

(201)

Committee which selects me  
~~for~~ for Adviser DST & TIFAC  
positions. This was orchestrated  
by VRG by having CNR as Chairman  
& having some members. They  
did not interview me. (That  
would have <sup>been in</sup> early 1988)

After I joined TIFAC  
and with VRG having his own  
independence, SAC-PM members  
PR etc were against VRG &  
therefore prejudices against TIFAC  
(as I was perceived to be  
the "great general" for VRG). PSL  
might have also ~~prej~~ helped  
talked ill against TIFAC. Then

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during MAK's time (PR was in good books of MAK).

On the whole it was a bad "omen" for me & TIFAC! I don't recall being overly worried about it! Nor did I let up on my side "duties" of ~~set~~ having VRA settling down as he chose to stay in Qutub Hotel near "us" — (DST, NESTC, Vigyan Prasan, TIFAC etc)

Within a few days of his taking ~~PR~~ charge PR called me and told that he had been having lots of bad reports about TIFAC

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and he would like to review it. Having gone through MGK exercise, I calmly told him that he could choose the option of meeting all of them or a few of them in groups or individually. I also added that he could do so without me being around so that he could ask critical questions. and He would have been relieved.

As per his desire, I arranged for individual members he chose, to meet him. He did not even want any special briefing from me; he might have had lots of "bad reports" already with him!

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After a few such meetings (he did not even complete the full list) he called me & again, and said that he was getting a better understanding of TIFAC work and all the Council members whom he spoke to, were aware of the full work and were in praise of TIFAC. Then he added; "Then how come people were telling me all bad about TIFAC?"

I promptly replied, "Sir, you should ask them!"

Thus a major hurdle

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(P. Ramakrishna)

~~was~~ disappeared. PR wants to have TIFAC to do more and make its presence ~~in~~ with institutions also.

In addition to this, he also started having me to do general work of DST, instead of merely leaving the whole thing to PTL (which PTL expects as he was the senior most Advisor in DST; he addresses ~~Rao~~<sup>PR</sup> Secy DST as Rama Rao only). PR might have found me above the petty politics of the SET/Academic Community with which he was

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very familiar. He was ~~the~~ also  
"master of ~~their~~ the games they  
played" as he was in BTHU for  
about two decades & ~~was~~ was  
in the Science academies.

Among several such  
things ~~to one~~ in the  
initial days, one was a  
letter from Peter Heydermann <sup>(PH)</sup>  
a Senior Science Counsellor of  
US Embassy. I knew him too.  
But I did not expect such  
a letter from him! ~~BD~~ think  
American diplomats think that  
they had all the authority to  
tell others (at least it was

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So in 1980's when we used to go for the UN COUPOUS meeting. But it was not so ~~with~~ in our relations with NASA. We did face in ISRO such an "arrogance" when ~~USA~~ US representatives came to give "clearances" for special computers like VAX for ~~a~~ remote sensing applications (after the MOU arrangements introduced by MEA due to PM-RA regimes & for ~~the~~ "denies" technologies.) DST faces the problems with IPR ~~for~~ agreement for

Operationalising Rajiv-Reagan accord.  
(I have explained in Voice Record of IPR in Chapter - 5 Folder - 1)  
So the P.H. ~~was~~ had written to PR after ~~usual~~ the initial promise

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that "now that you~~are~~ are  
~~in~~ in key DST position, ~~you~~  
~~can~~ we expect you to clear  
all the hurdles erected by  
your predecessor." (not exact  
words but almost plainly  
without diplomatise). He

<sup>1</sup> ~~also~~ had also added somewhere  
as we have discussed". PR mumbled  
something to the effect, he had  
not discussed any thing with me.

To me, it strengthened my  
suspicion that <sup>(with GOI/PMO(?))</sup> US embassy persons  
were also lobbying for renewal  
of VRG with the support of  
some "peaceful <sup>#</sup> Indian Scientists"

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May be PR was not directly involved. But definitely PR would have worked with the "science - para-sciences" to project himself.

In any case, I had been brought in the administrative school of Vellore / TNS / YSD in terms of administrative propriety in dealing with foreign embassies. I ~~had~~ myself had

been directly responsible in ISRO for <sup>all its</sup> ~~that~~ international relations. After coming to DST that role was not there. VRA was my ~~and~~ services only for the complicated issues like ~~of~~ IPR.

~~205~~  
(210  
PR)

I told [almost spontaneously,  
"Sir, protocol ~~wise~~ <sup>wise</sup> he is not  
supposed to write to Secy GOI  
expect perhaps a simple congratulatory  
letter. This letter implies so  
many things especially a direct  
attack on your predecessor.  
Please do not even acknowledge  
it. Send it with a covering  
letter to Foreign Secy <sup>for info &</sup> with  
a brief mention that you  
had not discussed anything  
with him. You may also  
mention that you have not  
even acknowledged the letter."  
I don't <sup>know</sup> what he did.  
Nor did I ask him again.

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Another ~~such~~ item of which PR consulted me <sup>was</sup> about writing a note for extending the retirement age of scientists ~~to~~ from 58 to 60. This again was during initial days of his take over. Probably a few weeks only had passed.

I asked ~~him~~  
I told him "Sir, why do you want to take it up now! Please note that you are in this position because your predecessor ~~was~~ had completed 58 years and ~~he~~ he had to go away to ISRO or they made some thing different

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If you take it right away  
now when ~~the~~ you had sat  
on that seat, the bureaucracy  
will interpret it differently!  
He has just come and is  
trying for extension!"

PR said "No, I am  
not doing for me. But PTL  
will reach 58 years in  
about six months. That is why."

He is also pressuring me!"

I said "You may take  
up ~~PR~~ PTL case as an  
individual case for extension  
for one or two years. If you  
raise a general note for 58 to 60

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you will straightaway ~~to~~  
come down in the eyes of  
top bureaucrats!"

He was ~~a~~ a little tense  
and unhappy. He might have  
been worried to face PTL  
and his backers. They might  
tell him "What the hell, why  
are ~~you~~ you scared!" He saw  
the logic of what I said. ~~He~~ <sup>PR</sup>  
did not pursue it further.

~~He~~ PTL perhaps ~~was~~ was  
fortunate in another way: he  
got a nice position as  
Director USEFI (of  
US embassy!)

①  
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Another one item on which PR was rushing into was to abolish an ~~an~~ Award (with photo display) system for Group C & D staff introduced by VRG, with full approval upto the level of Secretary (Expenditure). I have explained in Voice Recorder folder 01 of chapter - 5 under DST clean up.

Some senior scientists of DST secretariat ~~were~~ of like PSL were fowl-mouthing on it. "What is an award for such persons? What is the achievement? What criterion? etc"

I told PR "Please do not rush it! You will be

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looked at by the lower level staff who had ~~to~~ stopper

a princely sum of Rs. 3000/- available to some of them, as one time award!

It is a fully <sup>Govt</sup> approved scheme. Let it go!"

~~But PR was~~

So PR did not ~~able~~ abolish it but did an "obnoxious" thing. He set up

a high level Committee (HG)

with Harsh Gupta who

was Advisor in DST introduced by VRG

to study the scheme and evolve criteria. ~~He~~ Most of ~~them~~ <sup>the</sup>

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scientists did not carry ~~the~~ <sup>the</sup>  
egalitarian spirit vis-a-vis  
the "lower level" staff which  
VRA & I had, partly <sup>due to</sup> our own  
background & that of ISRO.  
~~How~~ HQ came up with some  
impossible criteria & the  
scheme was killed.

PR also killed a very good  
system VRA had evolved of meeting  
Scientists, admin persons etc in  
separate & joint forums. PR  
was "afraid" of talking to  
staff and even a group of  
non-scientists / non-academics.

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In the process he had ~~cut~~ cut off ~~many~~ several consultative processes built up within DST during the short period of VRG's tenure. Even the delegations of ~~power~~ admin/financial powers to the Heads of Divisions (Scientists) started eroding. Tensions between the administration/finance and the secretariat scientists also started; increase to the "original" levels as existed before. ~~See~~ (In the Voice Recorder Folder - 01, DST cleanup)  
PR's rapport with Joint Secretaries ~~was~~ was also minimal till S.B. Krogman came as JS (F&A).

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Sanujit Ghose was JS (Admin).  
He came after D. B. Sehgal who  
was JS (Admin) from Ins. Telecom Service.  
PR also surrendered the additional  
post of JS which DST had (which  
N. K. Sinha occupied during VRG's  
tenure — it was VRG who got  
that post!)

Sanujit Ghose & myself  
developed a special friendship.  
He was from the Orissa Cadre  
of IAS. He suffered a major  
crisis in his career with allegations  
of "emergency excesses"; one of  
it was relating to the case of

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"Ki'ssa Kursi'kaa" film; he was in I & B ministry as a Dy. Secretary under Vasant Sathe as the Minister. I never tried to find out the whole thing.

He used to tell some glimpses of it and how he faces single handedly the CBI onslaught.

That episode affected his career. He could have been in a much more powerful ministry. Any way I had a good friend and he helped a great deal in my TIFAC work by giving a protective shield against many petty onslaughts from the DST administration.

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itself by Under Secy's, Dy. Sec. etc  
often triggered by the officers  
of DST itself and the splinter  
dept of DBT etc where there were  
loyal supporters for MS. (Manji Shau)  
He also helped TIFAC develop  
many flexible mechanisms by  
giving ideas. He knew I  
was very busy. Still he would  
block my time in a day to  
have general meandering  
discussions on various topics -  
(not gossip on individuals).  
He also used to refer to me  
difficult papers - be it  
parliament questions or ~~the~~ draft

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Cabinet papers. In order  
to avoid ~~the~~ TIFAC (which  
was a Society) papers ~~are~~ being  
mangled by the DST Sectt.

Officers (all the autonomous  
Societies under DST though in

theory were reporting to  
independent / autonomous Societies  
and though that to Secy DST  
in practice a junior

officer ~~with~~ would deal with  
those papers. This was

a set up right from MGK  
time as Secy DST. It was

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far too different from  
the freedoms/respect enjoyed  
by PRL/NRSA under the

Dept of Space!), <sup>He</sup> ~~the~~ strengthened  
the TIFA Division in DST

and making it the DST Secret  
Division to process the

necessary papers of TIFAC,  
as a Society, to work - be it

EFC memos etc. That was

a ~~great~~ great help. TIFA ~~Divn~~ Divn:

Head was me & Adviser DST;

Adv(R) was the abbreviation  
in files and DN Singh ~~was~~ <sup>was</sup> also

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in TIFA Division as ~~senior officer~~ PSO to process papers.

Otherwise we would have been reduced to chasing a Divisional dealing with ~~senior~~ autonomous Societies under DST head and his deputies as junior officers, who may write any thing in the file, without bothering to check with ~~us~~ us in TIFAC! Importance of such an institutional mechanism which was not "unitary" for "traditional bureaucracy" It was not that Adv(R) ~~to~~ <sup>& TIFA Division</sup> in that capacity as the final decision makers for TIFAC's interface with Govt. ~~to~~ nor was it an approving authority for posts or

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budget etc. It was only a routing mechanism. Within TIFAC there were strong ~~checks~~ checks & balances. All major admin / expenditure decisions had to be approved by the TIFAC Executive Committee chaired by Secy DST, a finance member which was initially JS & FA of DST & Executive Director of TIFAC which was me.

Societies did not have powers for creating posts. Then the papers after ~~off~~ approval by Executive Committee / ~~Working~~

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Council of TIFAC had to go  
to Ministry, that is, DST. It  
gets routed through TIFA Div<sup>n</sup>.  
If it was some other officer  
of DST, the entire ground visit  
by Executive Council / Govt Council  
may again be strated by a junior  
officer in DST! That was how  
the other Societies function!

Also the later sad story of  
C-DOT was due to that  
route after Sam Pitroda left.  
C-DOT papers would get  
shack up at the DOT junior  
officer.

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(Sanujit Ghose)

He had helped & Secy  
DST (PR) in many ways by  
acting as a buffer against  
political pressures (big & small)

PR did not really acknowledge  
those real helps. ~~and~~ At the

time of the ~~death~~ ghastly  
(SG)

death of Sanujit Ghose's son

PR did not help him to  
be in Delhi. More on these

later. One of the reasons was

that SG never went behind the

"powerful scientists" to please

them. Nor was he doing

the ~~praising~~ praising of the boss, which

many of them like. Also SG's

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speaking style was a ~~A~~ little  
round about. It would be like  
telling the whole thought process  
and not the final conclusion.

PR's working style was  
peculiar. He would come to  
office around 9:30 AM. and  
hardly spent 30 minutes  
there for signing papers  
and seeing the drafts we  
~~had~~ (SG, SB Knobbs & me)  
had given — ~~urgently~~ urgent  
ones given by him the earlier  
evening! Then he would  
disappear! Then again  
appear at around 5:30 pm

CHSS Payment

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and call me, & SA, & SBK  
and distribute lots of papers  
which ought to have  
been addressed a week  
ago - coming from PMO, etc.

So there would be ~~hardly~~  
just 24 hours or 48 hours  
of as dead time!

SBK ~~at~~ used to tell  
us privately later (we were  
considered as <sup>the</sup> trio) : "I think  
he has a 24 hr alarm only!"

So we had the pressure to  
do a first draft & rush to  
him. So we would be stuck up  
and he would go around 7pm -

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Such paper work put an unduly heavy load on me, in addition to the increasing TIFAC work (for which I should thank PR because he helped in having new programmes and some of them were suggested by him).

So much so my colleague DN Singh (DNS) of TIFA division & TIFAC told me "Sir, we thought <sup>that</sup> ~~VRG~~

after VRG had gone out as say DST, you would be freed of many DST work and you would be more available in TIFAC.

But now we find that you are much more into DST work!"

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~~Gen~~ He expresses the general expectation of DST officers who specialises ~~Delhi~~ in Delhi Secretarial politico; "Who is ~~etc~~ close to whom? Who is relates etc" So when I came ~~and~~ to DST in 1988 and was ~~moving~~ moving fast with TIFAC etc, their main conclusion was that I was brought by V R G because of ISRO connection and my "power" was derived from TN Seethan who was my relative (many were thinking that I was his brother - in - law!). The

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possibility that some person  
would be liked because his/her  
competence or capability or  
performance, was not in their  
minds at all! So ~~by~~ ~~all~~ from  
~~there~~ their information derived  
from the rumour mills,  
I had very little connection  
with PR and therefore, my  
importance to DST was gone  
with VRA. If at all the  
new Secy DST PR <sup>might</sup> ~~may~~ dump  
me and TIFAC's importance  
also would come down! - That  
was their calculations and expectations!!  
I ~~It~~ ~~at~~ All of these went  
wrong very badly!

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PR was depending on me for many of the DST work, many high level work etc and also he was initiating / supporting lots of activities of TIFAC; ~~that he then~~ took place in a short period after he took office.

It is true that if his support to TIFAC at that critical juncture were not there, ~~just~~ all the foundational work done for TIFAC for the initial two years would have seriously suffered. He built ~~up~~ <sup>up</sup>

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on that foundation. He had sensed that his contributions as being DST could come about largely through TIFAC. Also for his other work of DST, he would have been sensed my ~~cat~~ ~~com~~ capability and impartiality. I was not one of those who was in "loyalty camps" of VRA or any body else. And therefore, I would not be one of those who would be working against him. I am more a committed professional

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which he had sensed /  
judged. He had also seen  
the range of my knowledge  
and insights from science,  
technology, engineering, management  
to admin to ~~inter~~ finance to  
international relations to parliament  
~~etc.~~ etc.

May be his mentor  
Dr. V. S. Arunaachalam who knew  
~~me~~ me, who wanted me to be  
brought into DRDO & immediately  
after the induction of Kalam  
& PR, as Director DEAC, would  
have advised him to "use" me  
fully. But whatever it ~~is~~ was,

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~~# #~~ I was fortunate that  
I was "used" by PR fully and  
he helped <sup>to create</sup> many programmes  
for TIFAC. That was a great  
turning point for me. During  
those four years of PR, I was  
able to do so many things  
in TIFAC which were visible  
(what I did much more  
for DST would be invisible!)  
and it gave me a new  
national stature. Otherwise  
I would have ~~be~~ been  
a "damp squib" coming  
out of ISRO, as had

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happened for ~~several~~ ~~many~~ persons  
who came out of ISRO.

Strangely at a purely  
personal level there was little  
warmth from PR towards me!  
It was a cold professional  
relationship. Not even a day  
he had invited me for a  
private lunch or dinner. Only  
~~for~~ personal function was  
for his daughter's marriage  
in the <sup>Venkatapuram</sup> temple near DST.

\* \*  
At this point it is also  
important to mention about other

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major activities of DST in which I was not involved either at VRA time or at PR time. In some ways they were bread and butter of DST in terms of budget and especially in terms of giving Secy DST and the large number of DST Secretariat officers, their "power"! Prof academics / scientists will be after them, visit their cubicles and pay "obessiance" to Secy DST.

The major one was (is) Science & Engg. Research Council (SERC). It is the exhumeral

URGENT

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research funding to universities,  
colleges and science laboratories.  
(This is other than the funding  
by DST to the ~~Instit~~ autonomous  
Institutions ~~§~~ - So called - under  
DST like Chitra Tirunal, <sup>India</sup> ~~Institi~~  
of Astrophysics, Raman Research Instit.,  
Birla Sahni Insti... etc  
about 20 plus. Most of them  
pursue basic research, and very  
few of them do applied research  
and create technologies, like Chitra  
Tirunal. In a similar way  
DSIR ~~for~~ routes the funds for  
all CSIR laboratories, DOS funds  
PRL, DAE funds ~~THE~~ TIFR, VEC,

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Institute of Physics (Bhuvanagiri et al.)  
IIT's, IISc are fully funded directly by MHRD. Similarly  
the Central Universities are almost fully funded by UGC.  
DST's SERC started almost

immediately with the formation  
of DST based on NCST recommendations,  
was to support other colleges, universities,  
and several laboratories which ~~are~~ <sup>were (are)</sup>  
not funded annually with surety  
by a Govt department. It was  
a laudable ~~purpose~~ purpose to increase  
the base of S&T ~~reser~~ R&D in  
India. It was modelled on the  
UK's, SRC (Science Research  
Council); India added Engineering  
— a good step; would have been  
due to the first ~~to~~ full Secy DST  
Dr. A. Ramechandran, who had

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a remarkable foresight. He was the one who created NRSA, merged & IPTI of Survey of India (SOI) with it; pushed for India-US agreement for Landroot Earth Station — without these ISRO's IRS (Indian Remote Sensing) satellite programme would have been ~~has~~ heavily constrained to serve the users. SAC alone would not have done it; nor ISAC.

So SERC was to fund Engineering Research as well which was ~~to~~ expected to be strongly application orientated; user orientated. (UK later converted its

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SERC ~~to~~ SERC to SERC!

But over a period especially post-Ramachandran, SERC of DST was captured by the "big scientists" of India. They found the "power of funding" and did not want it to be left to the needs of country. It had

to serve them!! It is in this context ~~we need~~ to refer to my letter to Dr. S. Ramaseshan Editor *Annals* Sereny 1989(?)  
→ Refer in the Voice Recorder - also the paper is in Chapter 5.

Though DST statistics would show a large number and percentage of ~~proj~~ projects supported by DST under SERC, from the same statistical tables

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if one calculated the size of projects and the total from it about 80% of the funds ~~time~~ of SERC ~~was~~ were taken away by IISc, IIT's, TIFR, CSIR institutions, Central Universities etc which already received a very good funding (assuredly) every year.

In fact SERC became a mechanism of funding huge laboratories & centres for such "big cats". It was also generally talked about openly that the professors who are PI or even PI's in the national laboratories

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did not allow the equipment /  
facilities used by any body  
else even on else even within  
their own department. The  
equipment utilisation was  
very poor. The <sup>apex</sup> SERC Council  
never bothered to audit them  
properly and take corrective  
measures. They would generally  
record "motherhood" statements"  
(to use the American terminology  
~~exit~~ which exists ~~there~~ then!

I don't know what the  
current ~~equit~~ equivalent in  
the ~~gender~~ with political  
correctness of today (@ 2016))

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~~At~~ The general ~~po~~ colleges/  
universities which received only  
Rs. 6 - 10 lakhs per project  
on the average were still happy  
because they were starved of  
~~the~~ R&D funds. They ~~&~~ just  
had buildings, minimal  
teaching labs and salaries. ~~This~~  
Such a large scale availability  
of "small money" to them  
helped to build a human resource  
base - slightly better PG courses,  
Ph.D programmes and some  
research publications. But  
for getting that small amount

Small (not (245)  
~~the institutions~~

the small and "not so powerful"  
institutions had to struggle ~~using~~  
visiting DST officers several times.  
The process which can be  
considered impartial ~~is~~ was  
made up:

First Refreeing of proposal

Second Refrees proposals go  
to Program. Advisory ~~Committee~~  
Committee (PAC)

2 Third To be approved / ~~disapp~~  
by SERC apex Council.

The PAC's & SERC's were usually  
filled with academics / ~~per~~ scientists  
of national laboratories, <sup>& IISc</sup> — who were

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"powerful" ie have links with the "science leaders", recommended by them or selected by Seay DST etc. Of course some of them ~~are~~ were (are) good professionals too.

But the processes of Refereeing, PAC, SERC and in between operations by DST Secretariat and DST's Finance Division etc were all time consuming and over a period had become very mechanical and routinised. The so-called monitoring workshop held to

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Review the progress of the projects were also routine's.

Only thing which was done meticulously was the <sup>(UC)</sup> <sup>(financial)</sup> Utilization certificate for each of the proposal for each year because the fund release which were usually in annual installments were tied to the UC's.

To be fair to the DST's secretariat scientists, I should also mention the terrible ~~po~~ administrative / financial processing of files ~~to~~ within the Sect - with the DST Admin

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and Finance Divisions. ~~to~~

For each meeting of PAC,  
approvals had to be obtained  
for tea, coffee etc through  
admin / finance divisions which  
were run by persons on  
deputation from Delhi Govt.  
departments. They so mostly  
it was an "Aya Ram, Gaya Ram"  
at various levels from Section Officers,  
Under Secy's etc. Secretariat  
Scientists wasted lots of time  
in convincing them and ~~wasting~~  
wishing to send letters. The  
Heads of Divisions who were  
senior Scientists had no power.

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The first ~~senior~~ Seay DST who  
modified some of these procedures  
to give some relief <sup>in</sup>  
(See in Volume area Folder 01 1980-90 DST  
clean up)  
paper work was V.R.G. But  
durj PR's time, many of  
<sup>these delegations</sup>  
~~they~~ slowly decayed.

But on the whole  
the processes ~~and~~ — administration  
and more importantly the  
& scientific evaluation processes —  
~~— were~~ did not have a ~~soul~~ soul.

They very little attention was  
given to creating excellent  
researchers in India and also  
relevant engineering & R&D which

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which can help Indian industries. None bothered about end results.

Over a period the scientific evaluation was more based on the "influence" with PAC members of individual PI's or institutions.

The bigger, powerful, and well funded institutions ~~can~~ could withstand such processes. They had PRIVILEGED ACCESS to DST, ~~the~~ the PAC, SERC & ~~by~~ DST. Also "dumping" lots of money with

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them, helped in ~~finishing~~  
finishing of budget in  
time and ask for more  
funds for next year. The  
success / progress, even  
through the Planning Commission  
process was evaluated as to  
how much expenditure had  
been done!

So SERC was naturally  
an important component  
for Secy DST and DST Secretariat,  
about 60% of its personnel  
deployed in it. But since the  
processes were so routinised

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Say DST did not have to  
spend time on it. He had  
to attend to exceptions and  
urgent demands by powerful  
scientists who ~~can~~ could  
bring him up. He could  
then <sup>tell</sup> SERC Secy to speed  
up on that. He ~~can~~ could  
alert JS & FA (SRK) to  
take care of urgent release!

Another item was  
International Affairs. This  
division was loved by all  
Secretaries of DST as ~~it~~ DST

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was the nodal point for ~~most of the~~ all S & T Cooperation  
~~is~~ (except for Space, Atomic  
~~Energy~~ Energy & Defence Research)  
To have events with Heads  
of States ~~at~~ with whom India  
had (has) very little operational  
contacts, ~~are~~ were (are) done  
with an Agreement / MOU done  
during their visit : ~~at~~ One common  
set was S & T, Education  
& Cultural Exchange!! These  
are signed; but very little  
~~is~~ was (is) done as followup

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During the Signature & Seay DST  
was (is) an important  
person when PM, Ext Aff. Minis,  
etc were present. So he got  
(gets) exposure; media high  
light etc. So they were not  
leaving it.

In addition some  
~~over~~ serious agreements  
involved foreign travel, fellowships  
etc. Many academics / scientists  
would angle for these. So  
Seay DST ~~who~~ <sup>became</sup> (becomes)  
powerful by selecting such

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Committees. . . CNR Rao captured  
a few such programmes as  
the permanent Chairman  
(such as ~~top~~ Integrator  
Long Term Programme - ~~ITL~~  
ILTP with USSR later  
Russia) and several other  
programmes. He did that  
at VRG's time as he was  
Chairman SAC - PM & could  
force VRG. But such items  
continued with a PR also  
as he had to "pay back"  
to CNR & others for helping him

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to get the position of Secretary DST.  
~~Fellowships~~ such long term

fellowships such as that  
of Eu had additional pressure.

(A full episode on this follows  
separately!). So were

Indo-French Centre etc.

~~The~~ This again was

between the International Division  
(ID) & Secretary DST. He

had to get the support of

JS (Admin)  
~~JS & FA~~ for processing

travel papers and JS & FA

for ~~approval~~ concurring in  
the process of <sup>Govt</sup> approval of travel.

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None of these activities involved me. ~~Very~~ Rarely was I called even for a decorative sitting. But whenever there were crises, or when a special note was demanded by PMO or MEA, I was called by ~~S~~ PR to solve them / write special note etc often with critical time-scales, as the usual processes would have consumed much of the time.

I will write about such individual items separately. ~~at~~ ~~3~~ (They were NAM, NABL - European Commission Report & Israel etc during PR's period)

Other major constituents of DST ~~are~~ were SOI & IMD. NATMO was (is)

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too small. ~~Though in the~~ These were not processed by divisions of DST. Traditionally they were dealt with by ~~the~~ JS (Admin) of DST, though in theory Surveyor General & SOI, and DGM, IMD reported to Secy DST.

VRG took interest in IMD & NCMRWF. PR hardly took any; in fact he wound down VRG initiatives. More about it later.

Most of these references from SOI & IMD were administrative. It need not have been. Having been brought under DST because ~~they would have been~~ there could have been better inputs in terms

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modernisation of their infrastructure, ~~had been~~ <sup>handily took place.</sup> (SOI) S & T inputs, R & D etc. They were left to <sup>their own methods of working</sup> ~~them~~. One organisation Dept with which DST con'ts have energised ~~for~~ activities, synergised etc ~~would have~~ was DOS/ISRO.

But neither of the Secretaries took any interest. In general the approach was to have one's own territory and to coordinate only when there ~~is a~~ was a crisis! Institutions like the Planning Commission were of little use. These are areas in which I could have contributed a great deal. The ~~joint~~ JS's were using my background when they

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found some important or difficult file. Sanujit Ghose use to call me for important SOI related meetings. It was so with all the JS's who followed, M M K Sandana & Armita Pande.

### Cooking

In terms of numbers and budgetary support the Autonomous institutions (including the Indian Institute of Tropical Meteorology) were a substantial item. But DST Secretary hardly took any interest in them except for dealing with some special matters like selection

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of Directors, or some mandatory  
or renewal of <sup>Governing Council</sup> reviews etc. They were left  
alone for the DST Secretariate  
divisions & the JS & FA (IFD division)  
to deal with. Probably they <sup>(the institutions)</sup> ~~had~~  
also enjoyed it ~~as~~ as there ~~would~~  
would be no critical questions  
asked and they needed to deal  
with only their Governing Council  
(some of which had say DST  
as a member, but often a  
~~Senior~~ <sup>an</sup> Adviser ~~to~~ in DST used  
to attend, but ~~to~~ a representative  
of IFD would go). While I  
am also in favour of full  
~~and~~ autonomy, ~~at~~ I feel it would

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be useful to have a good programme oriented, informal type of ~~reviews~~ discussions — with some ~~structure~~ and prior work done — would be useful. It might have been useful to call a few related discipline institutions for interaction. Unfortunately the structure of DST (Delhi Govt departments) and the working culture had ~~the~~ been (are) only hierarchical para oriented. So Secretary DST gets overloaded with minutiae of files, high level meetings which <sup>are</sup> ~~are~~ often empty etc.

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Another major activity of the Secretary DST (in terms of consumption of time, though not important naturally or otherwise) ~~is~~ was (is) to ~~be~~ be a part of the lobbies for the selection of fellows of Science Academies like INSA, INAE, etc. Since they ~~are~~ <sup>were (are)</sup> totally dependent on the annual grants from DST, they were very servile to Secretary DST. They would not criticize DST; only in corridors or cocktail gossips they would criticize DST when they don't get enough funds. Their role especially the primeir ~~to~~ Science

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Academy INSA was to give  
partial finance support (PFS)  
to scientist to travel abroad.  
This ~~is~~ was a "parce giving"  
effort. So many rules and  
lots of meetings on that keeping  
the Fellows busy !! PR took  
lots of interest in these ~~as~~  
Academy politics / lobbying  
etc as he was ~~a~~ in BHE  
for ~~a~~ about two decades and  
this was an important activity  
for the Academics (IISc dominates  
(Professors of ~~FI~~ IISc dominate  
the scene in all Academies).

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I had little interest in these even when I was in ISRO.

So did I when I was in DST. On ~~the~~ hind sight

I find that my avoidance of these Academy activities

since my younger age would have been a factor in my

being "bypassed" for IISST

selection! ~~ETA~~

Well, I don't regret it, as I had a glimpse of the working of these academies, their fellowship selection etc. I had

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better things to do in terms  
of promotion of ~~ind~~ Technology,  
engineering and practical  
relevant applications for India.

My firm commitment was  
to use S & T for the benefit  
of Indian people, society,  
and economy (and of course  
~~the~~ security).

For Secy DST,  
then there were general  
visitors, just to mark attendance.  
Routine Admin files, mostly  
signature type...

My role with Secy DST  
covered only a few critical items  
from the above. Main things not

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given above were policy related papers involving the SET for socio-economic sectors, coming to DST as draft Cabinet Notes or as letters / OM's seeking DST views etc. Plus from higher levels of Govt; some of them "petty" pressures from lower level officers from Minister's office, PMO<sup>2</sup> etc, but invoking higher names! These were almost regular, on the whole almost on a daily basis.

In addition to my tasks derived from Secy DST, there were many other engagements formal & informal from DST: such as references from JS (Adm) & JS & FA

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- discussions they seek etc. For International Div<sup>n</sup> there was almost regular one-to-one meeting with Dr. Jawahar Dhar Head Int'l. He would seek my advice for strategy etc. He was a Progressive JNA, who joined DST. Fine gentleman. I would also tell Jawahar to radically reorganise

the work of DST Int'l Affairs:

to segregate them into the following

- (i) Those routine unavoidable decorative type of MOU's, Agreements etc which are done by MEA/Cat. For which follow up was just minimal. Most will fall in it
- (ii) Those with powerful countries where we need, we receive many

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a aids; fellowship etc. Just  
a handful of them. (We,  
JD & I, used to list them)

(iii) Those in which the country  
concerned is approximately  
same as India — ideal  
cases for joint projects.

These were again a handful.

He would agree if these reorganisations  
was ~~to~~ done, right human resources

~~can~~ could be put in; analysis  
done; strategies / tactics evolved

so that India ~~can~~ could maximise  
its benefits. JD would agree.

But he had resistance from  
his own colleagues who were used

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enjoying the routine work and  
the crisis mode operation (because  
we did not <sup>have</sup> any system of  
overview or planning & and were  
only working on a reactive mode!)  
which can give them some  
prominence. ~~See~~ They ~~can~~ could  
at those points ~~at~~ visit ~~See~~ DST  
office several times. Once <sup>that is</sup> over,  
all ~~was~~ were back to the same.

~~See~~ Including VRA, I found  
~~none~~ ~~at~~ none of Secretary DST  
had a vision of international  
relations. They knew some academic/  
institutions or a visitor with whom  
they had some rapport. S&T  
as a tool of diplomacy; as a

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tool to maximise National  
Interests (from technology to  
trade to security to leadership  
or good will etc); ~~or~~ etc.  
were not in their minds. Nor  
did they appear to have some  
detailed knowledge for such an  
overview.

So it was about their  
understanding of the needs of  
social-economic ministries. In  
this aspect VRA was far better.  
He made friends with many of  
them like Seay Rural Dev, etc.  
But there was no system in DST  
to follow up and consolidate. Though

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DST had a plethora of small programmes for Rural Technology, ~~Enter~~ S&T for SC/ST, for Women, etc etc, they were miniscule and all of them followed the pattern of SERC; call for proposals; referee; PAC or PAMC release funds etc. Each ~~was~~ division was jealously guarding their terrain; they had their PAC members/patrons; and all wanted to increase budgets like SERC!

But I & many of them ~~would~~ would discuss with me for ideas. ~~But~~ I used to respect my colleagues and share my thoughts, which would appear

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radical for them. Many of them were limited in their world view of science, technology or S & T policy or Indian socio-economy let alone political economy. In a way they were happy persons, who enjoyed their routines; even cribbing on administration, finance or budget<sup>†</sup> etc were a part of that routine!

I was still under the "bug" initially seeded by Subrahmanya Bharati and later many others, to

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do things to transform India.

Even the first year TIFAC

work — the ~~to~~ ~~technical~~ TF/TA

studies especially Technical Market

Surveys (TMS) had shown

me how laggard India was

in Industry, manufacturing,

steel, cement or any sector.

~~In my space to~~ In the early

years of ISRO, I never felt

about these backwardness. I

was gullible to take the govt

and the establishment economists/

experts writing about the strengths

of our industries, planning,

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Subscription for the year 2011

T. S. RAJAN, Member

military etc. I did not  
have access to the world  
scenario in these sectors  
except for space. Even in  
space technology I could realise  
around mid 1980's and beyond  
the lag which started building up.  
At the request of Bowonder  
& later by Dr. S. Ramaseshan,  
I had written about the Space  
Programme & its emerging future  
which appeared in ASCI Journal  
& later in Current Science (1992)  
The questions I had raised there  
had my answers — but I did  
not explicitise them. But the

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need for creating a Space Industry which would respond to the market forces was clear to me. I wrote ~~A~~ this article amidst my busy routines of DST. I was writing on ~~the~~ various aspects of Technology, Tech. Mgmt, ~~the~~ Policy. I had become more of a writer of papers and also delivered talks.

All these along with DST, TIFAC work. My presence in various forums was necessary for build up, growth and spread of TIFAC. I avoided writing on Space or speaking about it.

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Though Chairman ISRO was a member TIFAC Council, ~~of~~ URR, later Kalam Rayappa ~~attended~~ who later

attended sparsely and their interest in other aspects of

Indian industry was very limited.

Each to their narrow silo was

~~sp.~~ the special feature of

DAE & DOS/ISRO. A separatist

arrogance had built up in

them, so much so they were

not participating ~~in~~ even in the

evolution of Composite Mission

spearheaded by TIFAC, though

ISRO had good capacities!

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The bane of the country's technology stagnation was this silo mentality. DST was not taking any step to link them.

In fact through its SERC mechanism ~~the~~ DST created more silos. Though I had tried with

VRG (& slightly) to orient SERC

from ~~to~~ the current mode of ~~&~~ dependency on the proposals sent by ~~Ind~~

individuals with their own interest in view, towards oriented R&D.

It was some what like NASA's request for proposals

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Announcement of Opportunities  
(AO) which describe the  
specific problems to be tackled  
even in areas of ~~for~~ fundamental  
science. But that requires a  
lot of hard work; assessment  
of country's needs; assessment  
of <sup>scientific/technical</sup> capabilities; possible formation  
of teams etc. Instead DST  
resorted to the ~~old~~ definition of  
so called Thrust Areas: any  
things and every thing found  
place there. Macro topics,  
micro topics etc. Each scientist/

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academic ensures that <sup>his/her</sup> ~~their~~ topic  
was in it! I had seen  
a brochure ~~in which in exts~~  
which had two pages filled  
with thrust area topics with  
extremely small prints. So  
it was just a wild spraying  
of ideas. ~~A My request to~~  
suggestion to VRA was to  
make at least  $\frac{1}{3}$ <sup>rd</sup> of  
SERC budget to be focussed  
on end results, the proposals  
concentrating on a few deliverable  
ultimately. If If 20 or 30  
proposals were to concentrate

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on topics like that we could  
have developed strengths; we  
could have made Indian  
industries to commercialise  
them on a large scale. That  
is the way the ~~innovations~~  
innovative strengths are built  
up in the firms (industries)  
as USA, UK, Germany, ~~to~~ France,  
Sweden, ~~to~~ Finland, Japan, Korea,  
Taiwan, Israel, ~~Si. and m.~~  
Thailand, ~~a~~ Singapore and  
many others had done (and  
are doing!) ~~to~~ But we  
had built barriers / wall amidst

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industries, within industries,  
within institutions, between  
institutions, - - - - between departments  
and within departments!!

Every body within his/her  
cozy corners. Churning papers  
and shuffling papers... our  
academics concentrating on publishing  
papers; ~~the~~ most of them never  
applied their minds ~~for~~ on items  
which ~~can be~~ could benefit  
~~the~~ Indian people. Probably  
such a mode of living was  
best suited for ~~indiv~~ individuals.

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I was probably (unfortunately?!)  
guided strongly by Bharathi's  
poem:

കേൾക്കൂ കേൾക്കൂ ഭക്തർക്കിടയിൽ  
-----

കേൾക്കൂ കേൾക്കൂ കേൾക്കൂ കേൾക്കൂ  
കേൾക്കൂ കേൾക്കൂ കേൾക്കൂ കേൾക്കൂ?

His challenge to Kaali, the  
Mother Sakti!!

I had been fired up  
in young age by that strong  
poem! It stayed with me  
all along during ISKO days!

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During DST / TIFAC days it was  
much more vigorous, because  
I was able to operate in almost  
all fields touching the lives  
of people through making industries  
much more stronger; making  
agriculture more productive;  
and creating many new jobs  
through the expansion  
of industries / skills etc. These  
were not crazy dreams!

They were based on good rational  
and logical premises. Outwardly  
the papers - that - be at various  
levels, mouthed such ideas;  
but they did precious little to

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That did not deter me. There were always a few persons at various levels from Ministers, to Secretaries, Addl. Secretaries, Joint Secretaries to Dy Secy Secretaries, Sectional Officers <sup>affew</sup> to <sub>h</sub> persons in national laboratories, academic institutions, industries (especially the SME's), in Industry Associations, etc, who were also committed to do some thing ~~on the li~~ for India, much on the lines on which I was thinking. It is these people who gave me the ENERGY to keep trying. ~~One~~ Mention about many of them will be found in these

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Life Notes of mine. In fact a poem occurred in me in ~~satu~~ celebrating them & celebrating them. It was put down as

சின்ன லூசுரிசின்

~~in my~~ which had appeared in my first book of Tamil Poems - Nenjaga Malargal.

It is ~~in~~ translated to English as Blossoms of the Heart by Karthik & Narayan. The title in English

"Some Persons"

Both these books are ~~down~~ in

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Google sites (Thanks to  
Dr. N. Ramani)

Accessible googling

yasurajankavithaigal  
Now through a link in the Home page of my website  
[www.yasrajan.com](http://www.yasrajan.com)

The poem ends saying that

if then Some Persons

become More Persons,

India will flourish greatly  
from being merely being at

survival state which has  
been maintained by these

Some Persons.

I hope that day  
will come soon. @ Written  
at @ 2016.

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\*

\*

\*

Let me go straight to one of those persons: the MOS (S&T) of Rangarajan Kumaramangalam (RRK) who was appointed by PM Narasimha Rao. (1991). It was almost immediately after PR became Secretary DST. ~~He was~~ PR was not happy with ~~PR~~ RRK!

RRK was young almost around 40 years plus. Very articulate. Had a lot of ideas of using S&T for the country.

He also knew how much S&T/academic institutions had drifted away from doing time

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activities that would benefit Indian people, Indian Industry etc. He was also aware of the para-politics within S&T/academic community.

RRK came from a great political family of India. His father Kumaramangalam was ~~a famous~~ a Communist leader (CPI). He joined Congress at Indira Gandhi's time and was a Minister for Steel. He was a powerful force in the Cabinet. He had an unfortunate death in an accident in the Indian Airlines. ~~RRK's grandfather~~ was RRK's mother


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was a Bengali. ~~#~~ RRK's  
grandfather was P. Subbaroyan  
a respected Congress leader from  
the South. He was the Governor  
of Bombay when I was in  
B.Sc. (Hons). My degree certificate  
is signed by him in ink (not  
the ~~cycloset~~ printed version  
as in now). Even in those  
days <sup>(1960's)</sup> our media (press) — some  
of them — showed their silliness,  
(which is of course 90% plus now!  
@ 2016) by criticising <sup>(Subbaroyan)</sup> him (or  
~~not~~ ridiculing him) for coming  
with chappal in the formal dress,

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not caring to know that he suffered from ~~the~~ swollen leg due to elephantitis. Hence shoes did not fit him.

~~He~~ RRK was a man of action and he was also a man in a hurry. He used to have friends like Ashok Parthasarathy (AP), Jaialam Ramesh (JR). ~~who~~ They started pumping him immediately with ideas on policy and more importantly what he should do; what he should close down etc. AP had an additional advantage

 Concept Note on Organic Farming\_7-8 Jan 2014.docx  
21K

 Concept note on Women Farmers\_6-7-8 Feb 2014.doc  
327K

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of being Addl. Secy in DSIR (having been dumped by Nambiar when he became Secretary DO Electronics; only Dr. S. Varadarajan was ready to accept him as AS, in DSIR). He had linked role of taking care of NRDE, CDE & CEL. In addition another para-welding part of ~~the~~ earlier DST function of ~~reg~~ recognising R&D units in Industry (in-house R&D units) and SIRO's outside Industry. Such a recognition helped them in claiming custom's duty exemption (which was hefty then) for the

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equipment and component  
they buy. ~~Govt~~ agencies Govt  
departments were fully exempt  
from Customs duty for the  
equipment, material & components  
which they import. PSU's were  
not exempt. CSIR was exempt.

I always felt that it was  
such an ~~ext~~ exemption which  
killed Instrumentation Industry  
in India. When we were at PRL  
we used to buy APLAB power  
supplies & Toshniwal oscilloscopes  
△ ECIL Microwave generators  
(for our transponder project).

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The exemptions encourages Govt  
departments to import everything  
If Customs duty were there, it  
would have ~~been~~ pinched their budget;  
though ~~Govt~~ ~~Income~~ Govt budget  
may come to them but not fully,  
and hence an indigorous  
industry could have developed.

Expenditure on R&D  
by Industry recognised by DSIR  
was about 15% of total National  
R&D expenditure in those days.  
It was for that R&D they got  
an exemption, and hence came  
to DSIR for exemption. Other

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non-governmental (non-industry) R&D units came under SIRO (Scientific & Industrial Research Organisations). They got customs duty benefits and also income tax concessions to ~~the~~ those who contribute to them (SOG etc) if they were recognised by DSIR. Even for TIFAC which was fully funded by Govt, due to certain ~~vague~~ vagueness in the interpretation of Income Tax laws, we obtained a SIRO recognition.

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For AP, who was  
shuck up with such a minisule  
~~at~~ activity after having occupied  
the powerful position of Secretary,  
Electronics Commission, RRK's  
arrival was a God-sent  
opportunity. He would go and  
sit in RRK's room most  
of the time. So did Say DBT  
S. Ramachandran, who was  
(?) relatively a junior Secretary and  
had lesser roots in "SET  
Community" as he came from  
Industry.

This became a

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a big problem for PR. Already he had a problem to answer the questions of relevance, benefits of the programme, outreach etc, which RRK asked him.

In addition the constant fixtures of AP & SR (who did that to show their importance with the rest of SET community as MS did with MGK!), caused PR ~~a~~ more problems. He could not even consult RRK the MOS(SET) about some sensitive/confidential matters, which were many for Secy DST. Once ~~he~~<sup>PR</sup> told me about this problem. I replied "Sir



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The growth of Electronics Industry in India. So R R K asked PR and sent a note, asking several questions and also specifically ~~asking~~ <sup>the role</sup> of MITI in Japan and what steps TIFAC ~~was~~ <sup>was</sup> taking to move in the direction of MITI.

PR was very nervous. I told him to leave that to me and that I would handle it. I did an elaborate note with many enclosure, all coming to

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about 9 to 10 inches in height  
and sent to sent to MOS(SPT)'s  
office. I had some latest  
reports on MITI and also  
extracts some relevant pages  
from an excellent book on  
MITI.

~~The~~ I think it works.  
The only question I had  
from Raju of MOS office was  
to send the book on MITI.  
I told him ~~it~~ that it  
was the only copy in DST and  
perhaps in Delhi and it  
needs to be returned. He said,  
he would personally take care.

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The book was sent (I still recall its ~~cover~~ hard copy cover, a light orange); and it never came back!

But afterwards, MOSK ~~di~~ became very friendly with me. Good for me. But I should appreciate his excellent grasp of ~~the~~ S&T the needs / processes for using S&T for national benefit. In the short period of his tenure, he did tremendous change in the mode of working of S&T institutions. ~~It was I~~

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~~worked~~ had worked with  
all MOS(S&T) from ISRO  
days — Shivraj Patil, K. R.

Narayanan & later with  
Prof Alagh etc. I would say

without any doubt that

RRK was the best. It was

unfortunate that he had

to resign for a silly reason  
due to the microphone being

on after an TV interview

within 2 years of his tenure.

It was a loss to Indian S&T

system. Had he stayed on

the full term, he would have

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effectes basic changes. Instead  
of going chronologically I  
would narrate all about

RRK! PR was to face the  
RRK's enthusiasm and initiatives!  
brunt of ~~it~~ ~~But~~ But the  
(we - Sangitkhore, SBK&I) (PR)  
~~TRIO~~ TRIO helped him out!

That narration will follow.

One major crisis was  
Latur earthquake. IMD under  
which Seismology work of the  
country came under, was controlling  
all the seismic network,  
except those maintained by  
the Dept of Atomic Energy

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which had more accurate sensors ~~ones~~ to detect nuclear tests world over.

IMD was an old organisation and was stymied by the hierarchical structures and also poor salary scales and promotional avenues. Over a period there were various forms of  $\&$  inter-agency politics ... Weather scientists dominated IMD and seismology was thus a step-child.

Very little research work was done. The NGRIP (National Geophysical Research Institute) of Hyderabad had the research

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component but there was ~~a~~  
very little interaction between  
IMD & NGRI

Latur was supposed  
to be a zone having very  
low probability for earthquake  
as it was in the ~~so~~ "stable"  
Deccan plateau, as per  
the then existing scientific  
knowledge - even including that  
of NGRI. Pune was the  
station which ~~it~~ would  
monitor those ~~are~~ areas.

When the Earthquake  
struck, ~~it~~ damages shocked

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the nation. Naturally the political class has to be the "face" of the music" especially those who were in power.

I distinctly recall that a German team wanted to rush there with ~~se~~ modern instruments ~~with~~ which can measure aftershocks with greater accuracy. To ~~allow~~ allow them or not was an issue. None in India had such measurements nor would they have a good experimental plan! But due to the

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involvement of Atomic  
energy, GOI had ~~a~~ many  
restrictions ~~on~~ on seismic  
measurements! ~~The~~ A foreigner  
there! "Go to MEA" etc.  
If one loses time, precious  
data would be lost...

~~Then~~ We will come  
back to this later...

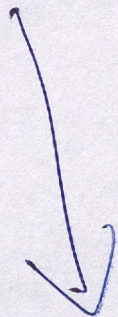
In the meanwhile,  
RRK (Rangarajan Kumara Mangalam)  
~~RRK~~ got active. He had a  
report to the Cabinet &  
Parliament... Appears that he  
had called PR on the matter.

He would have been nervous; probably  
not having all facts. Also the young  
Minister R.R.K. was a <sup>charming</sup> ~~charmy~~ young man and

1990-2000  
(cont'd)

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always  
was very quick with many questions.  
~~One he~~ He was in his forties. I  
was still older to him; but more  
close to his age.



07312H365H2

Continued till his death  
in the Voice Recorder ~~for~~  
Folder 2 (1st entry for 1990-2000)

Rest of the ~~for~~ things from  
the period based on paper I have plus  
my memory - see ~~not~~ extensive  
notes on items like covers (places  
herewith) are done in the

Folder 02 from SI No. (1) to (48)

Crisp notes are in this yellow  
pages notes which are  
also placed herewith

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Between the ~~white~~ sheets  
prepared for dictation placed below  
+ yellow ~~page~~ page notes will  
give a good idea of  
what to choose to see.

All these ~~the~~ yellow sheet  
Sl 1 Titles are in the

Lap Top ~~note~~ Top note & in  
the pen drive copy. One can

quickly hear — jump steps

— and decide