The power of disruption

Are machines going to take over the future? Can technology and human beings optimise each other? The rise of disruptive technology can be a double-edged sword. Here's a conversation with young 'disruptors'.

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Robots or the human touch? It might just be possible in a few years to have your pick, going by your mood or worldview. It was 2015 when McKinsey Global Institute startled the world of design and technology by publishing a book, No Ordinary Disruption: The Four Global Forces Breaking All the Trends, written by its in-house think-tank. It offered an insight into the upcoming wave of technological developments that would have the greatest impact on the way we live now. They called it the 'Disruptive Dozens', the 12 technologies that they believed had the greatest potential to remake the business landscape in the coming decade, and, by

extension, our lives: from renewable energy storage to genomics-based treatments and diagnoses extending our youth and longevity; from manipulating material at a molecular level to manufacture of superior products (think, nanomaterials in your favourite snack) to 'driverless cars' (some BMW cars can already park themselves).

From your daily dose of electricity coming from the sky (as opposed to fossil fuels from under the earth's surface); from cheaper, safer and more dexterous robots getting into manufacturing, maintenance, cleaning and surgery to the much-hyped 3D printing set to replace traditional manufacturing technologies (imagine buying an electric blueprint of a shoe, then going home and printing it out).

From an explosion of mobile apps changing our personal experiences dramatically (goodbye matrimonial columns, hello dating apps) to computers excelling at knowledge work-ranging from legal to sports coverage-and possibly taking over the jobs of millions; from the Internet of Things (IoT) controlling more products and tools, generating all kinds of data, to cloud technology changing just how much small businesses and start-ups can accomplish.
The International Energy Agency predicts the United States will become the world's largest producer of oil by 2020, thanks to advances in fracking and other technologies, which improved exponentially in the last few years (improving to the point where extracting oil from hard-to-reach areas finally made economic sense).

That was the context that brought together five bright young sparks, neck-deep in disruptive technology for research or business, at the India Today Conclave.

Ratul Puri, the young chief of Hindustan Power Projects, one of India's leading integrated power players in the energy sector, kick-started the session on a promising note, explaining the 12 disruptive technologies of the future that are slated to add between $0.5-1 trillion to the Indian economy in the coming decade.

Here's a flavour of the session:

Ratul Puri Chairman, Hindustan Power Projects
There are 12 technologies that have been identified which are going to change the way India works, operates and plays over the next 10 years. These technologies are to add about half a trillion to one trillion dollars to India's economy and will significantly empower the lives of people. About three quarters of the people in this country lead a life of very poor quality. These technologies will change the way they operate and interact with each other.

Manasi Kirloskar, Executive director, Kirloskar Systems
Electric vehicles and autonomous cars are very cool ideas. They are eco-friendly and emissions-free too. But what we lack is infrastructure. You need perfect roads, perfect broadband systems for this. India currently does not have that. We still struggle with our

internet every day. Autonomous cars also pose ethical issues, especially in case of accidents: who does the car protect, the passengers or the pedestrians? The government will have to set its policies and priorities right first.

Shashwat Goenka, Sector head, Spencer Retail Ltd

E-commerce is the inevitable future, since we are impatient as consumers. But we are Indians and our purchase psychology is attuned to touch and feel. Brick and mortar will continue to exist. You know, with all the disruptive technologies that are out there, all the things that are happening, India is going to face a challenge. And the challenge is going to be around skills, to prepare for all this technology.

Ananya Birla, Musician, founder of Svatantra Microfinance

The primary challenge is consumer behaviour. I can talk about it from Swatantra's point of view. We have this system called the Aadhaar Card Payment scheme, which basically integrates the Aadhaar card with bank accounts. Now the Aadhaar card uses the biometric system, so all our field officers have tablets which can sense the consumer's biometrics and payments are done immediately. So we reduce all the paperwork.

Rohan Murty, Founder, Murty Classical Library of India

The coming wave of technology will certainly concern India. There will be no industry that will be unaffected by it. Take artificial intelligence (AI) and what it may mean to us. AI will ensure that 20,000 people worth of effort can be done in 24 months by just 190 people. The next 20 years will be a period of transition, when things for which you need genuine human effort, for which you need people to write programs, how to create architecture for systems and so on, will continue.