Structure of Society and of Livelihoods
Main-streaming or Community or Cultural-Cooperative?

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Agenda

Rural Transformation

- Urbanization, increasing dependent on small towns and cities for livelihoods and markets.
- Cultural integration and common values.
- Other than in cooperative or tribal pockets, *mainstreaming*!
- Stress and distress.

Social Innovation

- What or who constitutes society?
- Who should innovate and for what purpose and with what?
- State or Market or Cultural innovation? Community based innovation? Cultural products?

What is it doing?
What is it measuring?
What will it leave behind?

SHG, Federation, Cooperatives, Training, Convergence.

My conclusion:
Largely Mainstreaming.

Micro-finance. Safety net vs. productive assets?
Cultural Production for broader markets?
NRLM

- What is it doing?
- What is it measuring?
- What will it leave behind?
- SHG, Federation, Cooperatives, Training, Convergence.
- My conclusion: Largely Mainstreaming.
  - Micro-finance. Safety net vs. productive assets?
  - Cultural Production for broader markets?
Cultural Transactions: based on identity, class, prestige. Usually collective and historical.

Market and State: e.g., mediated either by Power and Money.

Intricate competition and a dynamic equilibrium between sectors.
# Economic Framing

<table>
<thead>
<tr>
<th>Producer</th>
<th>Unit</th>
<th>Consumer</th>
<th>Monetary Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Employed, BPL</td>
<td>Home</td>
<td>Large</td>
<td>Low</td>
</tr>
<tr>
<td>Casual, Informal Wage</td>
<td>Small Unit</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Educated, Urban</td>
<td>Formal</td>
<td>Small</td>
<td>Large</td>
</tr>
<tr>
<td>Cultural Production</td>
<td>Households</td>
<td>??</td>
<td>??</td>
</tr>
</tbody>
</table>

## Key Questions

- What and How will I produce? How will I sell?
- How will I train myself to deliver value?
- What are the hurdles to achieve these?
- What are my aspirations?
Hurdle 1: Basic Well-being and resources

- Basic issues of water, food, health and *living*.
- Severe stress in natural resources. *Fodder, Firewood.*
Stress

However, many village wells run out of water as the summer approaches.
When that happens...

- Women have to walk long distances, spend substantial time and effort.
- In some cases, tankers may be used by the district administration to supply water.
- access may reduce to 10-15 lpcd!
- adverse impact on incomes and well-being
Rural Maharashtra: 2001 and 2011

Percentage of Rural Households with Primary Source more than 500m away (2001)

Legend
2001
Away/Detailed
- <9%
- 9-12%
- 12-16%
- 16-18%
- 18-21%
- 21-24%
- 24-27%
- 27-31%
- 31-51%

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Hurdle II-Social Understanding

- Poor community understanding and comprehension of the role of the state and the market.
- Inability to identify and act for common good.
- PDS, BPL-APL, roads, drinking water and sanitation, school teachers, common lands.
- Outside the community-APMC, bank loans, public transport, dealing with ZP and tehsil office.
- *Inability to move from the house-holder to the citizen.*

Never taught, but it matters.
Typical Issue

Population Pressure.

Shahpur taluka: Population fraction under 6 yrs vs. literate fraction.
Social Cohesion

Shahpur ST fractions

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0
0 5 10 15 20 25 30 35
Hurdle-III: Poor Technical Efficiency
Trades
Even Farming-Horticulture

Importance of extension, access to market, coordination, land-use and contracts, community support.
Hurdle-III: Formal Education

The very basis of Social Transformation.

- Rural-Urban and gender divide.

<table>
<thead>
<tr>
<th>Table 8: NSSO (2011-2012, 68th round) statistics on household expenditure on education.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>Households with one studying male</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Number of Samples</td>
</tr>
<tr>
<td>Gini</td>
</tr>
<tr>
<td>Households with one studying female</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Number of samples</td>
</tr>
<tr>
<td>Gini</td>
</tr>
</tbody>
</table>
Hurdle-III: Formal Education

- Continued Polarization.

<table>
<thead>
<tr>
<th>Cohort</th>
<th>JEE 2011</th>
<th>JEE 2012</th>
<th>JEE (Advanced) 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Registered</td>
<td>Qualified</td>
<td>Registered</td>
</tr>
<tr>
<td>Village</td>
<td>19%</td>
<td>10%</td>
<td>19%</td>
</tr>
<tr>
<td>Town</td>
<td>29%</td>
<td>25%</td>
<td>29%</td>
</tr>
<tr>
<td>City</td>
<td>52%</td>
<td>65%</td>
<td>52%</td>
</tr>
</tbody>
</table>

Table 7: Rural-Urban statistics for JEE.
Hurdle-IV Formal Sector in trouble

Sector-wise GDP

<table>
<thead>
<tr>
<th></th>
<th>Agriculture</th>
<th>Industry</th>
<th>Services</th>
<th>Per capita ( in USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>India</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP (2012) (%)</td>
<td>17.4</td>
<td>25.8</td>
<td>56.9</td>
<td>1.5K</td>
</tr>
<tr>
<td>Employment (%)</td>
<td>51.1</td>
<td>22.4</td>
<td>26.6</td>
<td>-</td>
</tr>
<tr>
<td>GDP China</td>
<td>10</td>
<td>44</td>
<td>46</td>
<td>6.8K</td>
</tr>
<tr>
<td>GDP S. Korea</td>
<td>3</td>
<td>40</td>
<td>57</td>
<td>25K</td>
</tr>
<tr>
<td>GDP Germany</td>
<td>1</td>
<td>28</td>
<td>71</td>
<td>43K</td>
</tr>
</tbody>
</table>

Top Formal Employers

<table>
<thead>
<tr>
<th>Industry (Rs. lakhs)</th>
<th>Food</th>
<th>Textiles</th>
<th>Metals</th>
<th>Apparel</th>
<th>Non-metals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages</td>
<td>0.70</td>
<td>0.80</td>
<td>1.35</td>
<td>0.67</td>
<td>0.69</td>
</tr>
</tbody>
</table>
Food Sector

- Domination by MNCs
  - little R&D, imported know-how, few jobs, large profits, strict sub-contracting
  - huge spending on advertisements. Game-changing.
- Poor access to quality control, R&D. Poor trust in standards.
- Customer perception of quality and aspirational dysfunction.
Drinking Water and formal sector jobs

2012 Data - Person employed vs Water availability

- Employees per 1000
- Water availability
What to do?

- Livelihoods: A composite approach.
  - Careful look at Andhra Pradesh, Tamil Nadu, Himachal and Kerala.

Transition from Commodity to Cultural Goods

- Strengthen handicrafts, re-claim foods, extend to household products.
- Needs technical, social and enterprise innovation.
- Consumer and Citizen Choice: Towards a sustainable civil society.

- Governance: Water and sanitation, public transport, health.
- Knowledge Formation: Social comprehension and collective action, Extension, higher and school education.
- Level field for mainstreaming: Information asymmetry, standardization, access to markets, R&D.
CTARA Research and Training

Governance

Location of large rural regional drinking water schemes

Location of rivers and lakes

Data from MRSAC, Census 2001, District administrative offices
Socio-Technical Analysis

Intervention analysis


- **State** is usually an important elephant in the room, if not a direct player.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Intervention</th>
<th>Producer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household</td>
<td>Water Filter</td>
<td>Small Enterprise</td>
</tr>
<tr>
<td>Community</td>
<td>PWS scheme</td>
<td>Large contractor</td>
</tr>
<tr>
<td>State</td>
<td>Water Meters</td>
<td>High-Tech enterprise</td>
</tr>
<tr>
<td>State</td>
<td>Groundwater models</td>
<td>University/Consultancy</td>
</tr>
<tr>
<td>Household</td>
<td>Rainwater Harvesting</td>
<td>Small Enterprise</td>
</tr>
</tbody>
</table>
The areas of the future

- **SME and Informal Enterprises.** Bringing the benefits of technology, increasing efficiency, improving market access.

- **City and District Administration.** Improving planning, transport, infrastructure, logistics, optimization.

- **Core Sectors.** Water supply and sanitation, Electricity grid, Solar, Food, supply chains.

This would in turn create the demand for new instruments, gadgets, machines, tools for analysis and design, simulators ⇒ better engineering, better efficiency, better value.
Solar-steam based *istry* in Parbhani
Optimizing Irrigation in Shahpur, Thane
Processes at Ganapaty Factory in Pen
Thanks

[Image of a cart being pulled by two animals in a rural setting]