

*Swami Vivekananda's
Vision of
Scientific Rejuvenation
of India*

- a cursory reading

Swami Vivekananda *aka* *'Swamiji'*

- Religious leader
- Philosopher
- Patriot Prophet
- Cyclonic Monk

- A humanist par excellence



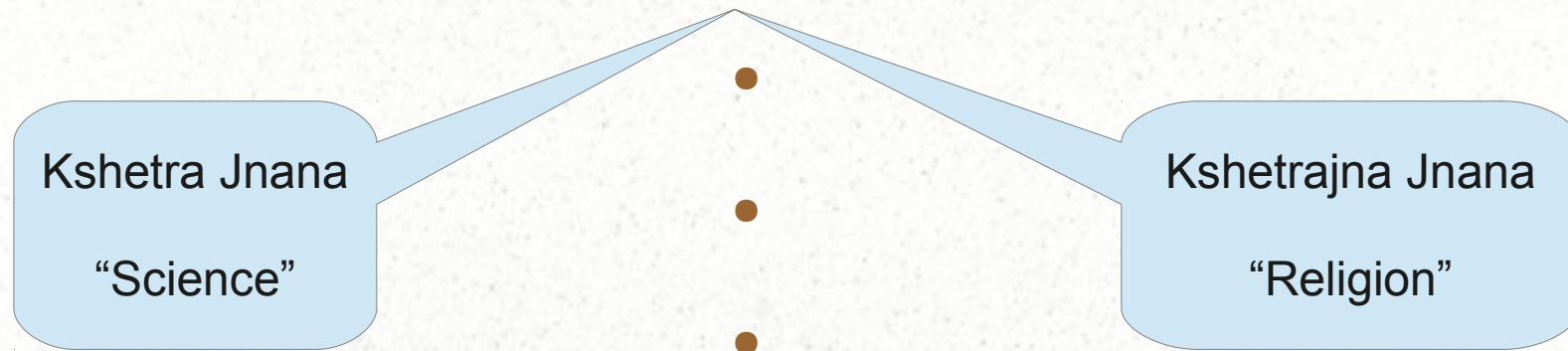


India in the eyes of Swamiji

- Every nation has its 'Individuality'
- A Nation survives by what it contributes.
- The individuality of India lies in her spiritual culture.
- Religion and Spirituality is the backbone of India.
- Efface her Individuality, She will die.

Science and Religion

- Right Knowledge



Science and Religion are
both children of philosophy

Two motives of Science

1. Harness the forces of nature for the betterment of life on earth.
 2. Quest for pure knowledge, of our universe and reality.
- In the first half of this presentation we shall take science for its second of the two motives.

Science in Swamiji's Perspective



- Science is an emissary of Religion
- Religion arrives at truth like leapfrog
- Science ratifies truth with investigative techniques through formalism.
- Both these approaches begin with gross and end in subtle.



Question

- Science has all the instruments for its need while religion has apparently none.
- Can religion gain mileage with scientific discoveries?

First dig

- Science is 'still' an evolving body of knowledge. (later explained)
- Opposing theories do (co)exist.
- Saving grace: Unity underlies all processes.

Higher truth.

But from Lower truth to

error to truth;

Journey is not from



“Science and religion will shake hands”

Swamiji, an Intuitive Scientist

“Microcosm
and
Macrocosm
are built
on the same plan”

- Planetary atomic model.



Glimpse



Genius

Episode 1

- Curvature of space-time continuum.
- Is the will available for free? 'We feel we choose, but we don't' -John-Dylan, neurologist
- “Nobody has ever seen anything produced out of nothing; if anything arises in the mind, that also must have been produced from something.....will is caused...Hence it cannot be free.” -Swamiji

Another Question

- Intuition has the advantage of big leap.
- Intuition is a valid form of knowledge.
- But how to check this from becoming a spoiled child ?

Role of Reason



- Intuition may transcend reason

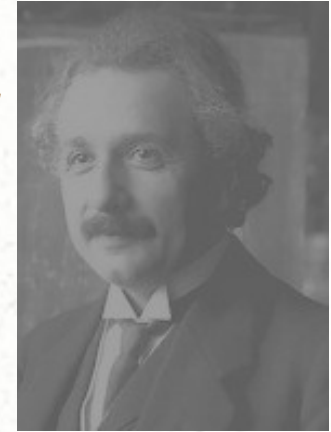
but cannot contradict.



Old man cannot contradict the child



Glimpse *Genius*



Episode 2

- Era: 19th Century in last leg
- Paradigm: Time and Space are absolute
- Intuition: Swamiji took them to be relative.
- Reason: Time and Space begins with mind and mind is not absolute.
- Verification: Special theory of relativity

Unity, The Final Tier

- Unity is the highest point in every science
- Evolution culminates in discovering Unity.
- Chemistry and Physics meets with the same fate.

Glimpse



Genius

Episode 3

- Unity proposed in Cosmology
- Akasha and Prana are two primary causes for cosmic evolution.
- They in turn resolve into mahat, which is the first evolute of Brahman.
- Swamiji crafted the above in the language of science.

Brahman

=

The Absolute



Mahat or Ishvara

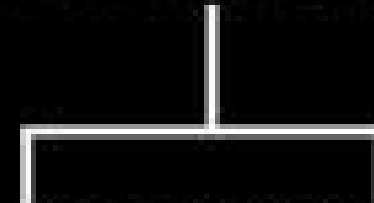
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Primal Creative Energy



Prana and Akasha

=



Force and Matter



Swamiji and Nikola Tesla

- Nikola Tesla got interested in the study of Vedanta.
- The pronouncements of Vedanta are matched only by theories of modern science.
- Tesla couldn't show what Swamiji greatly desired.
- Finally, it came up through Einsteins work on Relativity



Evolution and Involution

- Struggle for existence and Survival of the fittest is not uniformly true.
- Saints dont struggle.
- Perfected beings dont compete.
- Ideal ones dont destroy.
- Instead sacrifice is epitomized.



Glimpse



Genius

Episode 4

“Buddha is an evolved molusc
and
a molusc is an involved Buddha”

- Swamiji

“Life is one
and
the revelation is awe inspiring.”

- Christian de Duve,
a Nobel prize winner in cell biology

Advaita

- Highest generalization of the ultimate reality
- The explanation it offers possesses the mandate that is internal.
- Q: Is it practical???
- A: A Grand Idea, but lacking in method. Yet, Advaita twice saved India.
- His Mission: To make *Advaita* living and poetic in everyday life.

Secular Science

- In other countries machines led to a materialistic civilization, but in India, for good or bad, they only reinforced the idea of Isvara, the One from which everything has manifested.
- Yeomen contribution from the ancient India.
- A brief period of slackening...
- .
-



Clarion Call

'The tremendous engine of competition will destroy everything. If you are to live at all, you must adjust yourself to the times. If we are to live at all, we must be a scientific nation. Intellectual power is the force.'

..... *Colonial Regime* *a flashback*

- University education was a perfect machine to turn out clerks. -Swamiji
- Western Science with Eastern Value System was needed then.

Need of the hour...a flashback

- Media expressed urgency in demanding science education and
- study of ethics and their ilk can be postponed.
- But, Imperial Top brass, indifferent to suggestions.



Making a Wish

"If I can get some unmarried graduates, I may try to send them over to Japan and make arrangements for their technical education there, so that when they come back, they may turn their knowledge to the best account for India. What a good thing that would be!."



Swamiji and JCBose



JC Bose, the physicist who gave radio to the world.

- A new lease of hope through JCBose's Scientific initiatives.
- JCBose had other vigorous diversions from science.
- Swamiji intervened and urged Bose to work for recognition of scientific values in Indian minds.
- Disciple in the footsteps of the master, Nivedita was a strong support for JCBose.



Swamiji and JNTata (1893 CE)



- Copassengers in the vessel 'Empress of India'
- Tata for World's Columbian Exposition
- Swamiji for World's Parliament of Religions.
- Tata expressed the desire to setup steel mill.



Swamiji and JNTata (1893 CE)



- Two Challenges in putting up a mill
 1. Manufacturing technology
 2. Science of Steel

Technology can be imported ...but...

the later had to be researched in India.

- Swamiji told Tata



Tata writes to Swamiji (1898 CE)



- “I trust, you remember me as a fellow-traveller on your voyage from Japan to Chicago. I very much recall at this moment your views on the growth of the ascetic spirit in India...
- I recall these ideas in connection with my scheme of Research Institute of Science for India.
- If such a crusade in favor of asceticism of this kind were undertaken by a competent leader, it would greatly help asceticism, science and the good name of our common country;
- and I know not who would make a more fitting General of such a campaign than Vivekananda.”

Re-emergence of a distant echo

- “A booster in the form of foreign collaboration can give a plane an assisted take-off,
- But it will be incapable of independent flight.
- Unless it is powered by engines of its own.”

-Homi. Bhabha 1966

Swamiji writes (chicago sep 1894)



“...with proper care and attempt and struggle of all her disinterested sons, by combining some of the active and heroic elements of the West with the calm virtues of the Hindus, there will come a type of men far superior to any that have ever been in this world.”

Thank You