

### **Fundamental Nexus**

consider as axiomatic the fundamental insight that:

there is an inalienable **nexus** between

- production-technology systems &
- production-organisation including the decision-making governing it;

hence to change one, the other must reciprocally also change:

- the change may be a versional change with no fundamental change in decision making

OR

- the change may be a more fundamental systemic epochal change.

there has to be a motive force for change

- ◆ a governing faction propelling a versional change

OR

- ◆ subordinate subalterns struggling and aspiring to fashion a new epochal nexus

It is evident that the subordinate subalterns (especially their representatives) in the here and now:

- ✓ must have the capability to not only innovate their proto social organisational forms, but also
- ✓ must have the capability to innovate their proto production-technology systems using and modifying the materials and knowledge on hand.

### **Freedom Struggle -- Creativity**

innovative creative thought and praxis characterised our freedom struggle;

the struggle necessitated mobilisation of masses of people comprising:

peasantry, artisan & other petty producers/ peddlers

what did freedom mean for these large masses of people ??

The answer included:

- **democratic village communities;**
- the small engaged in **domestic/cottage & village industries;**
- **cooperative production** as extension of self-/ family-employed production;
- **Nai Taleem** as education in and through production to wholistically develop individual intellectual and productive capabilities;
- **Rachnatmak Karyakarta cadre** engaged in village development and village industry; and
- **development of domestic/cottage & village industries through application of scientific knowledge and method.**

## **Limits of Small Production**

However:

- x the above experimentation remained largely in the “ashram” mode
- x Nai Taleem and the “ustad-shagird” shop-floor education remained un-joined
- x Rachnatmak Karyakartas, engaged in self-subsistence, were left with little surplus-time for village development

In part this was because answers were yet to be formulated on larger democratic organisation;

instead there were substitute notions of a 'mahatma state', or 'mahatma corporations' as peoples trustees.

## **post 1947 Reigning Paradigm**

post 1947 formations like Sarva Seva Sangh and KVIC/Bs could not provide leadership instead they eventually adopted the reigning paradigm;

The reigning paradigm held that the latest production-technology, regardless of their social organisational purpose and geographical origin, was the most progressive choice of technology.

Attempts at formation of federation of cooperatives based, however, on production technology systems designed for and by non-democratic corporates, not surprisingly, degenerated into hierarchical corporate forms.

## **Impress of the Freedom Struggle**

Nonetheless the aspirations of the freedom struggle left their impress on

- the formulation of the Directive Principles of State Policy in the Constitution;
- on the creation of regional engineering colleges and of regional research laboratories;
- creation of National Social Service(NSS) to join higher education to, and with community development;

[NSS was projected in 1950s but was realised during the progressive phase of the early 1970s];

- the modular democratic structure of Panchayati Raj Institutions.
  - the Panchayati Raj institutions as with any parliamentary institutions comprise a heterogeneity of interests and serve as fora for conflict-expression/ -resolution;
- their modular democratic structure, however, is of interest

## **What is Required? What to Do??**

the emergent key issues then are:

- the development of large scale production-organisations having democratic decision making;
  - the modular democratic structure of Panchayati Raj Institutions is of interest to developing large scale democratic organisation including that for production.
- there is a critical need for corresponding systems of production technology for the development of large scale democratic production-organisations
  - the experience with federation of cooperatives underscores this need.

## Logic for a Blueprint

It is axiomatic that application of scientific method and knowledge to the techniques of production requires their *analysis into constituent* [unit] operations/ processes and then their *synthesis into a systemic whole* to achieve their collective purpose:

- the relations between the the constituent [unit] operations/ processes are in terms of their *input-output linkages*, and
- the act of synthesis *optimally matches these input/ output links to constitute a working whole*;

optimal synthesis requires efficient matching of inputs/ outputs and that implies that:

- in contrast to the Panchayati Raj fora, *the production system comprises a relative homogeneity and commonality of interests*.

a relative homogeneity and commonality of interests is fundamental and essential to democratic decision-making.

NEXT:

amongst the constituents there may be some which play a **nodalising** role:–

- these nodal constituents provide inputs to &/ or process outputs which *enhance the productivity of other constituents*; and where,
- *relatively isolated constituents without mutual input/ output links are at low levels of productivity, such nodalising units may enhance their productivity and initiate systemic development*;

ADDITIONALLY:

*the systems are not to be closed, that is, there will be external inputs for internal use, and internal outputs for external use:*

- constituents with inputs including external ones will utilise them to provide outputs which directly or indirectly serve as inputs to enhance the productivity of the other constituents; whereas,
- constituents with outputs including those for external use, utilise inputs which directly or indirectly are the produce of the other constituents;
- these constituents utiling external inputs and/ or providing outputs for external usage are interlinked directly/ indirectly with all other constituents of the system, and *hence also are nodalising units*

*It is evident that systems which are not closed but utilise external inputs for internal use, and provide internal outputs for external use are themselves constituent sub-systems of even larger systems.*

Such nodalising constituents in a sense characterise the system.

SYNTHESIS PROCESS:

as noted above optimal synthesis requires a production system comprising a relative homogeneity and commonality of interests which are fundamental to democratic decision-making:

the process of synthesis would require:

- a) persons directly elected to represent the systems as a whole, as also
- b) representatives of constituent units, including the nodalising ones, and thereby
- c) to feed-forward information on the sub-systems to the overall exercise and to feedback on adjustments in light of the overall process and thereby to *iteratively* arrive at an overall optimal.

The foregoing applies to multi-sectoral modular structures comprising interlinked sectorwise modular structures.

### **Nascent Modular Structures of Primary Economies**

many of my friends here have validated through their field work that economies related to various forms of organic primary production exhibit a nascent modular structure, for instance:

- economies formed by rural-labour, small peasantry, artisans & small producers show a nascent modular structure;
- agricultural labour in hamlets/ mohallas, for their daily wages, cover areas with a cluster of villages populated mainly by small/ medium peasantry – these areas are micro watersheds engaged in primary production;
- the agricultural labour and the small/ medium peasantry in such micro watersheds are linked to the artisanal-/ micro-unit concentrations and local bazaars at the kasabas;
- these kasabas are in turn linked to the local small towns.

### **Projections on Developing Modular Structures for Primary Economies**

one may project;

- development of micro watersheds enhancing peasant productivity and diversifying primary production for allied occupations and plant-based secondary occupations; and where
- these micro watershed development initiatives necessarily engage rural-labour organised by the nodal-agency developing that watershed;
- this nodal agency is part of a complex comprising
  - nodal operations/ processes which provide inputs for the watershed development, as also of
  - nodal operations/ processes formed because of enhanced peasant productivity and diversification of primary production for allied occupations and plant-based secondary occupations;

and since no arbitrary restrictions are to be imposed on scales of production technology:

- the nodalising complex is but the i/o linked foundation to a modular structure incorporating kasaba and/ or small town scale operations/ processes.

### **Necessary Conditions to Develop/ Realise the Projections**

my friends will agree that the ground level leather technology from a national laboratory has proved most useful in their field activities;

the creation of this leather technology came around through the joining of highly competent technologists and village level flayers and tanners with their heuristic knowledge.

it is evident that for the projections to be realised it is necessary that:

- the field activists have on hand the needed support and technological systems available to be developed/ adapted to their specific needs and conditions, and
- it is equally evident that the realisation of such technological systems requires the joining of creative persons –
  - persons who are technologically competent,
  - persons who are equipped with innovative organisational experience/ capability,
  - persons with heuristic knowledge of their techniques, of local resources and the needs of the other small producers linked to them;
- of priority shall be the nodalising interventions which enhance local productivity and facilitate the organisation of the rural workers and small producers

## **A Suggestion**

participants gathered here could perhaps be a catalysing nucleus.

this occasional getting together needs to be one of a continuing interaction and exchange; not only exchange, but cooperative interaction with active collaboration as visualised by necessary conditions;

one believes that this would be feasible on the internet like the cooperation among open source software creators

**as a first step one proposes:**

- **the use of available open source software to create a collaborative web portal**
- **a collaborative portal which develops into a source of open source software, open designs, open technology flowsheets, and open expert systems incorporating organisational attempts/ insights**
- **a collaborative portal which hopefully influences choice of research projects in institutes of education and vitalises and transforms NSS into a fora for bootstrapping concepts & praxis**

This portal has and will draw its inspiration from

the **Directive Principles of State Policy** and its **advancement through citizen initiative**; creativity of our **freedom struggle** including:

- **cooperative production** as extension of self-/ family-employed production;
- **Nai Taleem** as education in and through production to wholistically develop individual intellectual and productive capabilities;
- **development of domestic/cottage & village industries through application of scientific knowledge and method.**
- **analogue of Rachnatmak Karyakarta cadre** as agents of social change.