Knowledge, Society and Culture
for India as a developing people

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What we know

- Increasing inequality
- Climate change and increasing risk
- The role of science and technology
- *An emerging mono-culture!*
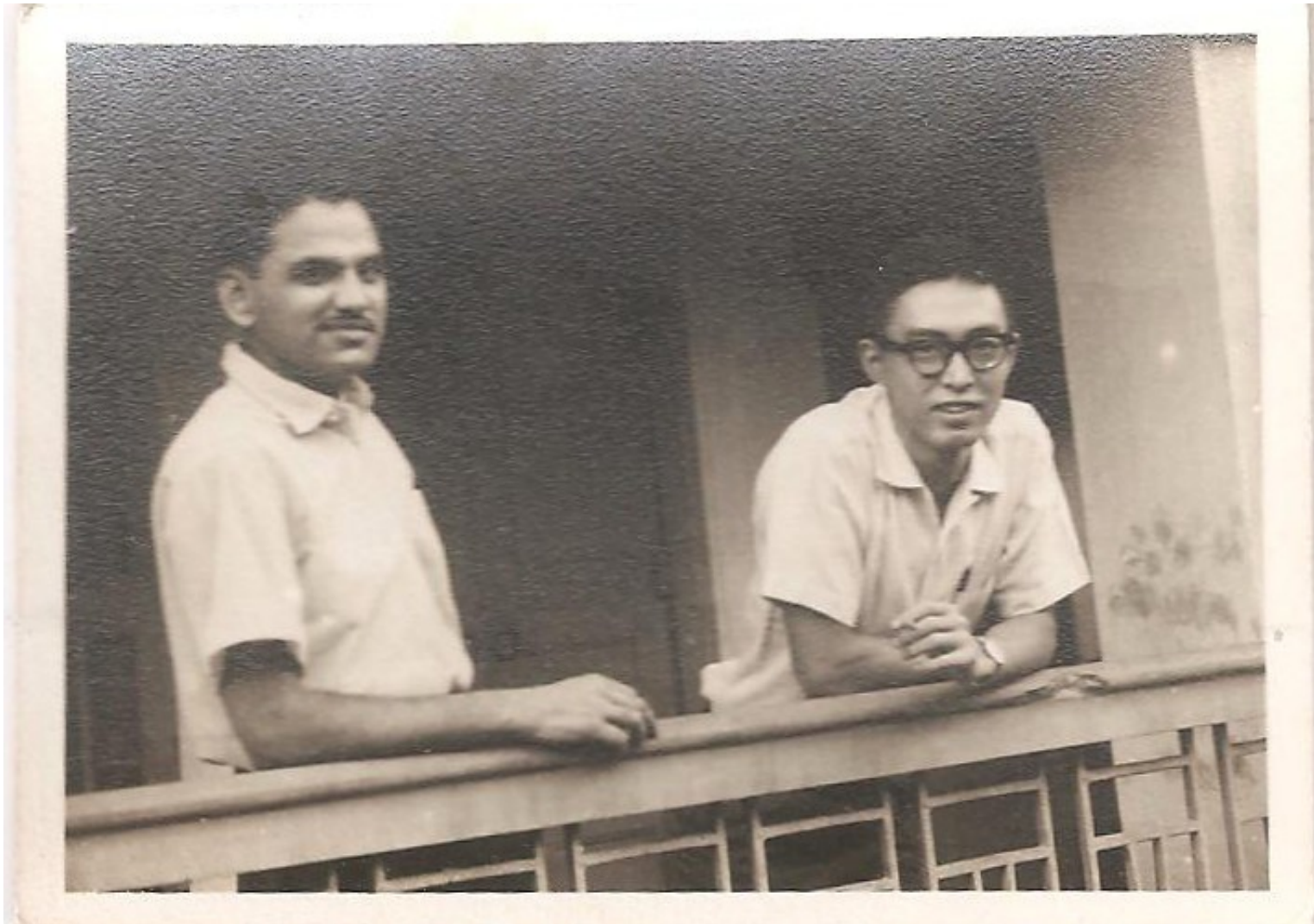
- Must Knowledge be conducted this way?

Today

- Types of Knowledge-personal and systematic
- The development question and how they fare
- *The role of culture- the forging of a new culture!*

- A personal (and un-publishable) narrative

50 years ago in Nasik
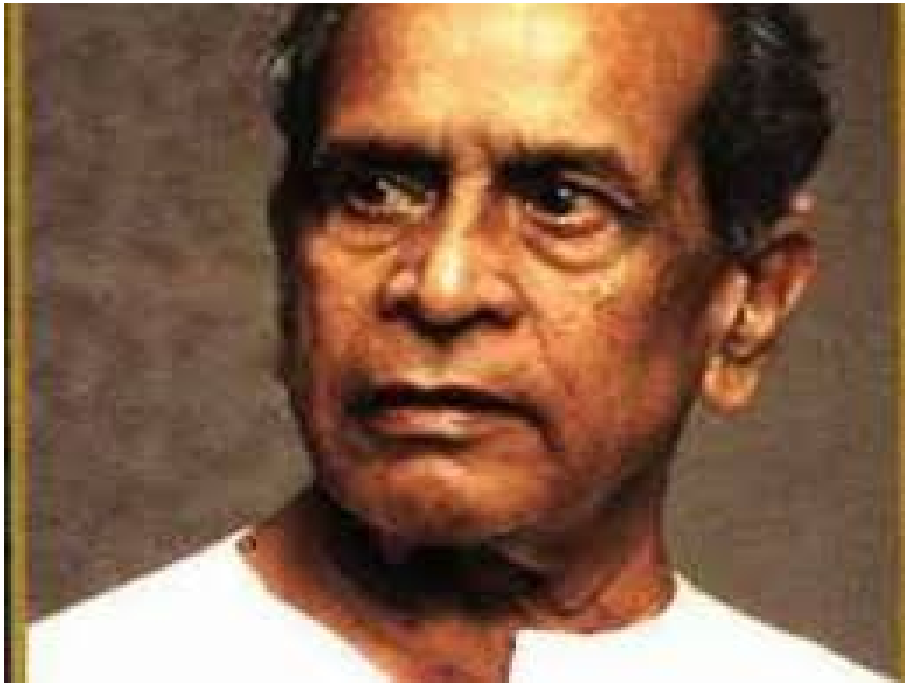
The Meticulous Engineer
The Meticulous Singer

What if I hide as a मोगरा in the माळी's (caretaker's) garden? How will you find me?

I will become a जाई. माळी baba will string us togther in a हार garland. That is how I will find you.
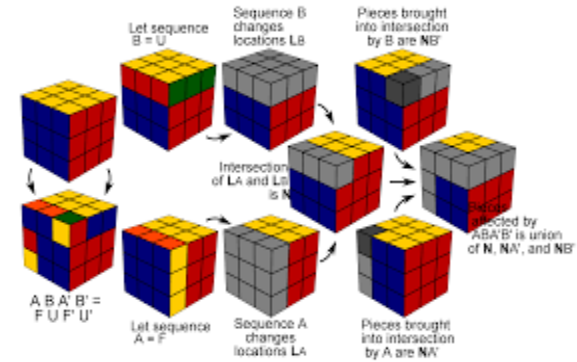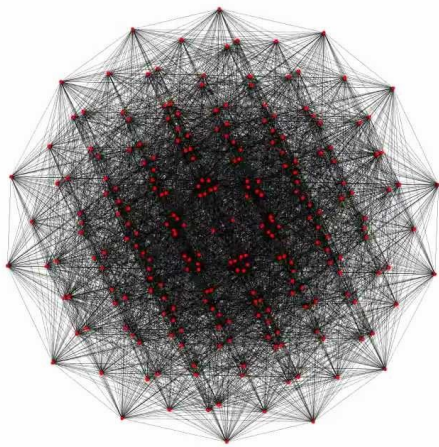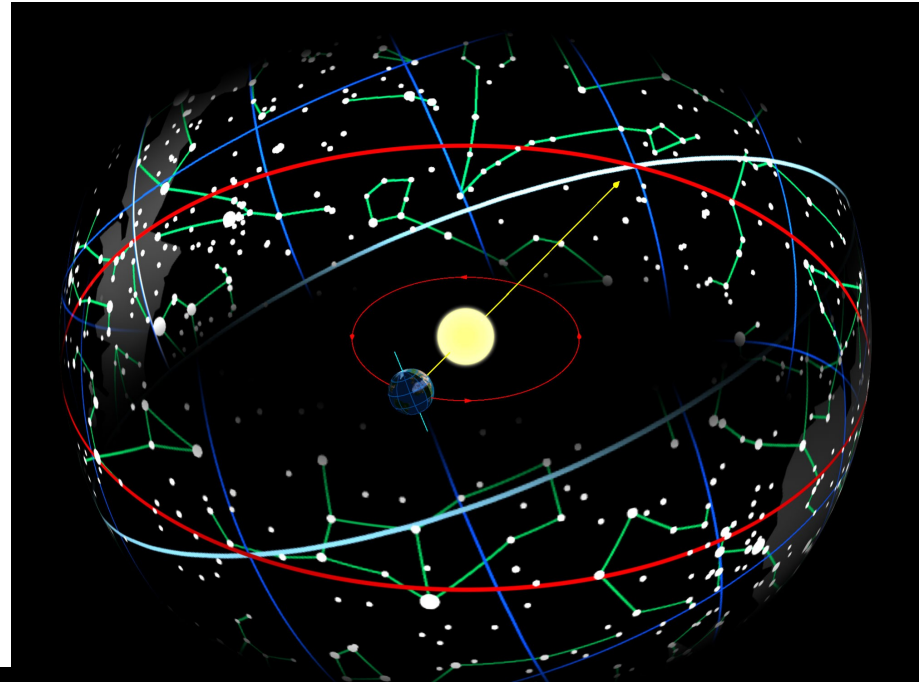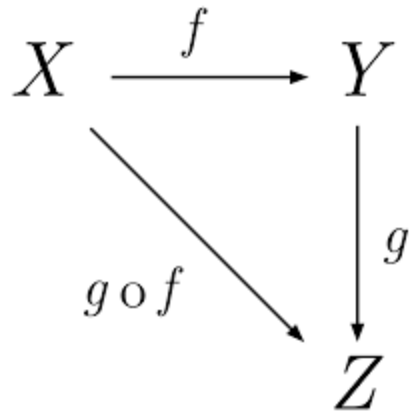
A saint

A listener in Mumbai

Structure and Correspondences

$$X \xrightarrow{f} Y$$
$$g \circ f \searrow \quad \downarrow g$$
$$Z$$

Let sequence B = U
Sequence B changes locations LB
Pieces brought into intersection by B are NB'

Intersection of LA and LB is N

A B A' B' = F U F' U'
Let sequence A = F
Sequence A changes locations LA
Pieces brought into intersection by A are NA'
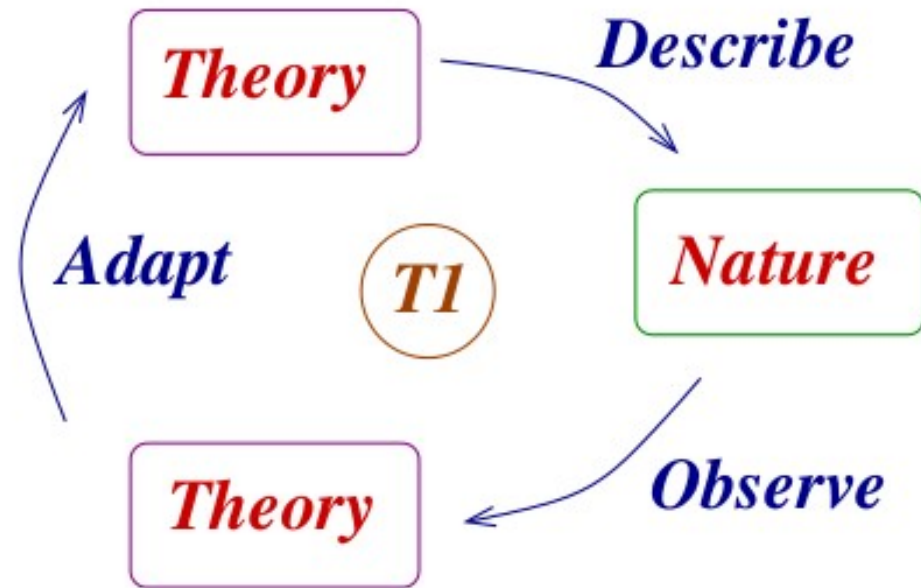
ected by A B A' B' is union of N, NA', and NB'
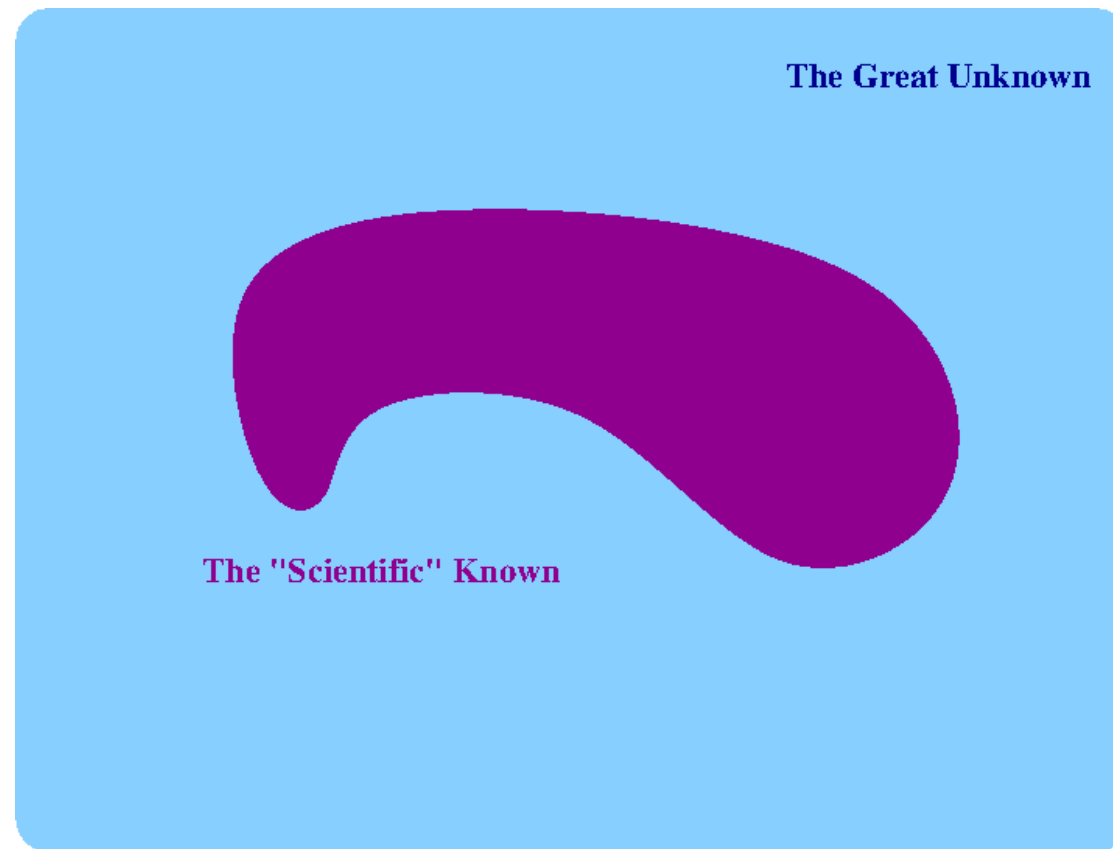
At 17

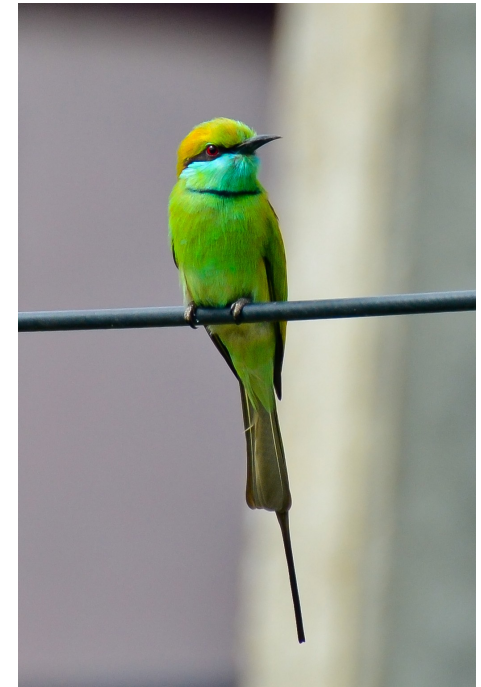54 kilos, three *personal* representations
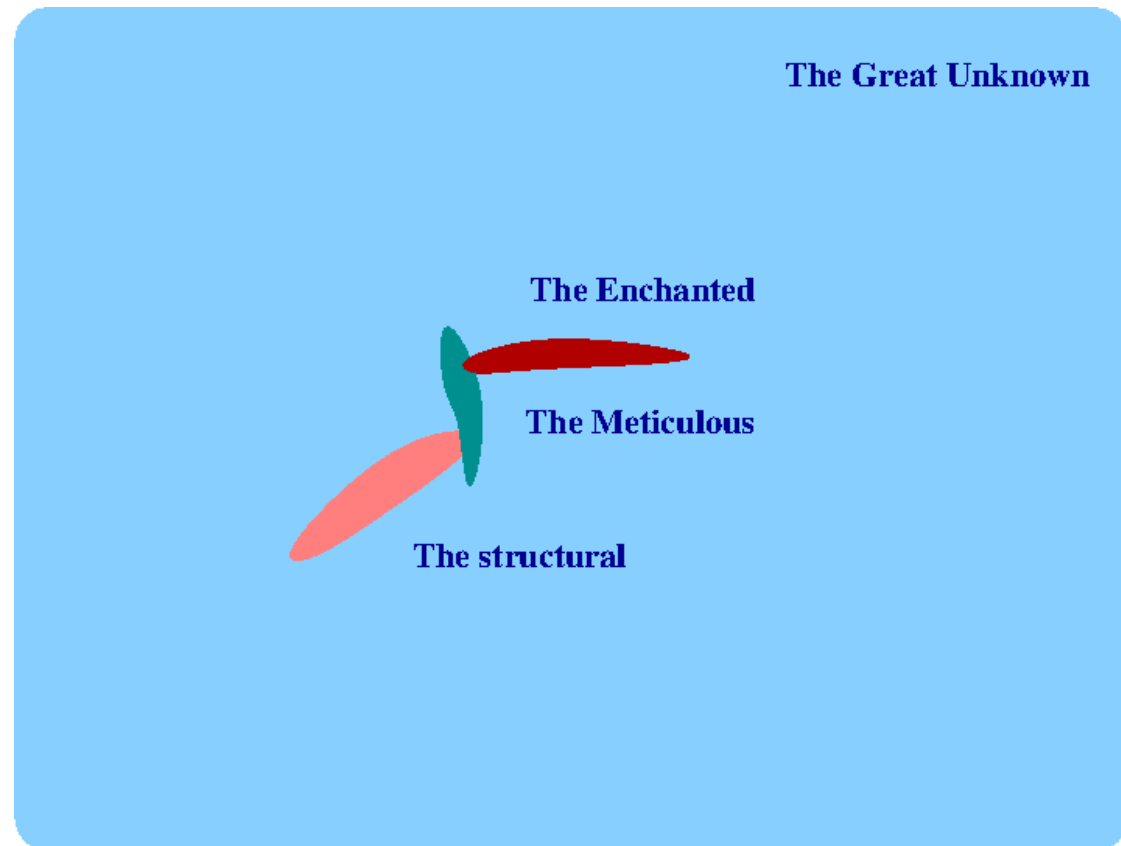
Science

Properties
- Outcome- Theories, causality.
- Leads to technology
- Social content-Aesthetics and argumentation
- Systematic-expensive experimentation

Big Science

The Great Unknown

The "Scientific" Known

Natural History

The culture of natural history

Treks

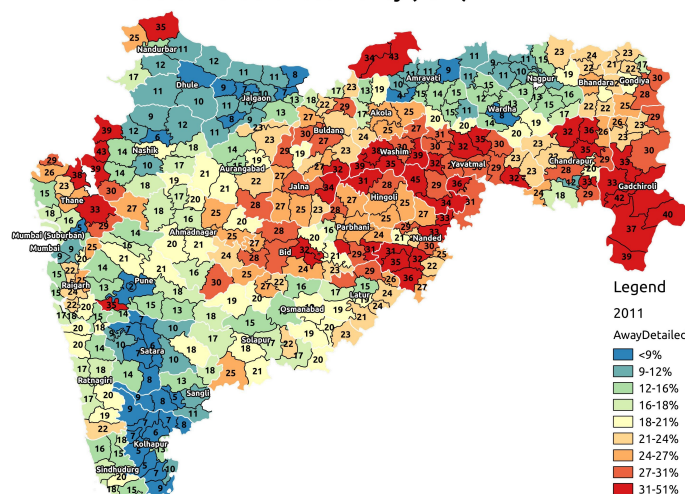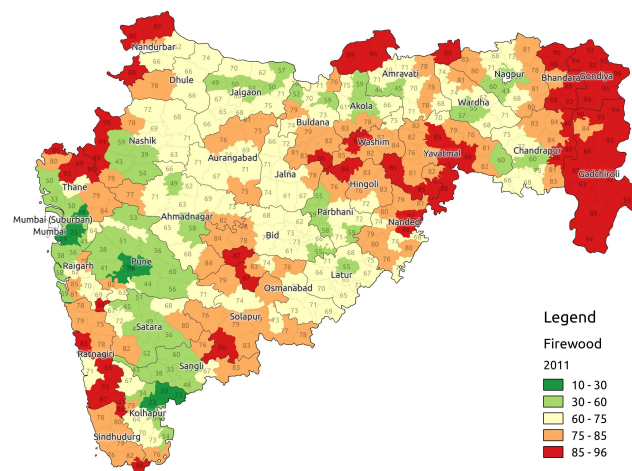# After several years

How do we explain this?

Severe stress in key areas

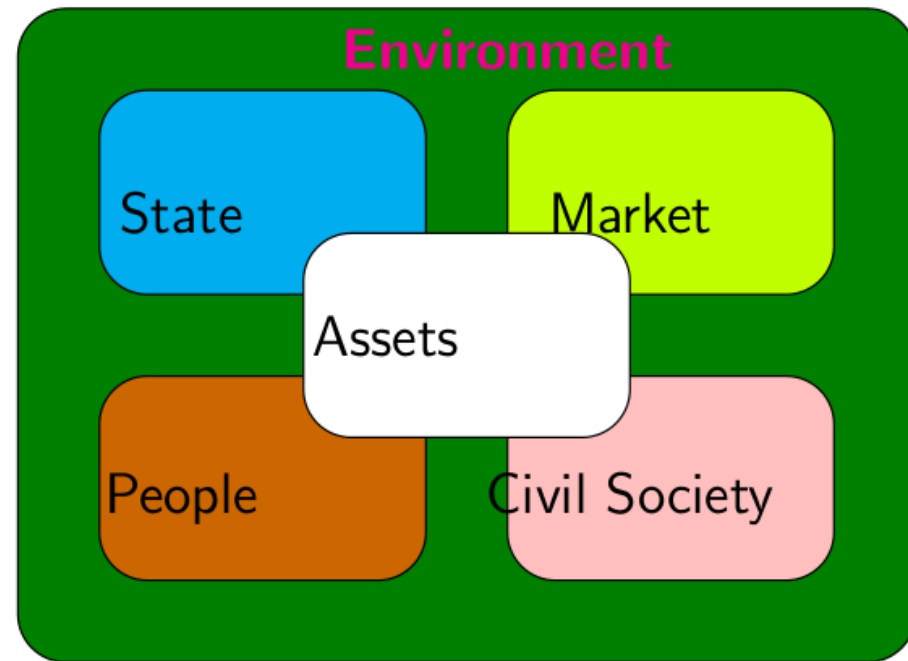Percentage of Rural Households with Primary Source more than 500m away (2011)

Legend
2011
AwayDetailed
- <9%
- 9-12%
- 12-16%
- 16-18%
- 18-21%
- 21-24%
- 24-27%
- 27-31%
- 31-51%

Percentage of Rural Households cooking with Firewood (2011)

Legend
Firewood
2011
- 10 - 30
- 30 - 60
- 60 - 75
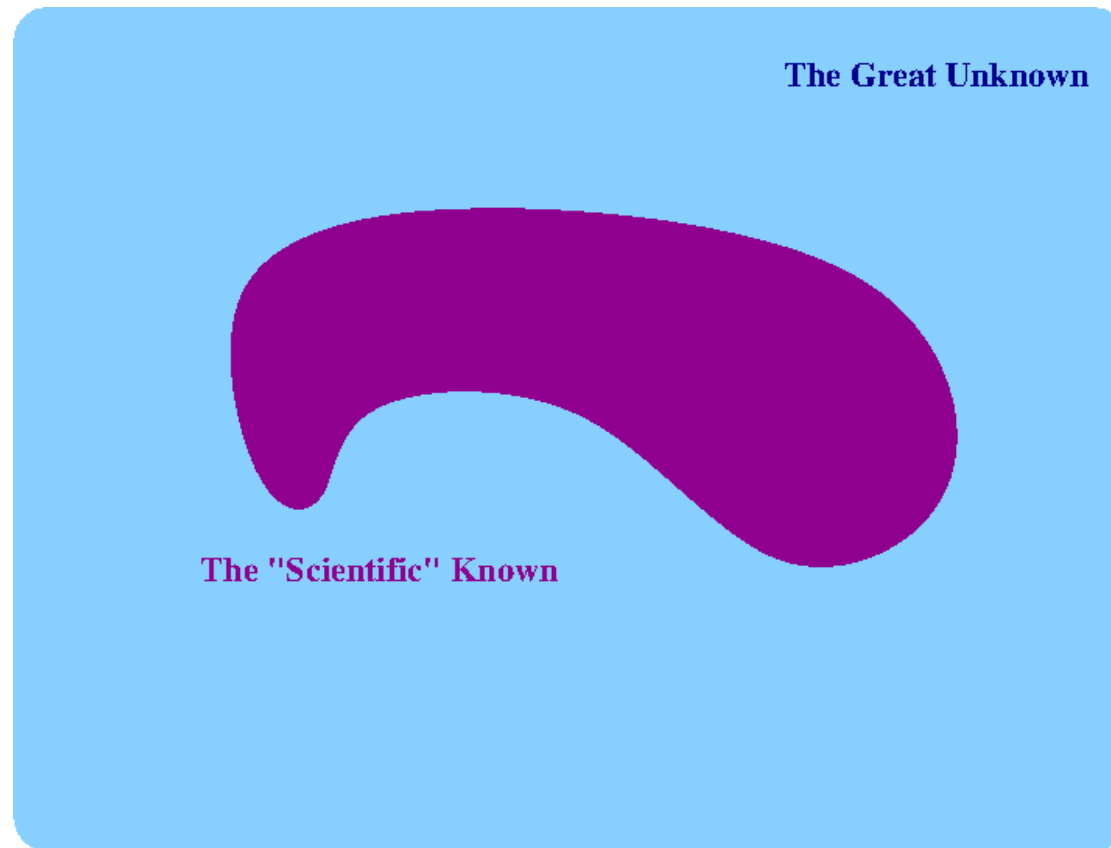- 75 - 85
- 85 - 96

Society
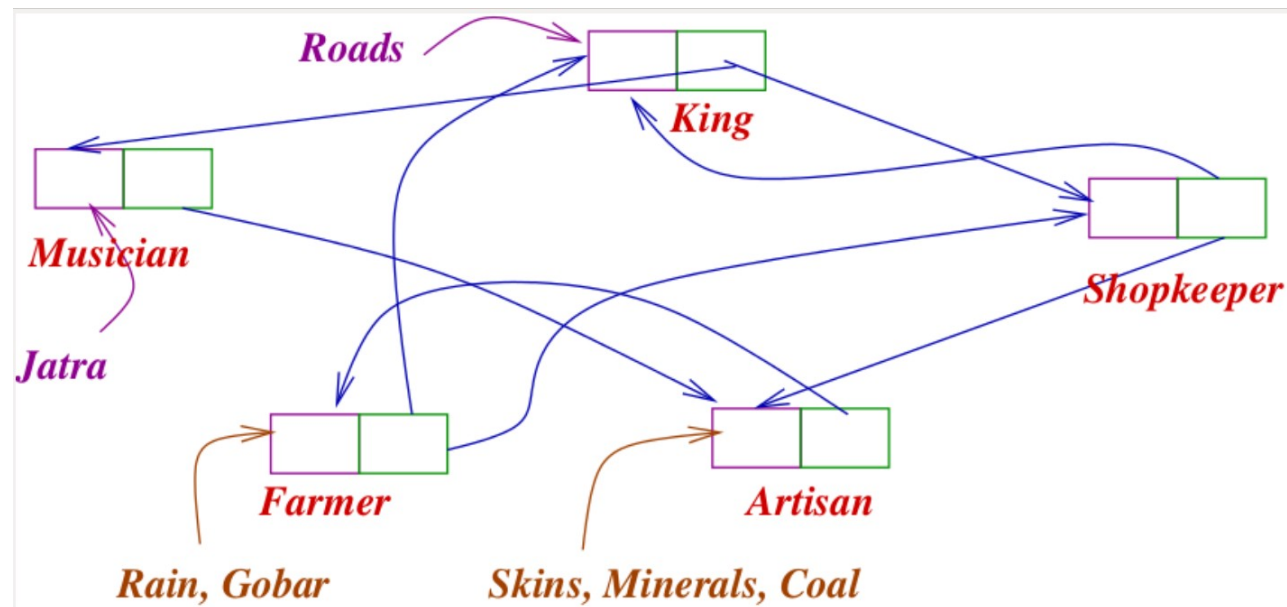
Agents
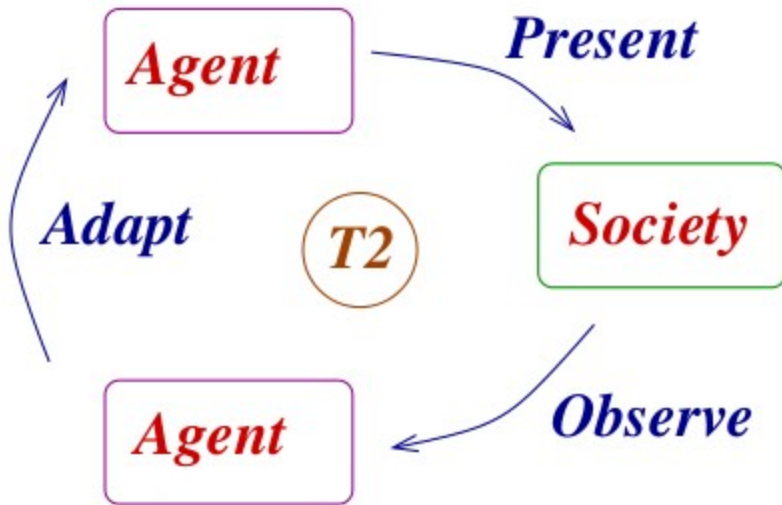
Knowledge

Sound and Rigourous

- A pays B to deliver to A
- A pays B to deliver to C

- Examples Cobbler-Teacher-Tehsildar

Ask the scientist

Everything is known!

- Scientist-corruption, backwardness
- Social Scientist-class, gender and caste
- Economist-market failure

But is this true?

What is science made up of?

Subject of science

Combustion, nano-electronics

Process of science

skills of observation, documentation, argumentation, experimentation

- New experiment

- *Which is the best chulha in the village?*

Dhaulvalli

What happened

- 7 wadis, 5 best chulhas-lots of arguments
- Boys and girls visited each other homes and took measurements
- Lead to better chulhas? Role-models?
- *Separate the cultural from the scientific?*
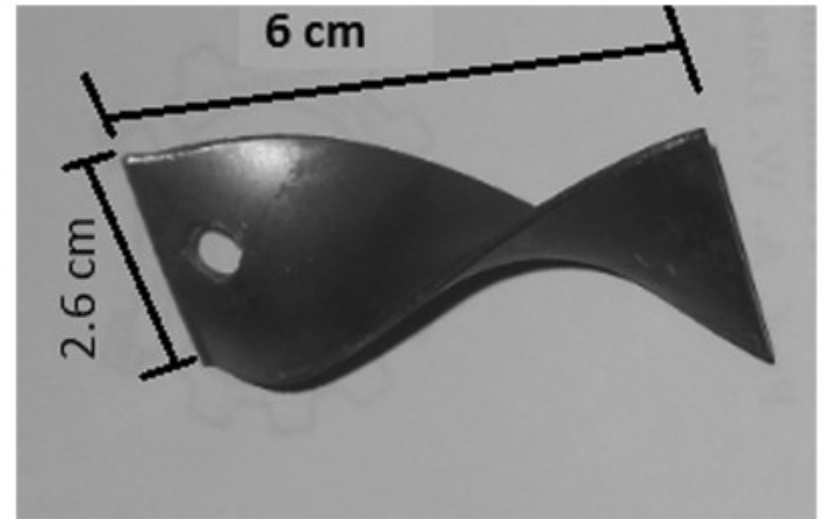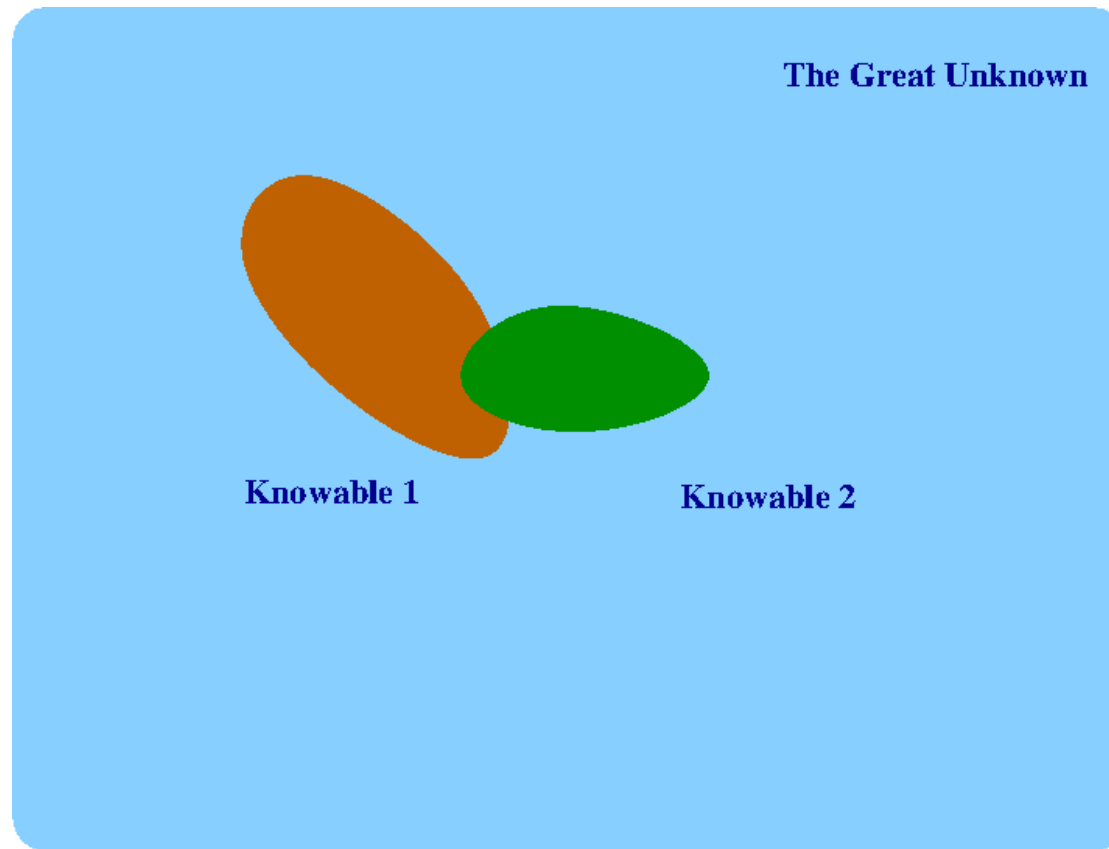
CTARA's intervention

Twisted tape pack.

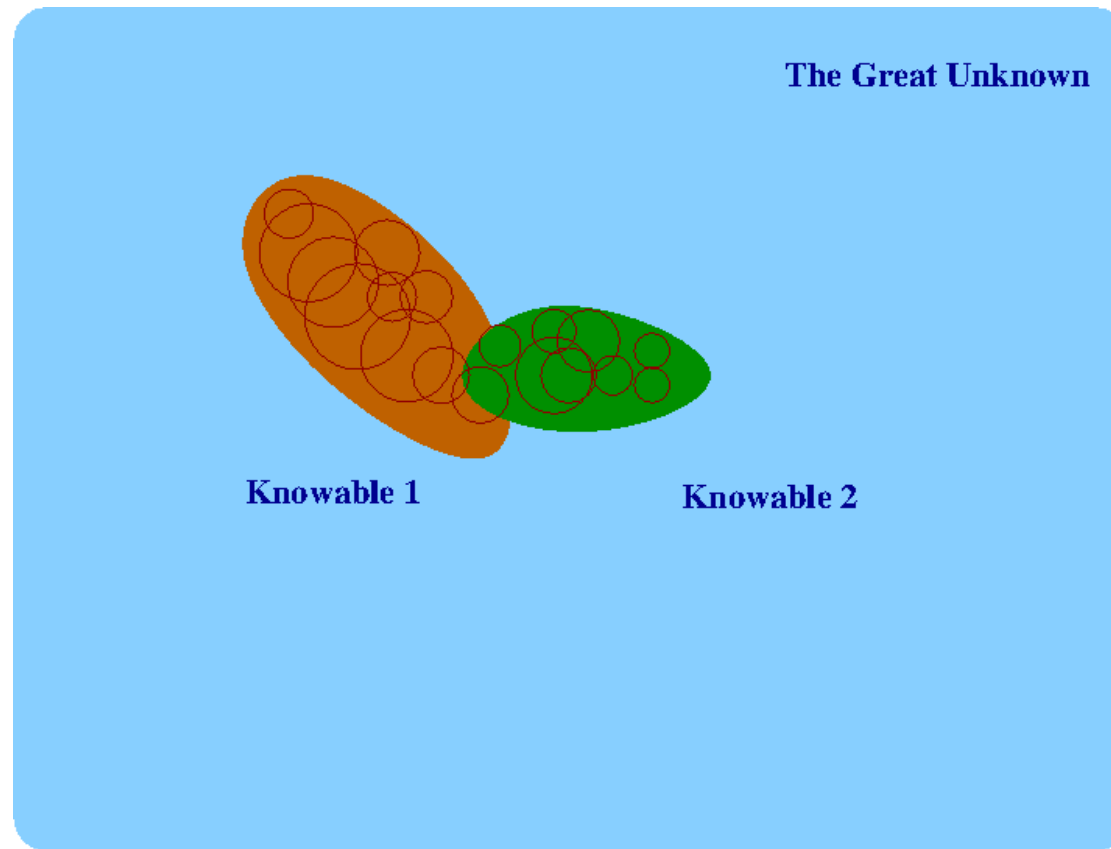**Figure 5** A twisted mild steel plate.

6 cm

2.6 cm

Increased efficiency, less soot.

In fact...quite possibly

In fact...quite possibly

Another System-Markets

Markets

- commodity (utility)
  not cultural artefacts

- Money-price as signal
- anonymous, instantaneous, ahistorical

- *Beliefs*
- Rational and fair
- Efficient

How does it play out

Hindustan Lever
2014 Annual Report

Revenues	27,000 crores
Profits	3,000 crores
Sub-contract	9,000 crores
Salaries	1,500 crores
Transport	1,500 crores
Royalties	900 crores
Marketing	3,000 crores

- *Packaged Wafers* Rs. 5 for 30gm, Rs 8 for 50gm

- Money going out-coming in as dole or low prices for rice

How do we reverse this?

Can women of Dahulvalli not make wafers?

Quality, Hygiene-better machines and processes

Trust, confidence, role models

Same as what runs community services!

How does a community serve it self better?

What runs the modern Big-System?

Branding
- Support to mobility
- Suspension of discernment
- Eventually consumable, part of identity

- **Elite Agency**
- Highly productive systems: clever people to operate.
- Elite Agents-iconic scientists, innovators, artists
- Elite identification
  - Harvard, MIT, IIT, UPSC
- Put In charge of big systems
- **All benefit!**

In Reality

- Wasteful, Unsustainable, inequality wired-in

- Aspirational dysfunction, inimical to community action

- Turns the rest of us into alienated consumers

- Loss of empiricism. Loss of coding and transmission of knowledge. **Loss of culture!**

How does a community serve it self better?

- More diverse roles for the familiar
- More give and take across time, more history
- More comprehension
- **More practice and culture!**
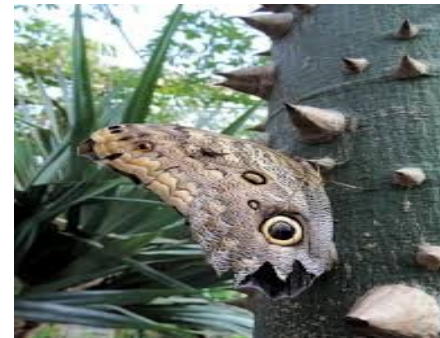
What to do?

- **Massive Decentralization right down to taluka level-governance, higher education**
- Give people back their language, their *shastra* and their *sahitya* and *its methods*
- Human practices and empathy as the guide to teach social and physical sciences
- Comprehension of the structure of society
- **Rehabilitation of the seasons and natural history**
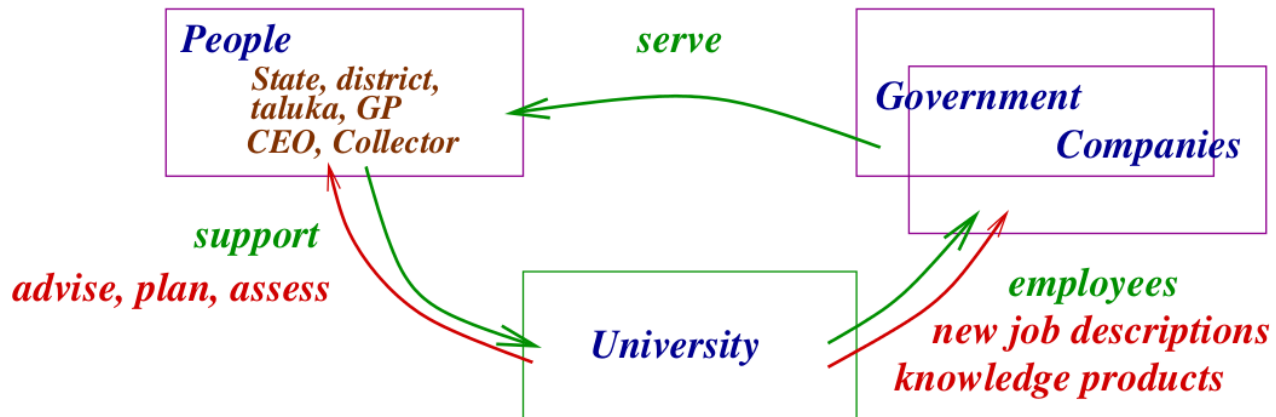- Production of role models

Different interpretation of agents and knowledge
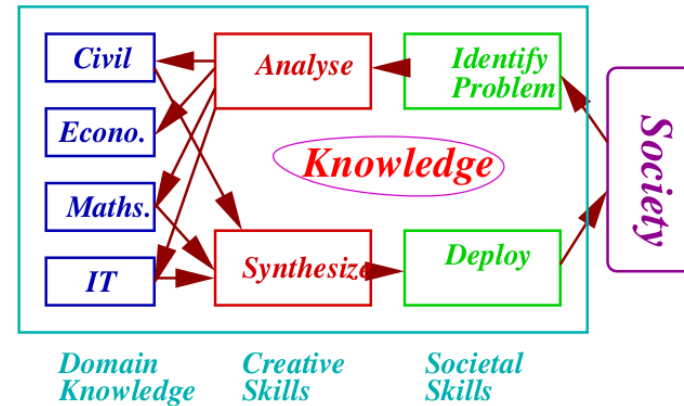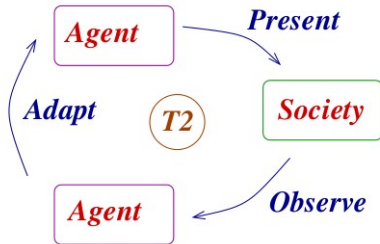
Different Vision of the University

University-The Current
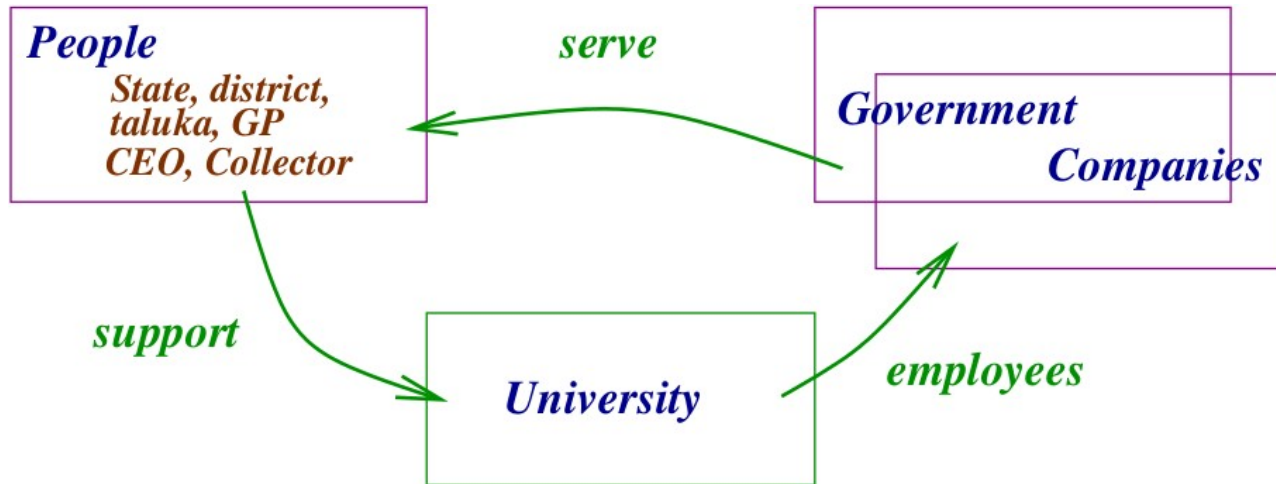
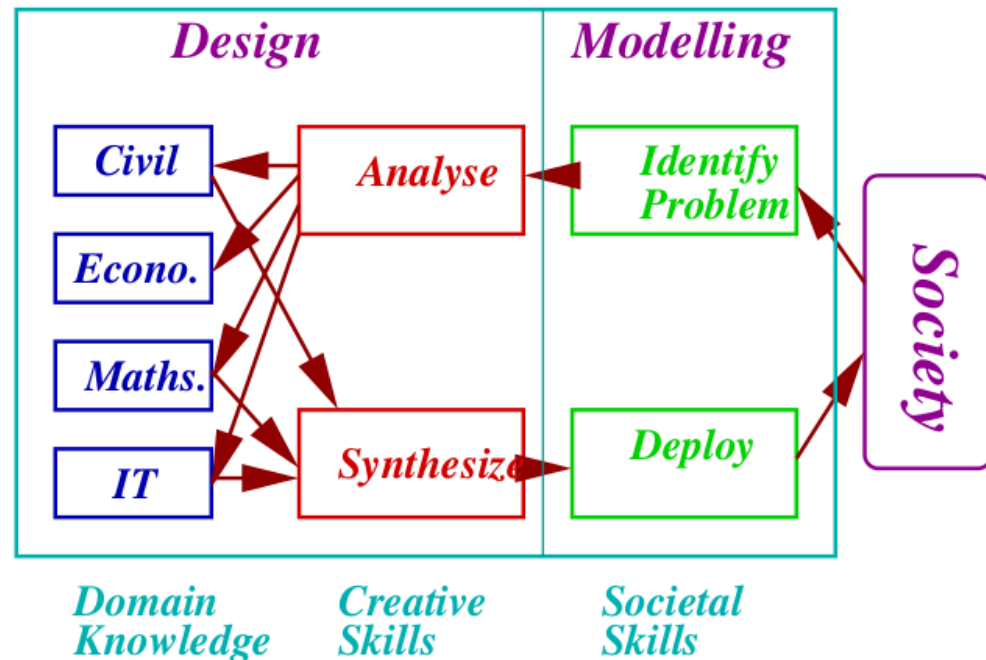## A modest beginning: University-as a civil society institution

The Knowledge of Engagement

The Design of CTARA

- A new direction and not in opposition

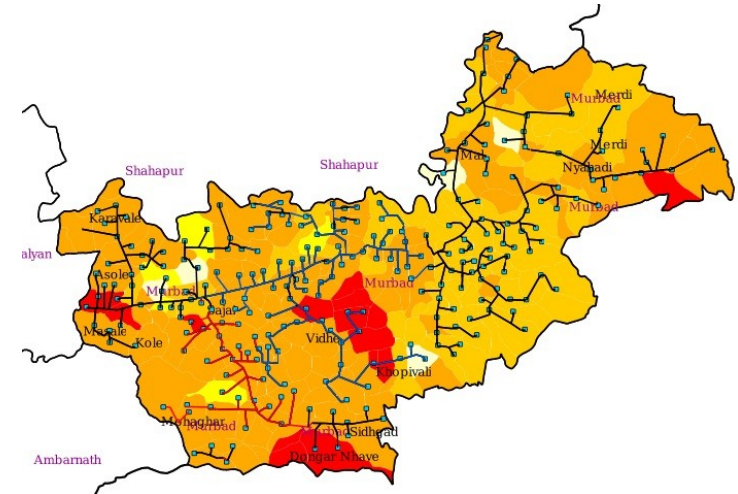- A recipe for the bottom 80% to serve themselves

- *Very clever!*

New Knowledge, New Mechanisms

Core values: Problems of the bottom 80%. Deliver value!

Professional Programs: inter-dsciplinarity, field work, development perspective and core sectors
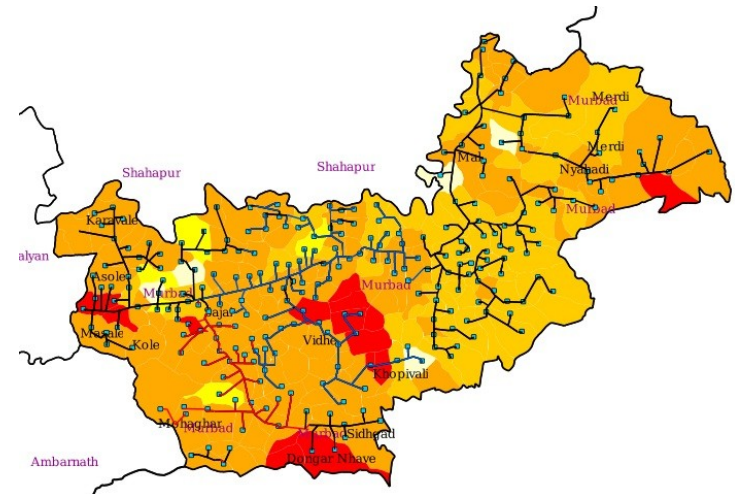
Creation of the Development Professional

Areas of work

Core sectors: Water, Agriculture,Energy,Environment

Concrete problems: Engagement, case-studies.

Plans, designs, feasibility studies, analysis, gadgets, systems.

Ultimately-Towards a convivial society

- *The personal-experiential*
- *The systemic-methodological*
- *The subject matter-practices*
- *The mystery resolved-**choice!***

- *But there is only one way-Culture as growth*

- <u>A Human Weakness</u>
- More secure, More certain, less drudgery=agriculture
- Inherent bureaucracy
- **Culture of the government servant!**
- ***Allure of the big system***

Finally, at the personal level

***Re-enchantment*-Hard Work**

Thank You