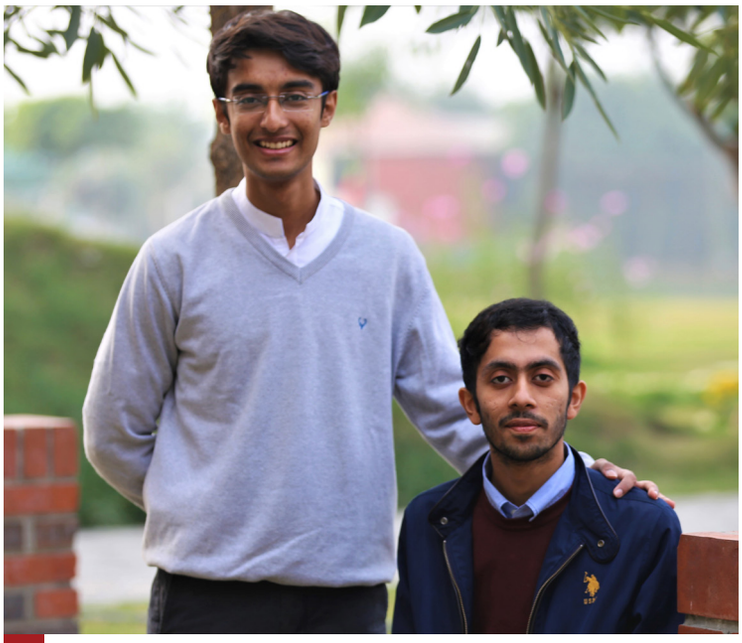
A student majoring in physics must be trained in the mathematical description of the world that is called theoretical physics, in the refined observation that is called experimental physics, and in computational techniques that are used in all areas of physics. The sequence of physics courses at Ashoka is designed to do this. It begins with two second-semester gateway courses – Mathematical and Computational Toolkit and An Introduction to Physics Through Experiments – designed to introduce the discipline. (These courses will, we hope, also prove useful to those who, after doing them, decide to major in a discipline other than physics.) In the third and fourth semesters we have all the courses that form part of a standard physics undergraduate curriculum. In the fifth and sixth semesters there are electives. And in the sixth semester we have a course that brings together all the physics learnt thus far.

Moving On

In the final year of an undergraduate programme a student faces the second crisis: "What do I do after college?" Most of those who major in physics do not end up becoming scientists. Yet most good physics programmes in India are designed for professional physicists. Of course this serves a purpose, for it is essential that an undergraduate major have a solid core, and that those who intend to pursue the discipline be given the opportunity to study it deeply. But it is equally important to give those who want to move into allied areas the opportunity to use their foundation in physics to explore these areas effectively. The elective courses offered in the physics programmes in the fifth and sixth semester offer both possibilities.

On the whole the physics programme at Ashoka is designed to allow a wise choice of major, a solid core, and the chance to explore possibilities within and outside the domain of physics.

> "The physics programme at Ashoka is designed to allow the chance to explore possibilities within and outside the domain of physics."



India and the Belt and Road Initiative

Undergraduate students Rhythm Banerjee and Yash Gaddhyan travel to Shanghai for the Belt and Road International Special Event Contest for science and technology and return with more than just the second prize. They write about their experience.

The Challenge Cup is a biennial competition of economics and technology held in China, with nearly 400 universities from across the world participating.

In 2017, the 15th edition of the Cup was organised by the Watson International Olympics, 5th line - with the Belt and Road Initiative as its theme. Ashoka sent its entry for the economics competition. Our paper was titled, 'India and the Luxian of the 21st century'. Luxian in Chinese means road to success, which Ashoka was on, as it was selected as one of the 39 finalists to present its paper at Shanghai University. Our primary work involved research around the economic impact of the Belt and Road (B&R) initiative on India. This required an analysis of certain empirical models, an industrial review of international trade between India and the B&R countries, and our solutions to overcome the current security and operational shortcomings faced by the initiative.

> "The Belt and Road Initiative will promote trade of goods, encourage innovation, promote employment, and create parity between wages and interest rates between countries."

The week began with a public exhibition of the B&R Initiative's most innovative technological and financial models on November 12. This gave us an opportunity to discuss our project with other finalists, understand their ideas about the project, learn about new eco-friendly technologies, and understand other economic theories.

The main presentation, however, was on November 13, made before a panel of judges from universities across Asia. In our paper, we used the Ricardian and Heckscher-Ohlin models of international trade to argue that India's participation in the Belt and Road Initiative will promote specialised trade of goods, encourage innovation, promote employment, and create parity between wage levels and interest rates between countries. Being two of the largest economies in Asia, it only makes sense for India and China to be partners in this initiative and encourage more economic activity. These benefits, however, come with certain challenges. For instance, the need to balance security and economics, the concern of local industry displacement, and a lack of systematic execution of projects. The solution? An autonomous body that addresses economic, political and security concerns of both the countries, and promotes dialogue between the two, more so when China continues to have such bodies with other nations.

Another major issue we addressed with our proposal was of terrorism and security. Most of the Belt and Road corridors pass through Central South Asia. The maritime route, on the other hand, stretches across the Indian Ocean and the Arabian Sea. For long, these regions have been subject to terrorism and buccaneering. A part of our solution was to propose a special state-sponsored financial bond backed by the Asian Infrastructure and Investment Bank and the Silk Road Fund. These bonds are then sold to the central banks of the 65+ Belt and Road countries. These bonds would be traded through a standard currency and use standard lending and borrowing interest rates. However, they would be priced differently for each country, based on a risk-score (a rating for terrorism and piracy levels in a country), tradable volumes, and other market functions.

A high-risk score would mean low prices, whereas a low score would earn a higher premium through greater trade as well. This way, countries would have an incentive to curb terrorism for greater premium on infrastructure bonds.

On the sidelines of the competition, we learned immensely about China's economic policy, sociological traits, geo-economic disparity, and its culture. Many of China's issues such as its national debt and a staggering economy, which are widely discussed outside the country look extremely different in it. This helped us think about its governance model more carefully—especially the balance between free markets and autarky. Concurrently, we were simply astounded with how the Chinese embrace their culture, use traditional tools for manual labour, and how central banks still operate with abacus. More than anything, we admire their commitment towards punctuality and discipline. Academically, we gained critical insights into the working of One Belt One Road's major policymakers, innovators and scientists, thus we remain bullish in the reawakening of the dragon. Our takeaway? It's time for the uncaged tiger to hop on its back.

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