GLOBALIZATION AND ITS IMPACT ON INDIA

PLANETARY THINKING

PAST – PRESENT - PROMISE
Globalization is an expansion of Human Activity beyond national borders which impacts Human Life, Culture, Business, Trade and Science and Technology. It is an integration of economies and societies around the world.
Universalisation
Indian Perspective

Spread of cultures and ideas across the globe resulting in a unique common culture is Universalisation. India believes in this theory and practised it for ages!

The lore of India goes to say that when the planet earth was drowned in to the ocean of the Universe – Garbodhaka, the Omni-potent Lord assumed the form of a Boar and saved the planet by lifting it up to restore in its position.

India conceptualised the theory of planetary thinking, not just global thinking. This legacy has been continued since Vedic times!
Maharaj Parikshit, the grand son of Arjuna & Subhadra and Son of Abhimanyu and Uttara ruled the entire world, personally visited every corner of the world and established dharma. Our legacy of globalization has been established since time immemorial.
The fact that we never invaded any country in the last 10,000 years only strengthens our concept of planetary thinking and confirms our stance on anti-cultural chauvinism and isolationism.
The world's first university was established in 700 BC at Takshashila. Around 10,500 students from all over the world pursued more than 60 subjects (Holy Scriptures, Eighteen Shilpas or Arts, Law, Medicine, School of Military training, Science and Technology).

The University of Nalanda built in the 4th century was one of the greatest achievements of ancient India in the field of education.
India was a land of prosperity, peace, wealth, with an ancient Civilization

India was one of the richest countries till the British invaded India in early 17th Century

Sushruta is regarded as the Father of Surgery. Over 2600 years ago Sushruta with his team conducted complicated surgeries

The four religions born in India - Hinduism, Budhism, Jainism, and Sikhism, are followed by 25% of the world's population.

There are 300,000 active mosques in India, that no other country could claim, including the Islamic Nations.
Planetary Thinking
Prosperity and Tolerance

- Jews and Christians lived continuously in India from 200 B.C. to 52 A.D.
- The oldest European church and synagogue in India are in the city of Cochin. They were built in 1503 and 1568 respectively.
- The largest religious building in the world is Angkor Wat, a Hindu Temple in Cambodia built in 12th century
- The Vishnu Temple in the city of Tirupati built in the 10th century, is the world's largest religious pilgrimage destination. Larger than either Rome or Mecca, an average of 30,000 visitors donate $6 million (US) to the temple everyday
- Yoga has its origins in India and has existed for over 5,000 years.

India has been invaded by Mongolia, Turq, Afghan, Arabs, Greece Portugese, French and British etc. India Tolerated!
India, world’s largest democracy, only country in Asia that has remained democratic ever since it attained its independence from British rule.
Indian Foot-prints on Global industries

SATYA NADELLA
CEO, Microsoft

SUNDAR PICHAI
CEO, Google

INDRA NOOYI
CEO, Pepsico

AJAYPAL SINGH BANGA
CEO, Mastercard

RAJEEV SURI
CEO, Nokia

SHANTANU NARAYEN
CEO, Adobe

FRANCISCO D’SOUZA
CEO, CTS
I chose to take the oath of office with my personal copy of the Bhagavad Gita because its teachings have inspired me to be a servant-leader, dedicating my life in the service of others and to my country.

- Tulsi Gabbard

Indian Foot Prints.

TULSI GABBARD
US Congresswoman

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Nobel laureates: Overseas citizens of Indian origin

SANJAY GUPTA
Popular Neurosurgeon in US

SUJIT CHOUDHRY
Dean, School of Law, University of California, Berkeley

SUBRAHMANYAM CHANDRASEKHAR
HAR GOBIND KHORANA
VENKATRAMAN RAMAKRISHNAN
What it means to India?

✓ Steady attainment as Global CEOs, Practitioners and world leaders
✓ Global Community representing from every corner of India
✓ Able to seed our presence in various domains and subjects
✓ Catch up the booming & complex developing markets
✓ Proving our fast adoption to Neo-global culture and win the Ultimate
✓ Beating language barriers (e.g. Average American unlikely to speak any language other than English but Average Indian can speak more than 3 languages- including native accent)
✓ During 1991 Gulf war, as per survey, 50% Americans did not know where the persian Gulf war held on the Globe but Average Indian dreams to work any where across continents.
India is Ready for Industry 4.0. Whether Indians are Ready?

1. **Industry is adopting Industry 4.0** (referred as The Fourth Industrial Revolution, taking advantage of Ubiquitous, mobile super-computing, Intelligent robots, Self-driving cars, Neuro-technological brain enhancements, Genetic editing etc. It is going to change the way we live, work and relate to one another (Klaus Schwab @ World Economic Forum).

   *Do our Students ready to manage their career and life?*

2. **Industry 4.0 is going to bring change at a speed, scale and force!**
   
   *Do our Students have the strength to fight?*

3. Jobs get migrated from one **geo-region** to another, one set of **technology** to other and one type of **academic qualification** to another in no time!

   *Whether our Students are Job Ready?*

4. What our students **study** may become **irrelevant** in no time if they do not Learn, Unlearn and Relearn!

   *Are our Students Qualified?*

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**! INSPIRE….IDEATE….INNOVATE !**

Every day, Every Minute, is the only survival strategy in the IV Industrial Revolution.
Industry 4.0 globalization with regional flavors - (PWC)

1. Industry 4.0 creates digital networks and ecosystems, in many cases it spans the globe, but still retains distinct regional footprints.

2. With high investments in technology and employee training, digital transformation may bring in operational efficiency, cost reduction and quality assurance.

3. The fourth industrial revolution binds companies and countries together through worldwide supply chains and data networks – in turn it promotes globalisation at a quick pace.

4. Many industrial leaders operate worldwide on all counts, so successful implementation of Industry 4.0 may not be limited to specific countries or regions. At the same time, many applications gets closely linked to local companies, and as such customized products often require regional manufacturing capabilities.
Industry 4.0 and Skill Needs

1. Industry 4.0 may increase GDP per Capita, it increases Job growth in the areas where Labor –Intensive Services are Required

2. There will be jobs which are dependent on Human Traits such as Creativity, Emotional Intelligence, Social Skills like Teaching, Nursing, Mentoring, Counseling, Sports and Yoga.

3. A Tiny California College (Harvey Mudd College) whose graduates Out-earn Harvard and Stanfords because they embraced Liberal-Arts, that enhance critical thinking

4. Students especially children need Arts, Stories, Poems, Music as much as they need Love, Food, Fresh Air, Play, otherwise it results in Cultural Starvation in their life. Every child has right to Experience of Culture.
Industry 4.0 and Skill Needs

1. Billionaire investor Mark Cuban predicts that future jobs are highly connected to **Liberal Arts**. They are going to be more valuable than Software Programming or Engineering.

2. Students with **Adaptability skills, English, Philosophy, Foreign Language** majors will do well in Future Job Market

3. Business model change often translates to **skill set disruption almost simultaneously and with only a minimal time lag**

4. Current technological trends may bring out unprecedented rate of change in the core curriculum content of many academic areas, with nearly **50% of subject knowledge acquired during the first year of a four-year technical degree outdated by the time students graduate**, according to one popular estimate
1. Originally Indians are of **Intuitive Mindset (0-1 thinking)**. West is **predicative mindset** (0 or 1 thinking). India was best in research and west is best in marketing and outcome based. However, there is distraction and an aberration in the last 150 years due to National independence movement. Traits got weakened (neither intuitive nor predicative ). Correction Required

2. Most **advanced economies progressed** from the **green revolution to the industrial revolution** and **then onto the services revolution**. India, however, slipped out the most important step - the industrial revolution. It **jumped from the green revolution straight to the services revolution**. 67 percent of India's farmland is held by the marginal farmers with holdings below one hectare, as against less than 1 percent own holdings of 10 hectare, impacting on yield and input cost.

3. **Gadget Obsession**: Indians glue to smart phones- **3 hours 18 min daily** on avg. (US- 2h 12m, other Asian countries (40m to 50m) Video consumption (40% late at night, 25% eating,, 20% shopping)
# Indian Thinking

## The journey from proven to unproven?

<table>
<thead>
<tr>
<th>R&amp;D Performance</th>
<th>Vedic Times</th>
<th>Mid 19(^{th}) Century</th>
<th>Early 21(^{st}) Century</th>
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</thead>
<tbody>
<tr>
<td>Tripura Vimana</td>
<td>Rustfree Iron</td>
<td>Sapatave da</td>
<td>Have these stumbled progression?</td>
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<tr>
<td>Soursaktshi</td>
<td>Surgery Shustrutha</td>
<td>Inner Science</td>
<td>Independence Movement</td>
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<tr>
<td>Nalasethu</td>
<td>Yoga/Ayurveda</td>
<td>Bhardwaja’s All about Machines</td>
<td>Inexorable shift from Agrarian to Services</td>
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<tr>
<td>Vimana-Spacecraft</td>
<td>Textiles and steel for British Industrial Revolution</td>
<td>Complex Art/Stonework</td>
<td>Gadget obsession &amp; info overloading</td>
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<tr>
<td>Bhramasstra</td>
<td>Compass/Navigation</td>
<td>Organic Fertilizers</td>
<td></td>
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- Early 21\(^{st}\) Century
- Independence Movement
- Inexorable shift from Agrarian to Services
- Gadget obsession & info overloading

Have these stumbled progression?
## Reflections

### Overall Innovation Ranking (GII)

<table>
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<tr>
<th>Country</th>
<th>India</th>
<th>USA</th>
<th>UK</th>
<th>Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noble Laureates in last 100 years</td>
<td>10</td>
<td>326</td>
<td>116</td>
<td>26</td>
</tr>
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</table>

### GAPS TO BE FILLED

<table>
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<tr>
<th>Country</th>
<th>India</th>
<th>China</th>
<th>Mexico</th>
<th>USA</th>
<th>UK</th>
<th>Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific articles per million of the population (ref year 2008)</td>
<td>35.05</td>
<td>156.23</td>
<td>73.35</td>
<td>911</td>
<td>1249.9</td>
<td>1769.7</td>
</tr>
<tr>
<td>Researchers per 1000 total employment (ref 2008)</td>
<td>0.31</td>
<td>2.6</td>
<td>.88</td>
<td>9.53</td>
<td>7.98</td>
<td>5.59</td>
</tr>
<tr>
<td>Triadic Patents per million of the population (ref year 2008)</td>
<td>.14</td>
<td>.39</td>
<td>.14</td>
<td>48.69</td>
<td>27.01</td>
<td>113.24</td>
</tr>
<tr>
<td>Gross expenditure on R&amp;D (GERD) as a percentage of GDP</td>
<td>.71(ref year 2004)</td>
<td>1.54(ref year 2008)</td>
<td>.37(ref year 2007)</td>
<td>2.77(ref year 2008)</td>
<td>1.77(ref year 2008)</td>
<td>3.01(ref year 2008)</td>
</tr>
<tr>
<td>Business enterprise expenditure on R&amp;D</td>
<td>.14(ref year 2004)</td>
<td>1.12(ref year 2008)</td>
<td>.18(ref year 2007)</td>
<td>2.01(ref year 2008)</td>
<td>1.10(ref year 2008)</td>
<td>2.21(ref year 2008)</td>
</tr>
</tbody>
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46mn Unemployed workforce by 2020

Opportunity 2020

else Liability 2020

% Work force who receive formal skill training- India 2%, UK 68%, Germany 75%, Japan 80%, Korea 96%

Innovation and R&D hours missing in Education. We need to shift focus from degrees/Marks to ideas.
# Gains & Pains of Globalization

<table>
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<th>GAINS</th>
<th>PAINS</th>
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</thead>
<tbody>
<tr>
<td>• Telecommunication &amp; software industries</td>
<td>• Gap widened between rich and poor fuelling –isms</td>
</tr>
<tr>
<td>• Global food chains &amp; restaurants</td>
<td>• Diminishing ethical responsibilities in business</td>
</tr>
<tr>
<td>• Multiplexes &amp; shopping malls</td>
<td>• More growth and more unemployment</td>
</tr>
<tr>
<td>• Access to international brands like Gucci, Omega, Nike and so on.</td>
<td>• Price hike of Essential commodities</td>
</tr>
<tr>
<td>• Collaboration with foreign universities</td>
<td>• Adverse effect on reservation policy, labour law reforms</td>
</tr>
<tr>
<td>• Advancement in Farm technology</td>
<td>• Still farmers languish in poverty</td>
</tr>
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CVP College of Engineering (A)
Where are we?
We are the top software exporters in Asia with 1mn H1B visas!

250 mn people sleeping hungry every day

250 mn people don’t have medical facility
Inspite 7 million pool of doctors across India

350 mn people no safe drinking water
Where are we?

5th largest GDP in the world, 2300 high yielding hybrid varieties & food grains and cash crops

51% (< 5 yrs) stunted by malnourishment
Inspire 45% workforce employed in agriculture, but 14% agriculture contribution to GDP

1 death, 4 accidents per every minute

404 mn people without electricity
125,000 villages are off grid
90% households use kerosene where cheaper alternatives exists
4% of global disease burden is due to traditional cook stoves
Where are we?
Fair skin market crossed 2000 crores; Formula 1 Racing cars & IPL cricket Revenue exceeded 10,790 + Cr.

25% of its population is still illiterate  
15% of Indian students reach high school, and just 7% graduate inspite 80% public school budget directed to teacher’s salaries & 85% children enrolled in public education system

40 million persons residing in slums

Releasing 1100 kilograms carbon per capita and increased 35% from 1996
Where are we?

62,000 super-rich households, total wealth of 45 trillion rupees. This is expected to grow to 235 trillion rupees ($5.3 trillion) in five years.

% of poor increased
From 27.5% in 2001 to 32.5% in 2010

% of diabetic people increased in last 10 years from 2 crores to 5 crores

38,356 cows a day are slaughtered in India
Need of the Hour
Checks and Balances

1. Promote Liberal Arts in our School and higher education

2. Emphasis on Philosophy & Spirituality, Foreign Language

3. Encourage the culture of Celebrating Failures: We will see major success in Startup India and Standup India Programs

4. Revive entrepreneurship. Originally India is an entrepreneur country. Repeat History

5. Promote Vocational Education from School Level itself. Theoretic Curriculum is killing Hands On Experience. Models, Prototypes, Patents and Papers Publications should be new way of evaluation tools

6. Barefoot Colleges, Makers Asylums, Innovation Labs, Incubation Labs are new type of institutes which India should Invest in.
India should not worry about “Globalization” but we should not miss the sight of “Glocalization” -
Advantage India- India 4D Vantage

With the convergence of 4 Dimensions, India is all set to handle Globalization Issues and consequences of Industry 4.0 or The next 4th Industrial Revolution
Dr. S. Atchuta Ramam
Dean, Administration
&
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