

Chapter-1

Prologue

Entropy begets our universe, thanks to the big bang, the extremely squeezed and mammoth intense, mass suddenly erupts and energy keeps unleashing, the ticking of time starts. The balance between mass and energy keeps changing with the advent of time and expansion of space. The Boson and Higgs particles are becoming the basis of universal entropy.

As the universe goes on expanding towards infinity following the Big Bang, the time starts happening. The extreme grace and glory of energy-matter dialect has made the universe beautiful and formidable, infinite and extremely finite in the frame of a horribly consolidated mass that did not allow even a photon particle to jump out of a 'Black Hole.' In travel, matters keep rushing towards infinity by favoring its transformation into energy and at the same time leaving behind of expansion of space is the history of birth and death of stars and in between there lays a trajectory of equilibrium to non-equilibrium and non-equilibrium to neo-equilibrium. Extension science deals with energy flow in a confined social energy which always keeps trembling with 'lost energy', the energy apparently goes un-accounted for.

The second law of Thermodynamics postulated this residual energy retained in the form of entropy, a gap between energy lost and work done. Since, it has been an irreversible transformation from matter to energy, the entropy can never be reduced or eliminated, but can be kept at least at a manageable level. This will go exponentially while no measure would be taken to control the unabated transformation of matter into energy.

In one social system, motivations are unleashed through education, training, stimulation and simulation. These motivations have got a gene base as well as psychological nature. When one is motivated he/she supposed to unleash latent energy base. But many a time, the motivation released and goal accomplished is creating a chasm in itself.

When knowledge is imposed, motivation is impoverish and action is imitative, the social outcome is supposed to be and exposition of disorderness/Chaos after a certain point despite of its quantum achievements. The present study is basically a concept paper on social entropy an analogy of principle of Thermodynamics that has been applied herewith.

The whole of Indian farming system is undergoing a complex change process which is complex, polymorphic and dynamic in nature. The transformation of ecology needs an ongoing equivalence irrespective of physical, biological and social ecology. In physical ecology the most important movers are matter and energy. In biological ecology the respective

determinants of genetics and metabolism for the social ecology of course the important determinants are motivation and intelligence.

While motivation is basically the unleashing of internalize forces, a directed release of inner drives it involves energy equivalence and energy dictum. A huge pile of works have been conducted to study and estimate the eco dynamics of physical and biological ecosystem, for social ecology. These kind of study are not yet accomplished that much yet.

The modern concept of extension science is basically based upon the dynamics interplay of knowledge and social space the concept and the commodity, the discourse and dicta, the auditing of social energy is an essential component of social metabolism in extension science. While quintals of fertilizers represent not only Nitrogen, Phosphate, and Potash, it includes calorie equivalence which is the energy outcome of a complex industrial process. On the other hand the quantum of human labor when deployed in the production process of farming system, it does not involve on the quantum of wages in economic parameter, but also involves the calorie equivalence which has got both economic and ecological values. So, adoption of technology *vis. a vis.* its complex socialization process does not estimate the percentage of say NPK use, but the level of energy it is either generating or pumping in from an into an ecosystem. Here social ecology per se. Social functions of dynamics manifestation of social system operation, perceived in terms of economic function, technological function, political function and cultural function. A technology is basically a thematic means to meet a social need. Here lives the confusion between conceptualization and commoditization when technology comes as a concept, it needs to be supported by commodity and when a concept is commoditized it needs a socialization process.

Now what are the possible responses to replies of proposed technology socialization process? The adoption of the prescribed concept may be rejected outright due to its inherence non compliance. The other reason may be, when a concept is floating into or through a cluster of social echelons. It generates bits of multicolor perception consisting of justified rejection, confused rejection, impulsive adoption, strategic rejection; diffused rejection; discontinuance with a hunt for a better choice, discontinuance with an intension to providing a deterrence against possible damages or discontinuance for generating plethora of options for a comfortable technology socialization process to usher higher economic benefit secured and decentralized livelihood,

making ecological surrounding more supportive and synergistic.

These multicolor ripples of socialization process consisting of adoption, rejection, discontinuance, reinvention, refinements ramifications or retrenchments of a prescribed or deemed Technology socialization process are creating what we call a social metabolism *per se*.

When a technology is rejected, it can have three possible social and psychological energy consequences.

- a) It protects the social ecology from an inevitable entropy due to the entropy of an 'exotic' technology into an endogenous social ecology;
- b) It can invite a better technological resonance through a descent and effective replenishment;
- c) It can add a space to the Technology socialization process by adding more logical alternatives to what is operating at the level of Technology socialization process.

Social entropy is basically conceived in the pursuit of social system theory wherein it keeps on adding more chaos and disorder in a given social ecology to be branded as social entropy. Here Social entropy has been postulated as the social gap between motivations unleashed and works done or accomplishment made. When the entire amount of motivation released through Training, education or simulation is not consumed through a proportionate accomplishments, which will lead to a kind of social ecological dissonance. The villages cannot be perceived as a dumping ground of agrochemicals or exotic commercial ideas and if done so, after a yawning gap between motivations unleashed and works done, that perhaps lead to a stressed and chaotic situation in the social ecology leading to a social isolation even to committing suicides. Any kind of intervention leading to unleashing of motivation must have won initial audit on its in built chaos or entropy if any. A system having intensive disorder cannot be persuaded for receiving an extensive order and in most cases, which are 'foreign' *vis. a vis.* 'externally innovated'

The present study has been designed to estimate the comparable socialization *vis. a vis.* entropy status between two villages from two different states, Ghoragachha from West Bengal and Chiroura from Bihar. It has been done so with a presumption that the village Ghoragachha has already gone a profile of modernization process increasingly exposed to stimulus of modernization in the form of ratification method, rural communication, a good history of clustered irrigation system, wider exposure to supply and agricultural marketing system and a blessed proximity to agricultural university. On the other hand, village Chiroura has just entered the process of modernization and passing through primary levels of inputs socialization, sporadic connectivity of electricity and

spattering level of modern input application. Now, quite logically following can be the axiomatic structure of the study;

- a) Does the level of modernization in agriculture has let us know a status of increasing confusion as well as dissonance especially for the village Ghoragachha, wherein 'basket of choices' has almost been depleted.
- b) Does the increase of cropping intensity will level a higher level of dissonance reason, being increase of cropping intensity meets change of cognitive level of modernizing farmers and chances of argumentative disclosure of proposed techniques have gone up.
- c) Within the Social entropy in both the social ecology viz. Ghoragachha and Chiroura have been contributed by unplanned and sporadic modernization and it has got ancillary effect on increasing dissonance, confusion, withdrawal, rejection, discontinuance, disagreement, conflict etc.
- d) Is it possible to design a model social entropy by successfully combining the analytical outcomes of the contributing factors leading to social unrest and dissonance?
- e) What are the policy implications in extension sciences, wherein Technology socialization process is now facing either the brunt of resistance or the drift of indifferences towards what we call Technology modernization in farm based social ecology.

With this background, specific objective is drawn up to organize the entire space and pace of study under the entitlement of 'Social Entropy and the Process of Technology Socialization in Extension Science.'

And the following the general objective have been carved out as follows

1. Development and elucidation of concept on Social Entropy and Technology socialization.
2. To identify, customize and optimize predictor and predicted variables for conducting empirical studies in social entropy and technology socialization process.
3. To estimate the relation and interaction of different selected variables of both inter and intra level in relation as well as interaction.
4. To device some policies implications from this empirical study as applicable towards managing social entropy and standardizing Technology socialization process in the realm of function of rural system