



Mutual Acceptance — An Arena of Implementation Science

Suman Ranjan Sensarma
Graduate School of Engineering
Kyoto University
JAPAN



Follow-up the Previous Work...

Muneta Yokomatsu, Suman Ranjan Sensarma (2005):
Normative Solution in Implementation of Disaster Risk
Management: Thinking in Public Economics & Game
Theory

Review on Chenta Gopalakrishnan & Norio Okada (2004):
‘Reflection on Implementation Science’
Mutual Acceptance & Implementation Science

Schematic Plan : The Ongoing Research Work

- Several questions have been raised for further research in this concept (2005).
- Some thoughts on Mutual acceptance: **Game theory and beyond** - with the references of the presented papers in the past IIASA-DPRI Conference (2006).
- Hypothesis , Models and its applicability in the real world context (2007).

Academic Reviews of the Past Studies (IIASA-DPRI Conferences)

Maiko Sakamoto, Yoshimi Hagihara : A Model Analysis
Social of the Social Group Conflict, 2002

- A mathematical model is built-up to analyze social conflict and to see what kind of equilibrium states could occur.
- This model is applied 2- players (group) conflict of the Nagara river weir problem.
- The probability changing process is modeled by ‘replicator dynamics’.
- To analyze relationship of equilibriums and characteristics of group process.

Academic Reviews of the Past Studies (IIASA-DPRI Conferences)

Hiroyuki Tamura : Modeling Ethical Conflict Resolution For Planning a Safe, Secure & Reliable (SSR) Mega City, 2002

- Behavioral models of decision analysis in group decision making is described.
- Attitude on the preference depending upon the disutility level of the other conflicting decision makers.
- The consensus formation model.
- The enterpriser of a public project and the regional inhabitants regulate and adjust their opinion with each other for realizing better social welfare.

Academic Reviews of the Past Studies (IIASA-DPRI Conferences)

Suman Ranjan Sensarma, Norio Okada: Modeling the Mountainous Community Disaster Mitigation Conflict Resolution Process: A Case Study of Ichinose Community, Tottori Prefecture, Japan, 2005

- To model the multi-stage conflict resolution process to systematically describe the process of changes in the structure of this conflict.
- The role of information and sudden social shock (as a natural disaster impact) can be interpreted as a cause of the structural change of the conflict.

Academic Reviews of the Past Studies (IIASA-DPRI Conferences)

Komal Raj Aryal, Shuresh Bhattarai : Environmental Disaster Risk, Political Conflict & Governance : A Case Study From Nepal, 2005

- Conflict situation in Nepal in the context of development, disaster management & political dilemma point of view.
- The undesirable performance of the government to control the conflict.

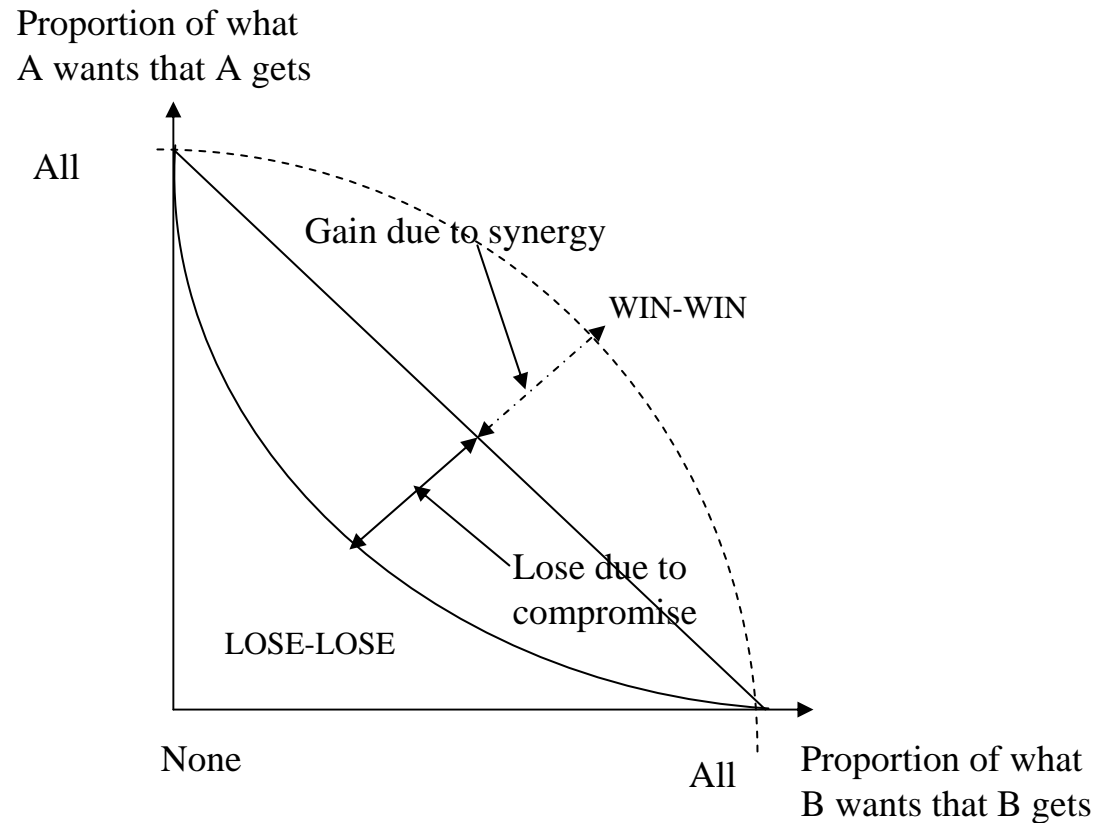
Mutual Acceptance

“From a global perspective, the idea of mutual acceptance is central to the success of implementation in the disaster management arena” “mutual acceptance will pave way to better dialogue among bureaucrats, technocrats and implementers at the grassroots levels. ”

Gopalakrishnon, Norio Okada (2004)

- The last year, I have raised several questions regarding the possible applicability of mutual acceptance in the light of Game theoretical approach.
- Basically there are two approaches to study the conflict and mutual acceptance.
- On one side is mathematical approach-Game theory and on the other side is non quantitative approach to understand the human behavior in the arena of mutual acceptance.

Game theoretic Approach...



Gains in collaboration

The famous **Nash bargaining solution** refers that no action taken by one of the individuals without consent of the other can affect the well-being of the other one.

Nash bargaining solution based on fare assumptions that two individuals are **highly rational**, they are **equal in bargaining skill** and each has full **knowledge** of the tastes and **preferences of the other**.

Game theoretic Approach...

- The three main assumptions have been granted in the Game theory to analyze the conflict and bargaining :
 - Players have the perfect knowledge
 - Players have the power of representability
 - Players have the power of execution
- But in the reality the real player seldom plays a game.
- Very strong assumption of the rationality is the another problem in Game theoretical approach.

Extended Game theoretic Approach...

Hypergame & Mutual Acceptance

- The Hypergame idea originated as a response to overcome some of the practical difficulties in Game modeling.
- To design a modeling approach acknowledging that parties in conflict are liable to define the **world in different ways**, and see different issues to be important-an alleged neglect of which was central to **received criticism** of the classical theory (P.G. Bennett,1984).

Contingent Game theoretic Approach

- The process of conflict resolution and mutual acceptance is a path dependent property.
- Okada and Sakakibara (2004) proposed a Contingent Game theoretic approach to model the conflict in terms of **scoping**.
- **Scoping** is a mechanism of coordinating among players to develop and share **a common perspective**.
- The player's **capability** to represent their interests and to **execute their action** has been addressed in this approach.

Beyond Game theory...

- The strict rationality of players has been widely criticized by different scholars.
- Often the real world problem is not very well structured
- In the Post modern era , we may interpret the conflict and mutual acceptance more on contextual point of view.
- Player's strategy depends more on contextual fact like, **emotion, tension, perception** and the socio-cultural background.

Beyond Game theory...

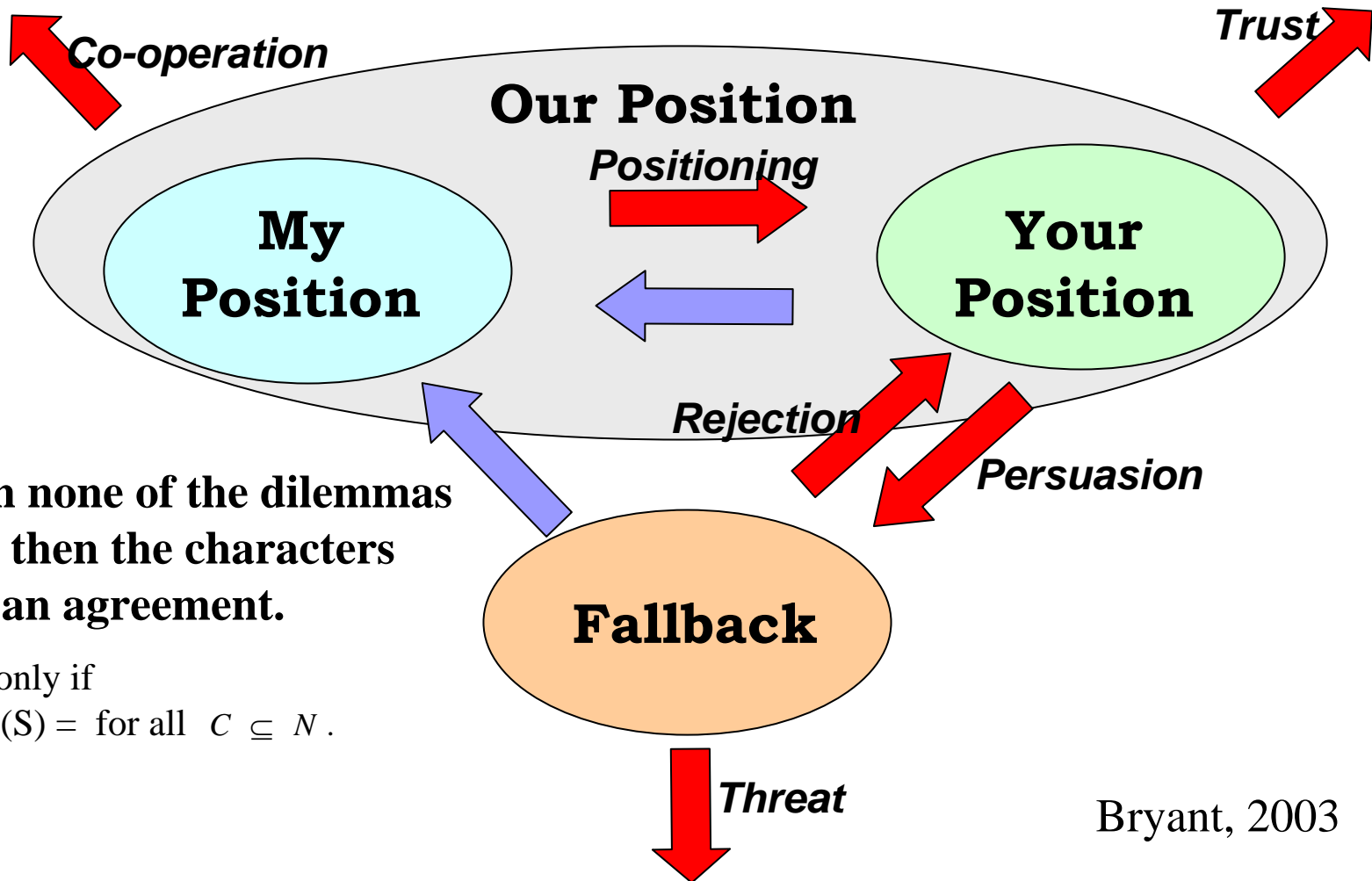
Darwin et. Al (2002) have summarized some principles upon which a radically **Post modern** stance might be based:

- Make a commitment to emancipation and democracy in organization
- Facilitate multiple perspectives
- Recognize fuzzy boundaries
- Keep thinking and action in **dynamic tension**
- **Value** process and put trust in **process**
- Allow for and encourage proactive emergence
- Facilitate learning
- Accept the absence of cardinality and foundations

Dramatic Perspective of Mutual Acceptance

- To overcome the limitations with 'Rational Choice Model' Howard (1992) postulated a new decision model called Drama theory incorporating 'Non rational' aspects of decision making such as **crisis, emotion, and self realization**.
- The fundamental difference between Game theory and Drama theory is that Drama theory allows as for the **possibility of game itself changing** even though the environment remains informationally closed.

Six & Six Dilemmas Only



When none of the dilemmas exist, then the characters have an agreement.

If and only if

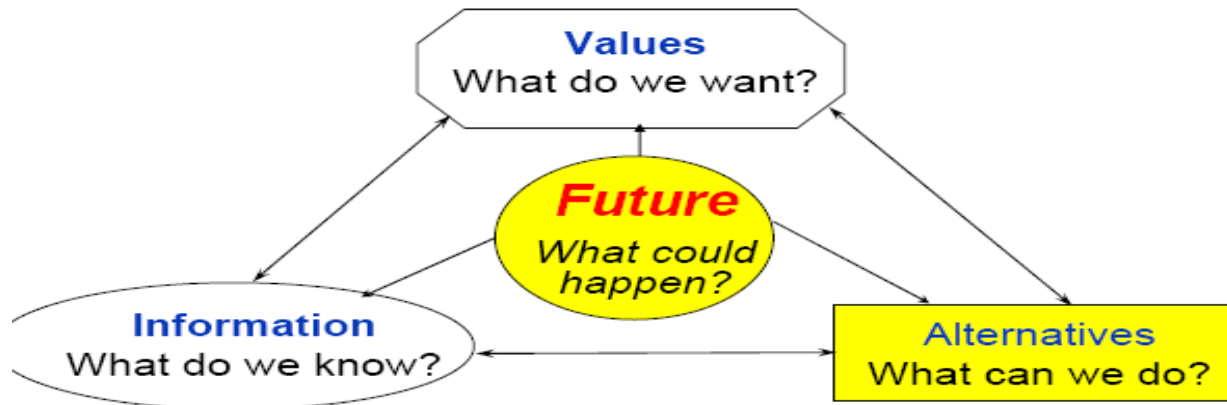
Imp $C(S) = \text{for all } C \subseteq N.$

Value Focused Thinking & Mutual Acceptance

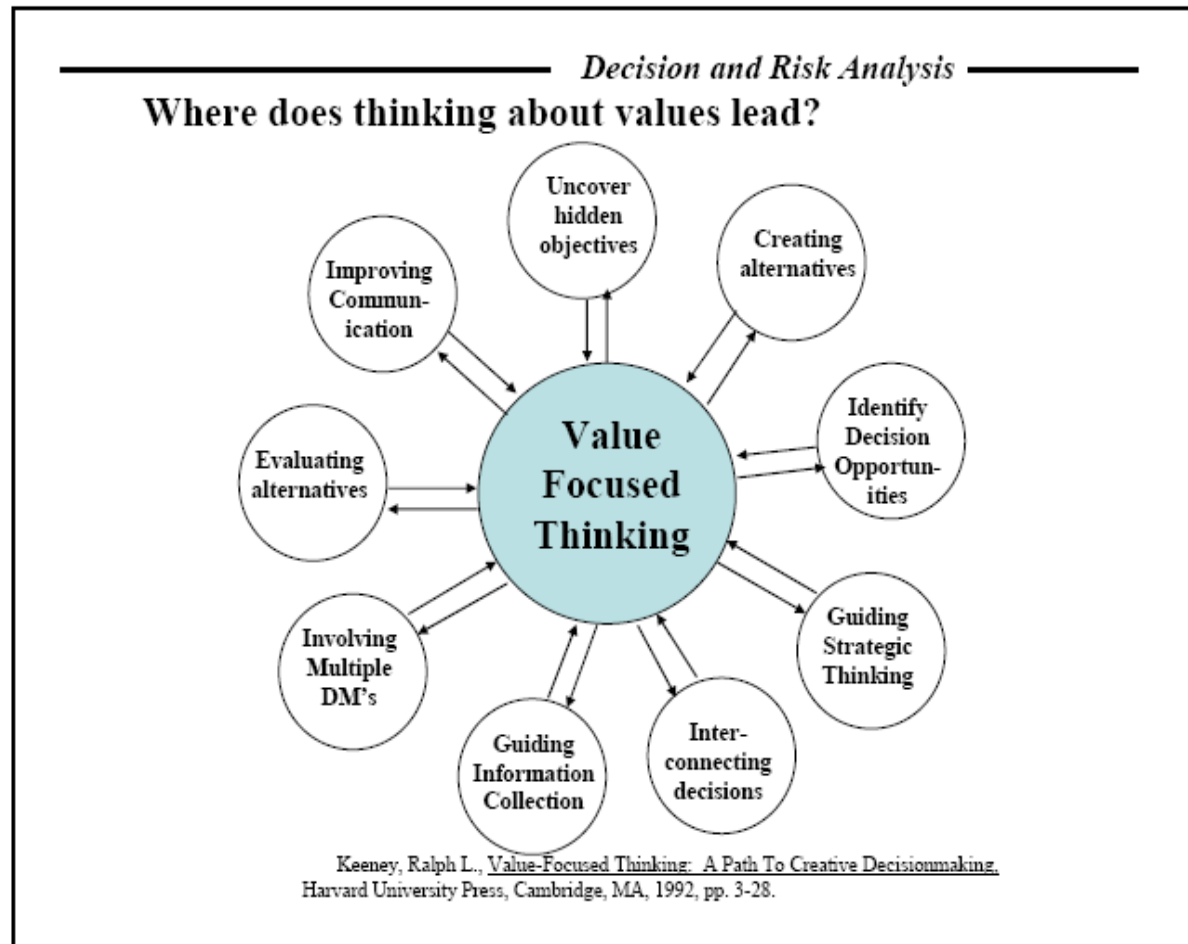
The concept of Value focused thinking for decision making was put forward by Ralph Keeney (1992). This novel approach helps one to identify decision makers values assist in formulating alternatives.

Decision and Risk Analysis

We usually need better alternatives.



Value Focused Thinking & Mutual Acceptance

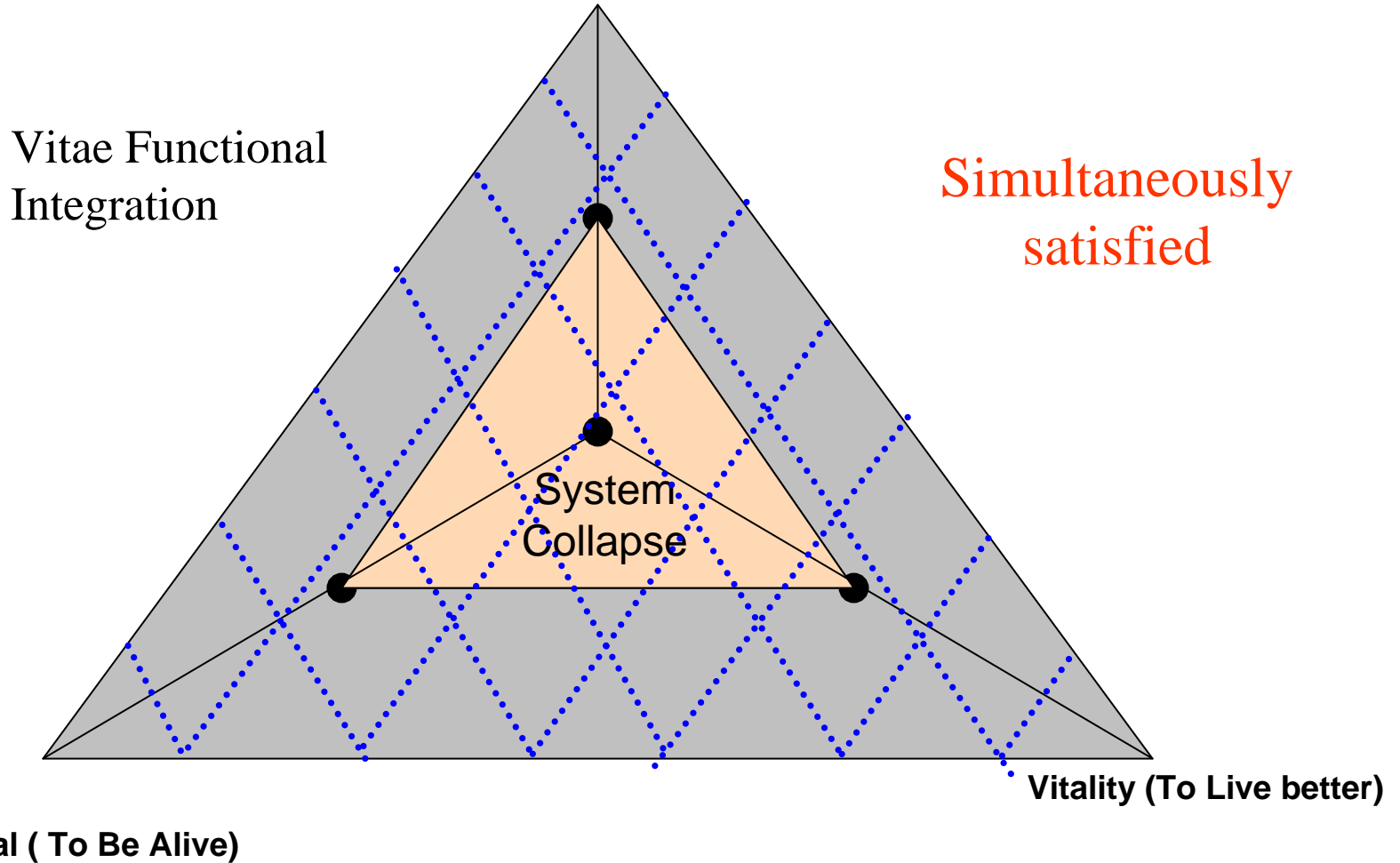


Vitae System Approach

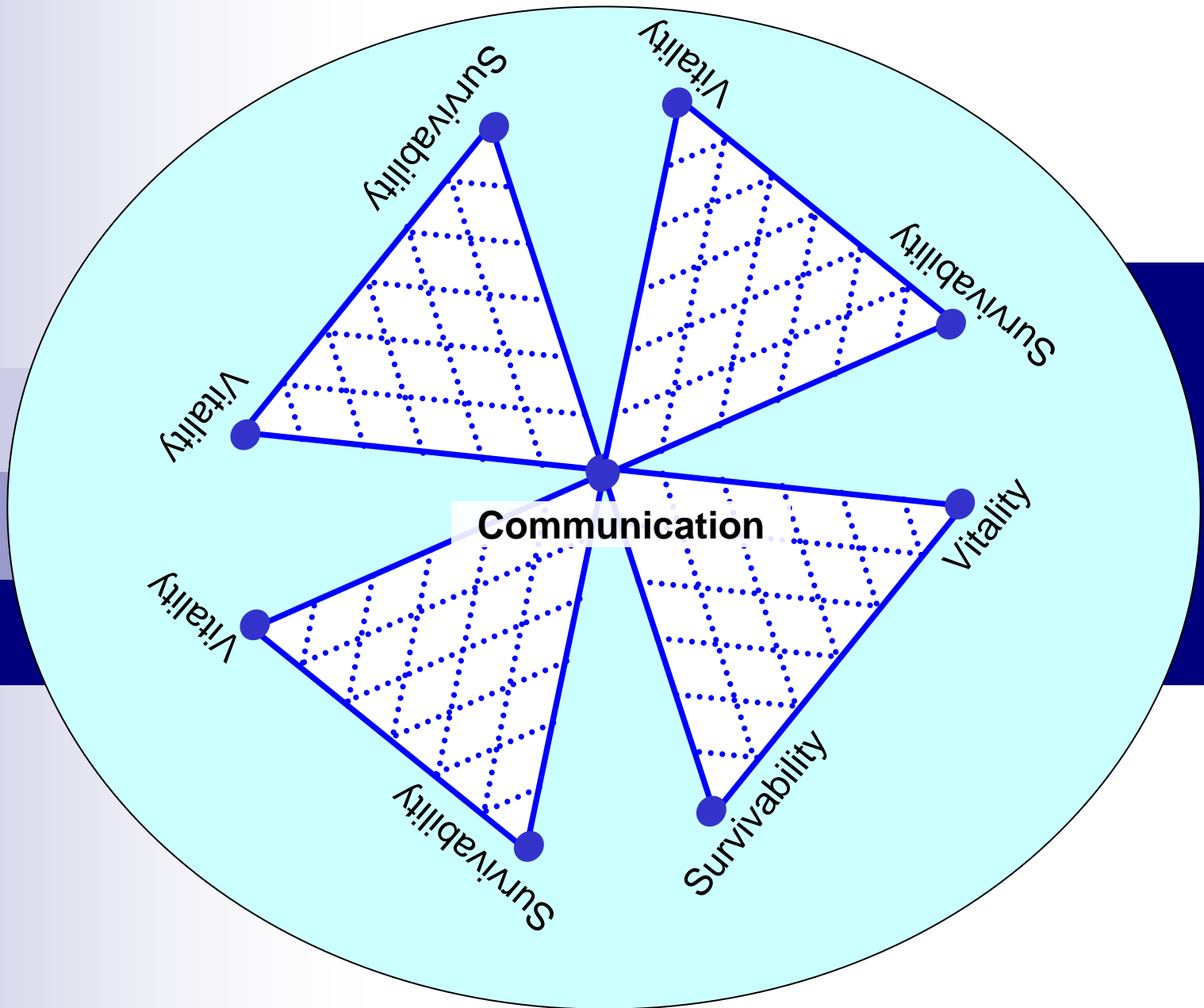
- The vitae system, a “techno- social network system” model is postulated by Norio Okada (2002) and further developed by Misra and Okada (2006).
- ‘Vitae system’ is based on the generic view of the development process, disaggregating the process into three basic requirements, namely, **vitality, communication** and **survival**, for the society in the context of disaster management.

SCHEMA OF VITAE SYSTEM

Communication (To Live Together)

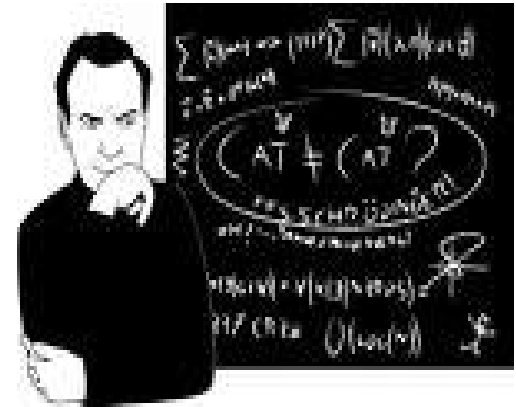


Assumption – collapse starts at half of equilibrium point



Networking of of Survivability, Vitality & Communication

Paradoxes of Implementation.....



“It doesn't matter how beautiful your theory is, it doesn't matter how smart you are. If it doesn't agree with experiment, it's wrong”

Feynman

Mutual Acceptance is a Discourse.....

- Mutual acceptance is a **path dependent process**
- **Freedom of choice**
- If the player is weak, they need someone to represent their interests. Otherwise, they cannot reach an acceptable point.
- Allison (1969) portrays - When actors are viewed as individual players occupying critical position, and their power is dependent upon their position, the outcomes of **games are not solutions but rather compromises.**
- **Subjectively** defined strategies
- Authorship of the **implementation**



Thanks