

TISS

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5/3/23

Some notes for the IASek All India
Service Persons @ TISS 21-3-23

o TISS has given me a very
good title for ~~intro~~ talking to
& interacting with you. All
of you individually and collectively
are the basic skeletal structure
and backbone of the Indian
State. (S-capital) I am not using the
usual terms like Steel frame etc
I am not unaware of the
jokes around the Backbone or spine
when some persons describe the
bureaucracy and some of its
members genuflecting to the
political bosses and a few other

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a few other extra-constitutional actors who usurp some of the powers of the State temporarily.

Executive powers are ~~ex~~ exercised through you all at different ~~over~~ levels; and even a number of judicial actions though many ~~may~~ ^{persons may} not know it.

Without the paperwork extended by persons from your Services, even legislative actions are difficult to be done.....

So ~~it~~ it is my duty to explain to you the socio-economic impact from the Indian Space Programme so far, the deficiencies in the Indian System to fully realise

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all its potentials; yet I would
~~to~~ point out some missed
opportunities by ISRO/DOS..... ~~How~~

How
many of
you Science
Bank
Econ/An
Buss
Arts

→ And most importantly
I would like to high light to
you ~~an~~ an important fact:
whatevera benefits have accrued
to the country and its people from
the Space Technology is not due
to ISRO and its scientists alone
or Satellites & Launch Vehicles and
related ground systems alone.

In fact any social benefit
or economic benefit or security
related benefit can come about

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in a reasonable scale ~~can~~
~~come out about~~ only when
~~the~~ a CLUSTER OF TECHNOLOGIES
act together and when the
~~the~~ input stream and output
stream supply chains are
reasonably well developed. There
will be clusters within these
~~these~~ chains. Not all of
them need to be linked to ~~most~~ the
technologies: it could be
marketing chain; administrative
clusters; systems. etc.

§ What I say about
Space, as examples, will apply
to all other areas of a Novel

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technologies (which are sometimes described as DISRUPTIVE in the sense you don't do it the same ~~way~~ ^{PACE} again ~~up~~ after they enter into the system).

Your telephone or TV may be the same but the speed with which you ~~can~~ connect or the ~~info~~ scale of information bytes you collect in a minute or a few seconds, are very different.

Space Technology in India has done such disruption in many sectors: Telephony, TV, ~~Dis~~ Weather prediction; Disaster Management etc. I hope all of you

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or some of you had the
~~at~~ time to see ~~the~~ ^{my} YouTube
talk ~~at~~ given at IIT Hyderabad.
Instead of repeating it, I
am compressing some of it
or taking examples from it.

Hat off to VIKRAM SARABHAI
for visualising them in the early
1960's and ~~creating~~ ^{albeit}
somewhat vaguely and creating
necessary ~~structures~~ ^{nuclei} to realise them.
He saw the vital role of developing
elements of Space Technology in India
to realise them sustainably. ~~The~~
The successor Satish Dhawan
~~created~~ ^{made} concrete ~~structure~~ ^{of} systems

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to realise them in concrete terms.
Not just as demos or prototypes
but ~~as~~ as operational systems
to make the benefits ~~of~~ ^{of} impact
various walks of life.

Prominent amongst them
is telephony reaching Indian
offices and homes at an ~~un~~
unprecedented scale and speed.
Total Telephone capacity created 15 years
before ~~the~~ introduction of the
first INSAT-1 (it was globally
tendered ~~for~~ purchased from abroad
USA, but to close Indian system design)
was achieved in ~~18 months~~ 18 months
after INSAT-1 was introduced into
the Indian telecom system. Actual
operation of these ~~times~~ telephones

was not done by ISRO but by the professionals of Dept of Telecom. It got absorbed into their system instead of being like a floating emulsion. This was possible because Dhawan did not look at Space Technology as a standalone but a part of the whole chain encompassing various input - output chains.

Interestingly the Min. of IB did not think satellite TV will be useful... (The ^{tell} story of Cabinet Approval by Manoj, Desai)...

Now DD is not only earning many times more advertising revenues but has many channels. Before INSAT DD was fully subsidised by Govt. On meteorology, though

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weather ~~presid~~ predictions are ~~ridiculous~~ ^{ridiculed}
all over the world, there is a
tremendous improvement in forecasts
thanks to one useful source of
satellite meteorology. ... I don't
want elaborate on the complexity of
~~app~~ meteorological science; actually
the ~~very~~ short term forecasting at
village levels is ~~still~~ still a ~~dream~~ ^{dream}.
But on cyclone warning front it
is a great success. It has
saved many lives.

I had given the statistic
in my IIT Hyd talk starting from
10000+ deaths in the Andhra cyclone
of 1977. ... The development of
input supply chain \rightarrow to output chain
of reaching the forecast out

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Continually updating them ~~was~~
were crucial factors in saving
lives. The local administrative machinery
have done tremendous job to fully
realise the ~~best~~ benefit & impact
of Satellite technology...

Is it all
There is Remote sensing —
from agriculture to zoology in
all fields. Some excellent successes
in forestry, Agriculture (crop forecasting),
flood management, urban ~~studies~~ &
development etc. But ^{some other} impact are
uneven due to the fact there are
many administrations involved.
Also the federal structure gives
many natural resources ^{related areas} ~~to~~ under
jurisdiction of the States. Govts
change... But corporate sector

Tell about
Bhuvan
NRSC

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is using them for their own assessments.
Some ~~international~~ ^{international} agencies like
the World Bank have made it
mandatory for the proposals to give
a report on Environmental Impact
based on ~~Remote~~ remote sensing studies...

~~We can~~

I need not tell about
the ubiquitous GPS. ~~Sept~~ A good
part of the Digital Economy depends
on GPS and GIS. ~~the~~ GPS is
directly from the satellites. GIS is a
composite of multiple parameters
overlaid to optimise one's needs.
This was borne out of remote sensing
based
L thematic map derivation techniques.

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Basically it is Spatial Technology.
& Even Social, political layers
can be overlaid. They are also
crucial for military and
security operations. Now GIS
is of its own expanding in many
ways. ~~sup~~

~~GPS~~ There is still no
India's own GPS. GPS is from
USA's Naval systems.

Now is that all? Have
Space benefits from Space
Technology saturated? Frozen
from the past applications with
timely improvements?

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I would say No! There is much more to be got from Space Technology. But it will not be like the way it was a trigger in the 1970's, 1980's disrupting the ways in which many things worked in telecom, TV, Natural Resources, Surveys, Meteorology, Disaster Warning, and Spatial location and surveys on the ground (GPS etc). ~~It~~

However it will be a crucial element of a cluster of technologies and systems for the modern economy, and social systems. In the field of Security and Military operations, it will take much larger and critical

HbALE

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role than it ~~ever~~ ever has been.
So much so, USA ~~formed~~ formed
its ~~Space~~ Space Defence force. China
has acquired such a capability
from South China Sea across the
Pacific ocean till US West ~~Coast~~
Coast.

Look at what is happening
around the world to get a
glimpse of the benefits sensed by
many nations.

- As of now, 90 nations are operating in space
- 10000 firms & 50000 investors are involved in Space Industry
- 2021 data All over the world 19% jump in Govt investments in space. India 36% China ~~20~~ 23%
- 2021 Space Economy US\$ 469 Billion.
- Space X has launched more than 3500 satellites
It has 1 million customer.

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Space X owns more number of satellites,
it launches more number of launch vehicles
than the US Govt. Don't be surprised
if ⁱⁿ other countries like S. Korea, UAE,
Australia,
Japan, etc it takes place. China
may not give such a handle
to private handle. May be in India as well.
But private sector would play a
major role in China & India as well.

Such ~~an~~ commercial interests
coupled with Govt interests indicate in
themselves a large social demand
from the society. ... people are consuming
many space based - space linked
~~proj~~ products. ... Govt interest are also
due to a great "invasion" of space
sector into the national security &
military systems. Space is a must

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for the present day & future Defence.
Some commercial sector has
evolved around military & security
demands. Pl. see ~~my~~ you in
YouTube my talk "Space, War
& Security" delivered at IIT Roorkee
I think in 2019....

If you ask me whether
it has reached the last person
in a society... well the answer
would be ~~no~~ No! even in the
most egalitarian countries of the West
developed world or China which
~~the~~ Chinese People's Republic. That
is a completely different aspect of
societies, not connected with

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with Technologies ... ~~At~~ I ~~can~~ had
studied on it ... Written about
it ... I can explain more
~~when~~ if you ask questions ...
"Technology" has its limitations ...

It is a great tool, solving
many problems of humans,
nature, ecosystem etc. Space

~~tech~~ definitely belongs to the
category. \rightarrow I need to reemphasize
the difference between S, T, I
and I will read out a great quote

As for many future applications
of space say from 10-20-30
years please read an article
in Wilson Quarterly 2023 Winter -
I had specially downloaded
for you & request TISS

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organisers to give an electronic^{or} hard
copy to each of you.

Now I stop ... expecting
many questions from you ...

Banks
collecting the loans
\$7 billion in a year

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TISS Notes "fair use"?

Training of AI
tools with
copyright material

Rajiv Gandhi

→ [CNG → Carage
Current EV & BSVI etc
→ 1970's & Coolig dom.

AI
made
decar.
charAPT
etc.

Gender issue → [Mechanism
Milk extr
Actual La

Ashish Bose

Superstar
Nanoto

→ Food process India
How much struggle.
Now how fast it grew.

Vedgaonkar

Indian Social
Science
Congress

TEDx TISS Y.S. Raza
Existence of Opposites

89853449398
378229
Cobalt
Jobrice →

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" Turn might into right "

Jean Jacques Rousseau · 18th
Century

Any branch of academic study that deals with human behavior in its social and cultural aspects. Usually included within SS are cultural (or social) anthropology, sociology, psychology, political science, and economics.

Most historians consider history as one of the humanities

SS = Science of Symbolic Reality

24/3/23

PESU (Tasamu) (April 6, Program)

NOT delivred

- Can you only think of Thriving & Flourishing
 → What about Surviving?
 → +ve thinking (No negative will arise). Existence of opposites.

You should be able to see Negativity to avoid it, overcome it etc

- How many of you want a Happy & Successful life?
- Long life???
- Paschama Sharada...

Explain

You now have an opportunity to live 100 & 100+ ...
 Give statistic.

~~Then what's~~ Do 100 years life automatic?

See accident statistics

411 in India per day?

Explain it -

Tho Are these risk taking Positive
Thinking - Mind over Matter?

Later
Some
place a
effects
of Autonomy
in Psychology
of parents
AI