

Integrated Disaster Risk Management – In Retro- and Perspective

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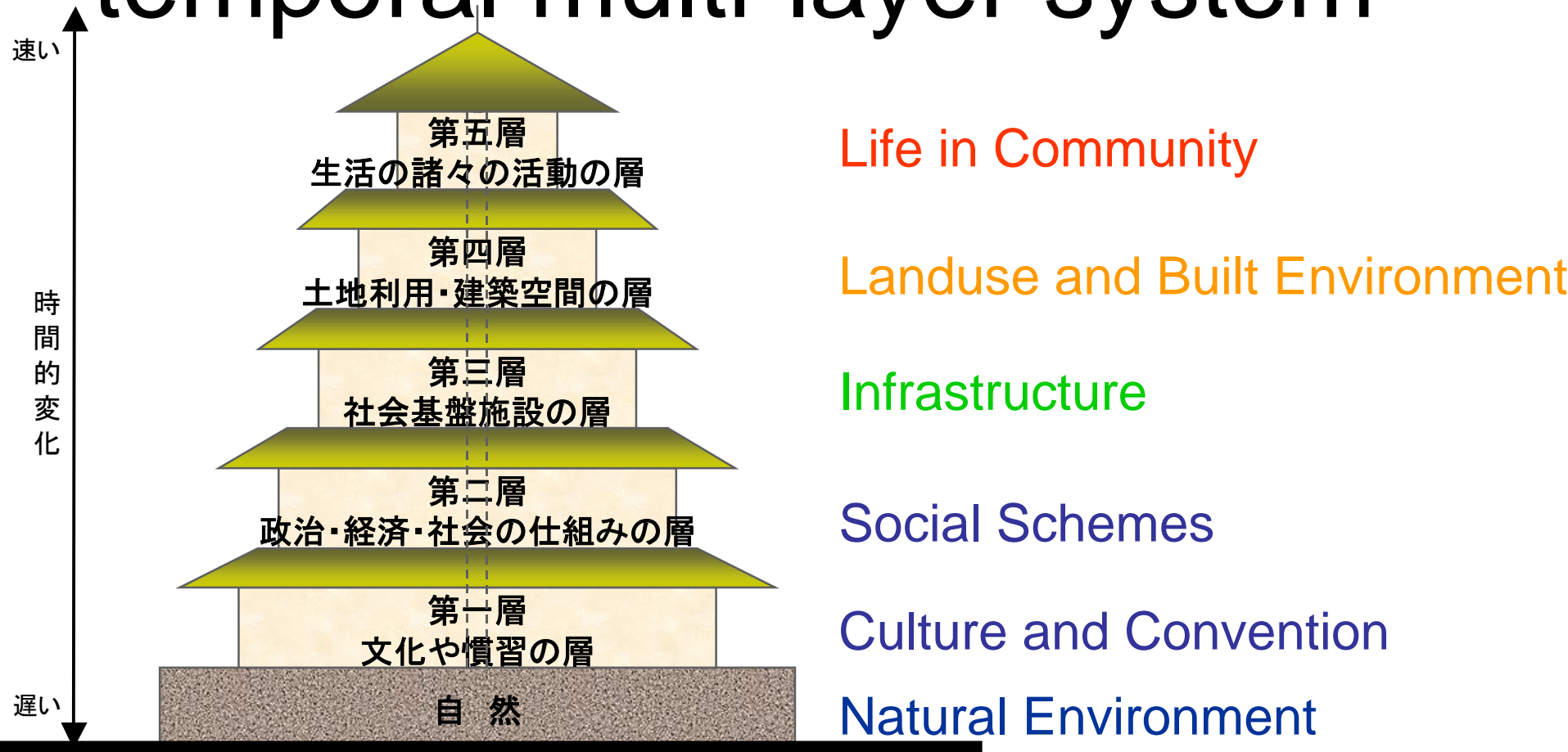
What has been repeated and clarified .

- Integrated Disaster Risk Management (IDRiM) Promoted
- Disaster Management for a single hazard/disaster
- Disaster Management for multiple hazards/disasters
- Disaster Management for stakeholders in cities, regions and communities
- Urban/regional/community Management with Disaster Management being a critical component
- More Participatory Disaster Risk Management Needed as a Part of IDRiM Governance
- People's Attitudes and Behaviors to Disaster Risk more studied by adaptive management.

Methodological Challenge needed.

We need conceptual models as
intellectual power for
implementation!

City/regions viewed as spatial-temporal multi-layer system



Five-storied Pagoda Model

Why NOT IMPLEMENTED?!!

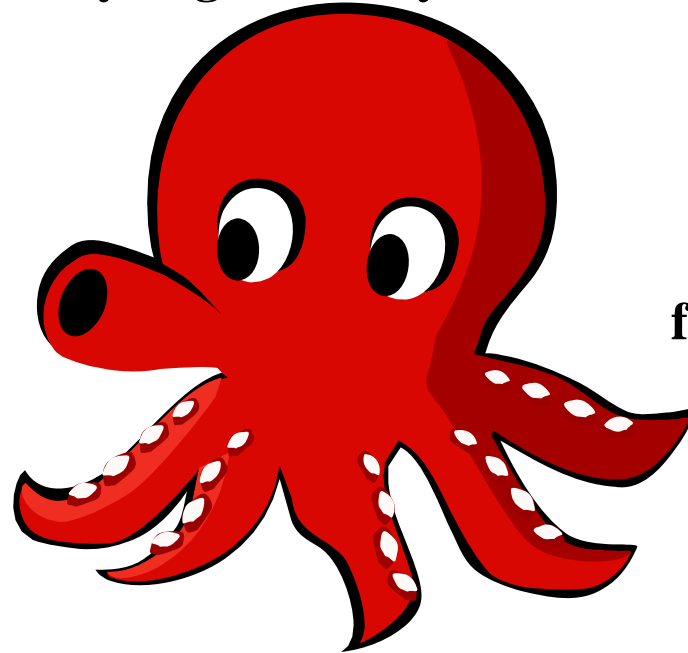
**Mindset and Excused
by High Priority Issues**

**Improving
Communication and
De-segregation**

Managing Poverty

**Increasing Risk
Awareness and
Capacity Building
for Evacuation**

(Social-Colearning)



**Structural Measures
for Disaster Prevention**

Lessons Learned from the 1995 Hanshin-Awaji Earthquake

- Self-rescue/relief (自助・共助)力 → Enhancement of coping capacity
- Day-to-day Practice for the Ownership of Knowledge and Technology (Lessons Implemented) Long-range proactive management to be switched to retroactive management
- Strategy to Overlap with Urban/Regional Management

However

- Lessons are rediscovered after a (low frequent-high impact) disaster and commonly unlearned before!
- Integrated disaster risk management (IDRiM) should be developed.
- Implementation is a key issue.
- Research and Practice should be more overlapped .Theories and Empirical Approach should go hand in hand, adaptively.

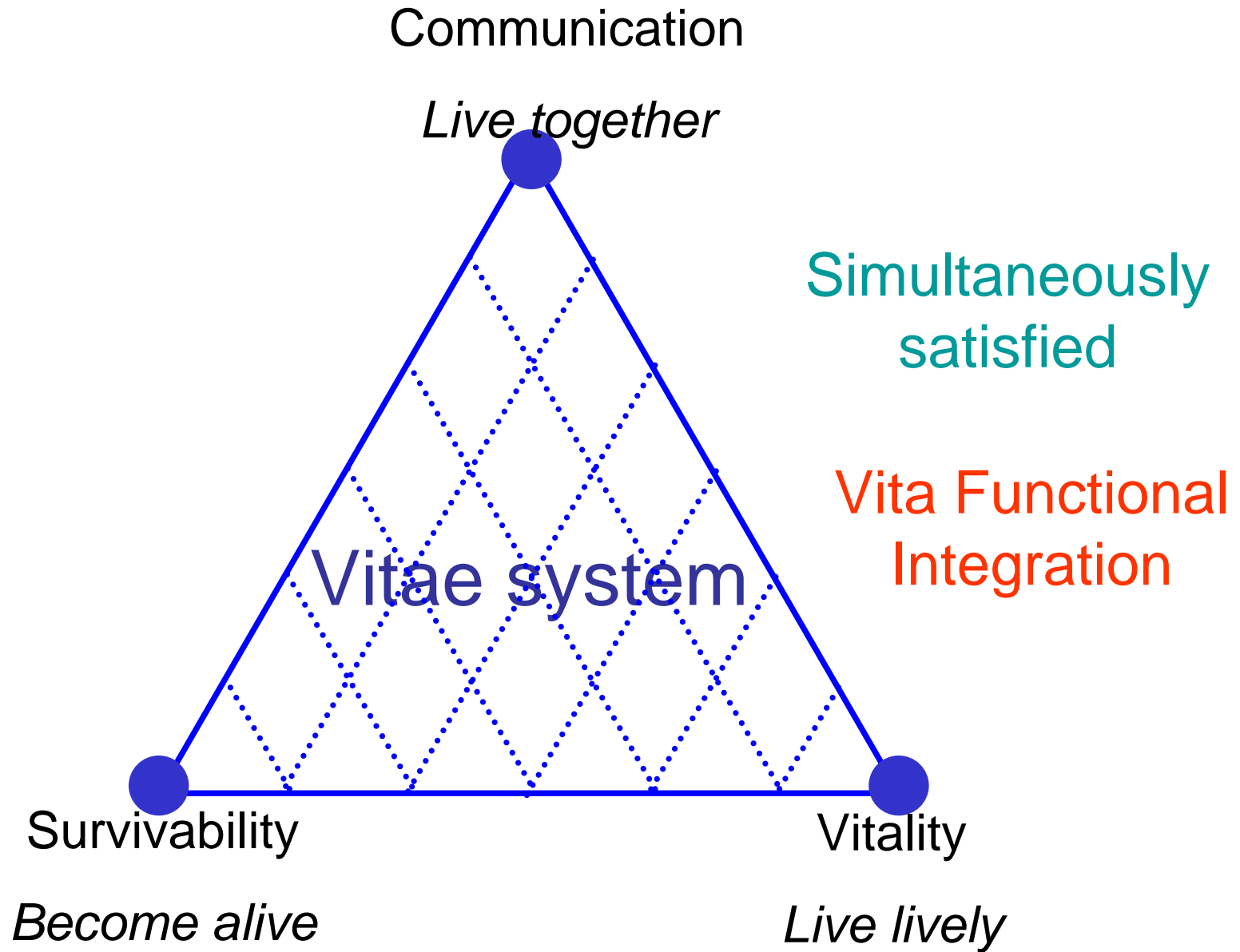
Messages Behind

- Seemingly non-related items must have their relevant foundation
Bio-rhythm, Common-ism
- Some missing perspective should be developed!
- Integrated management, sustainable management, and viewing cities and regions as a whole of living body.

Three Fundamental Isms to be Built into our any living system (Vitae System)

- Holism
Survival-Vital-Communication
- Biorythm
tension-relaxation
regular-irregular
- Communalism
mutually complementary
mutually exclusive

Holism = Viewing things as a whole



Bio-rhythm: Day to Day, and X Days

Tension mode

Sympathetic nerve mode

Communication

Live together

**Functional Integration of
Vitae System**

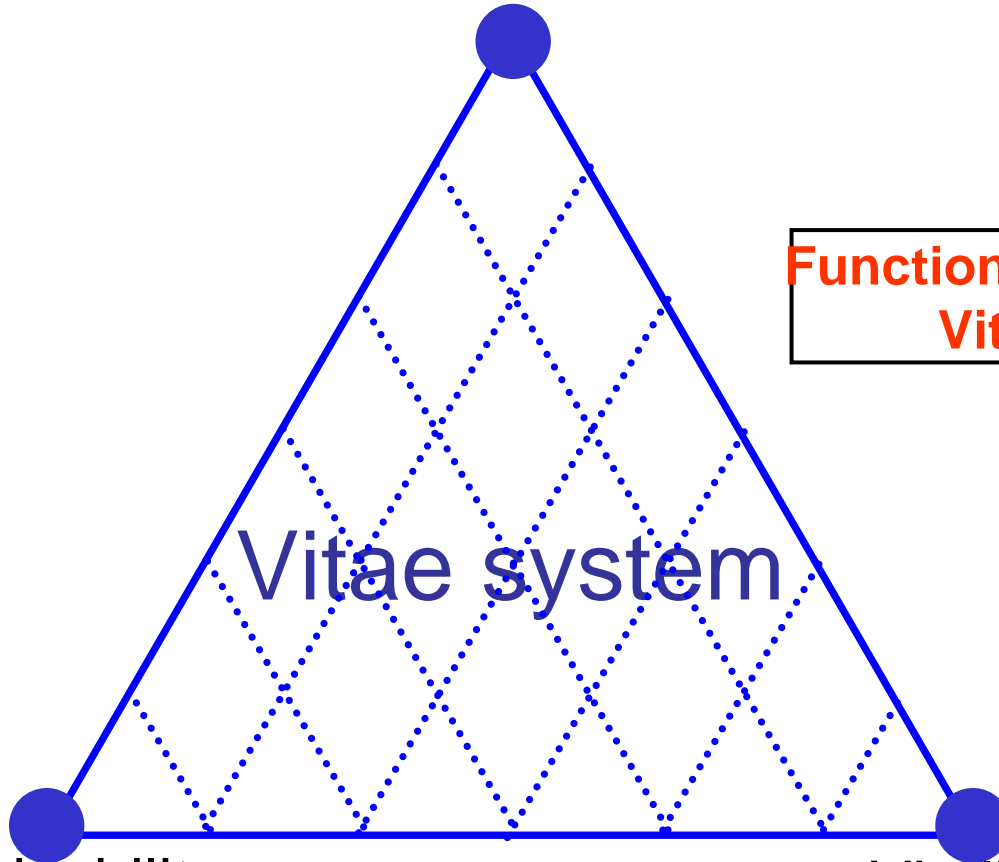
Vitae system

Survivability

Vitality

Become alive

Live lively

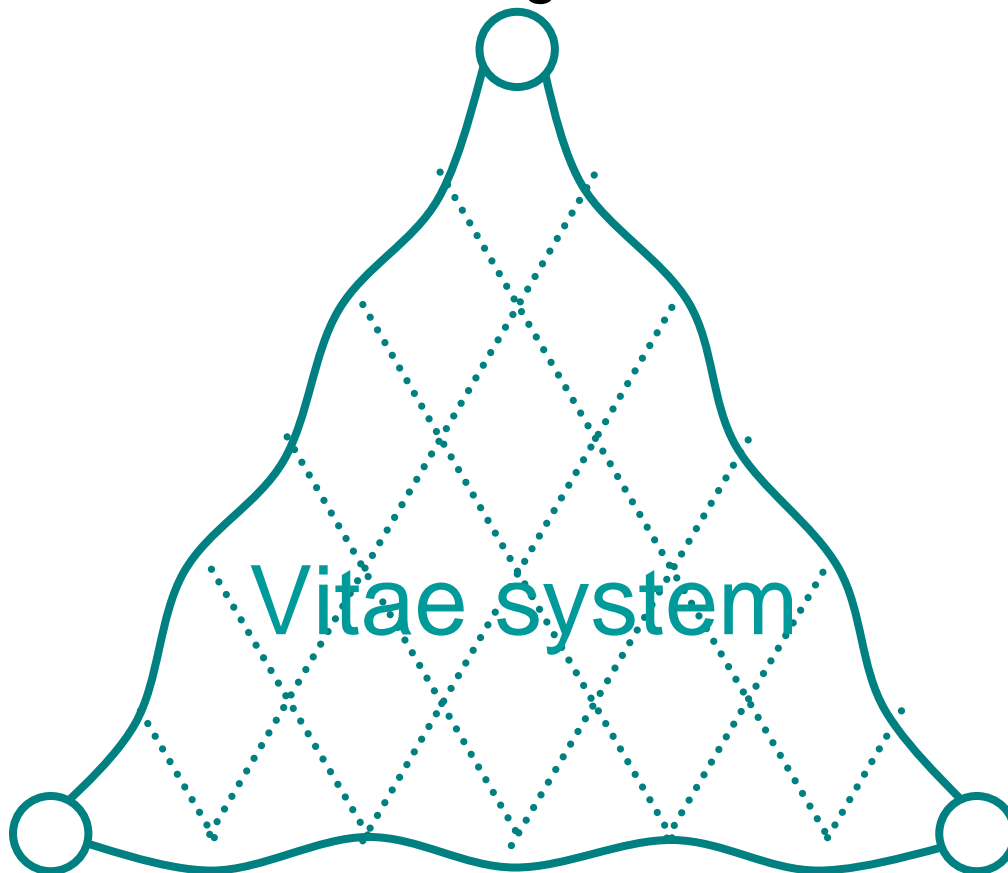


Relaxation mode

Para sympathetic nerve mode

Communication

Live together



Survivability

Vitality

Become alive

Live lively

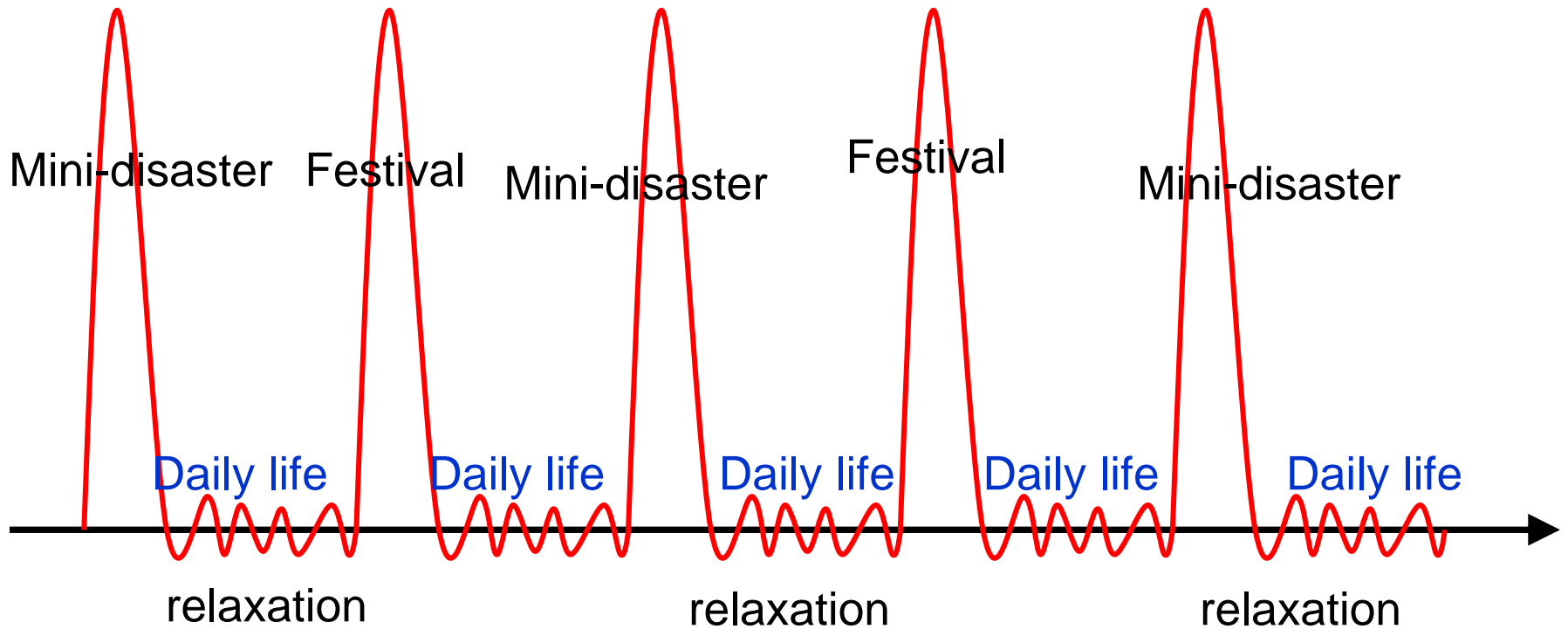
Vitae system

Vital Rhythms

Tension

Tension

Tension



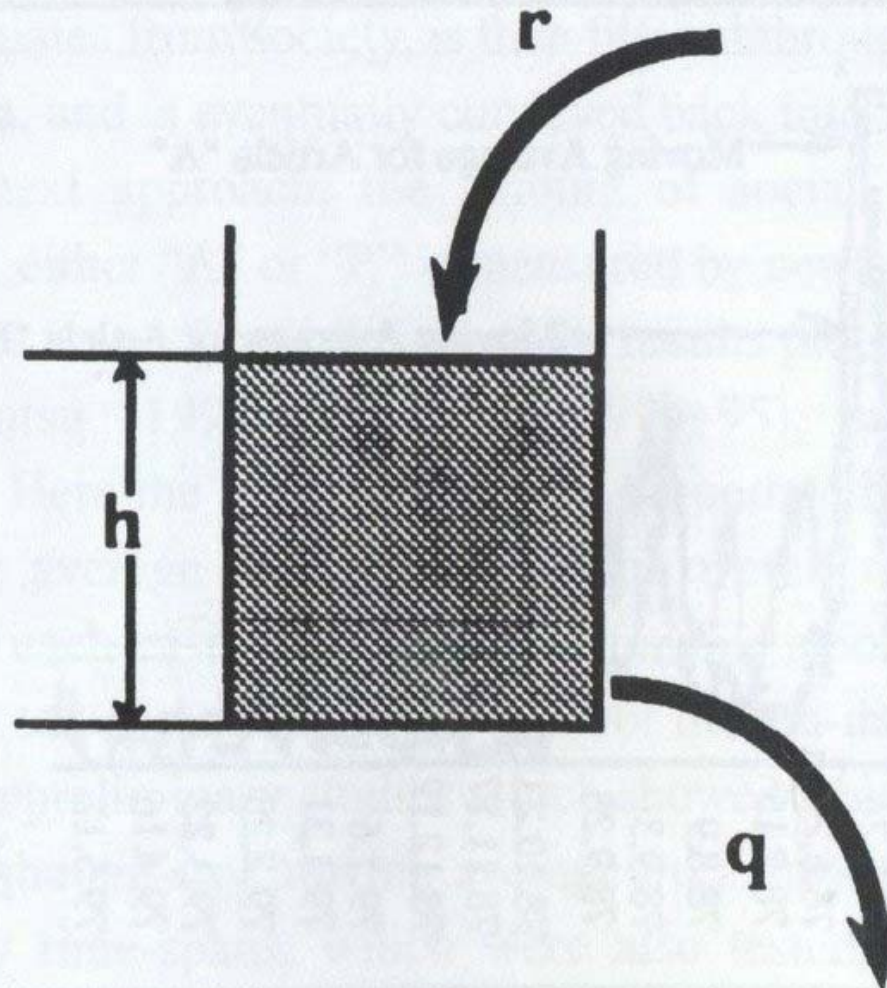


Figure 8.9. Conceptual diagram of the “tank” model.

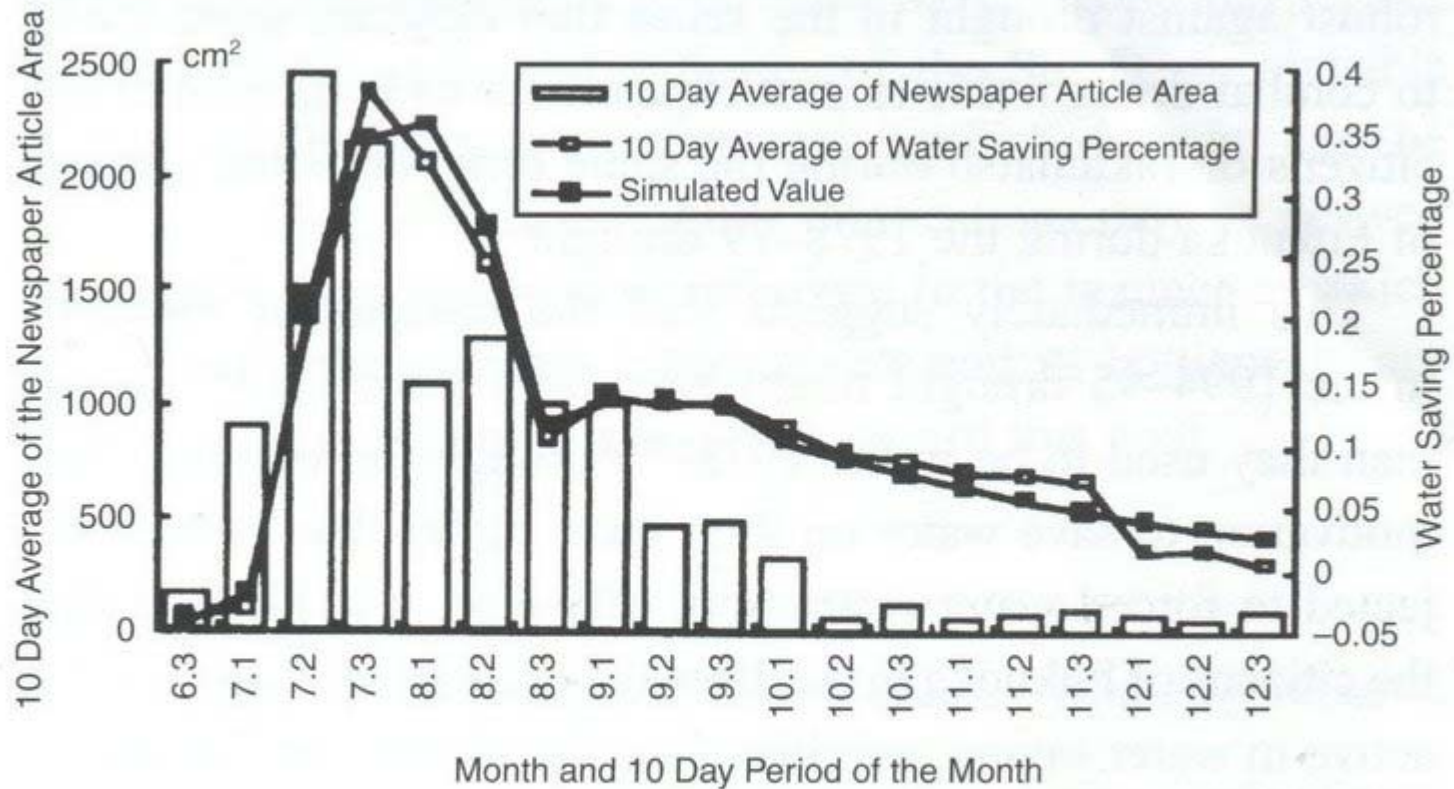


Figure 8.10. Comparison of observed SPRD, WSP, and simulated WSP (Takamatsu, 1994).

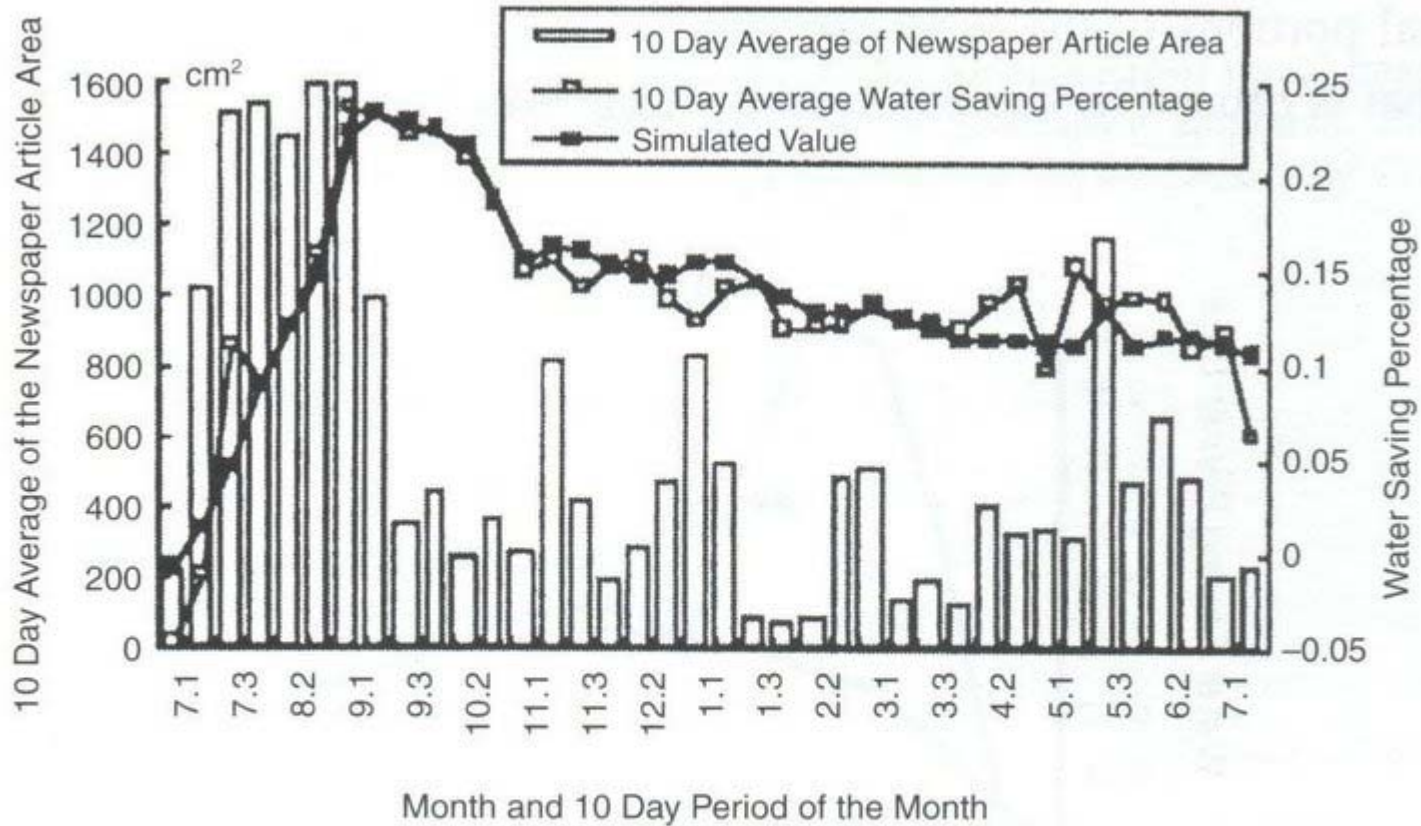


Figure 8.11. Comparison of observed SPRD, WSP, and simulated WSP (Fukuoka, 1994–95).

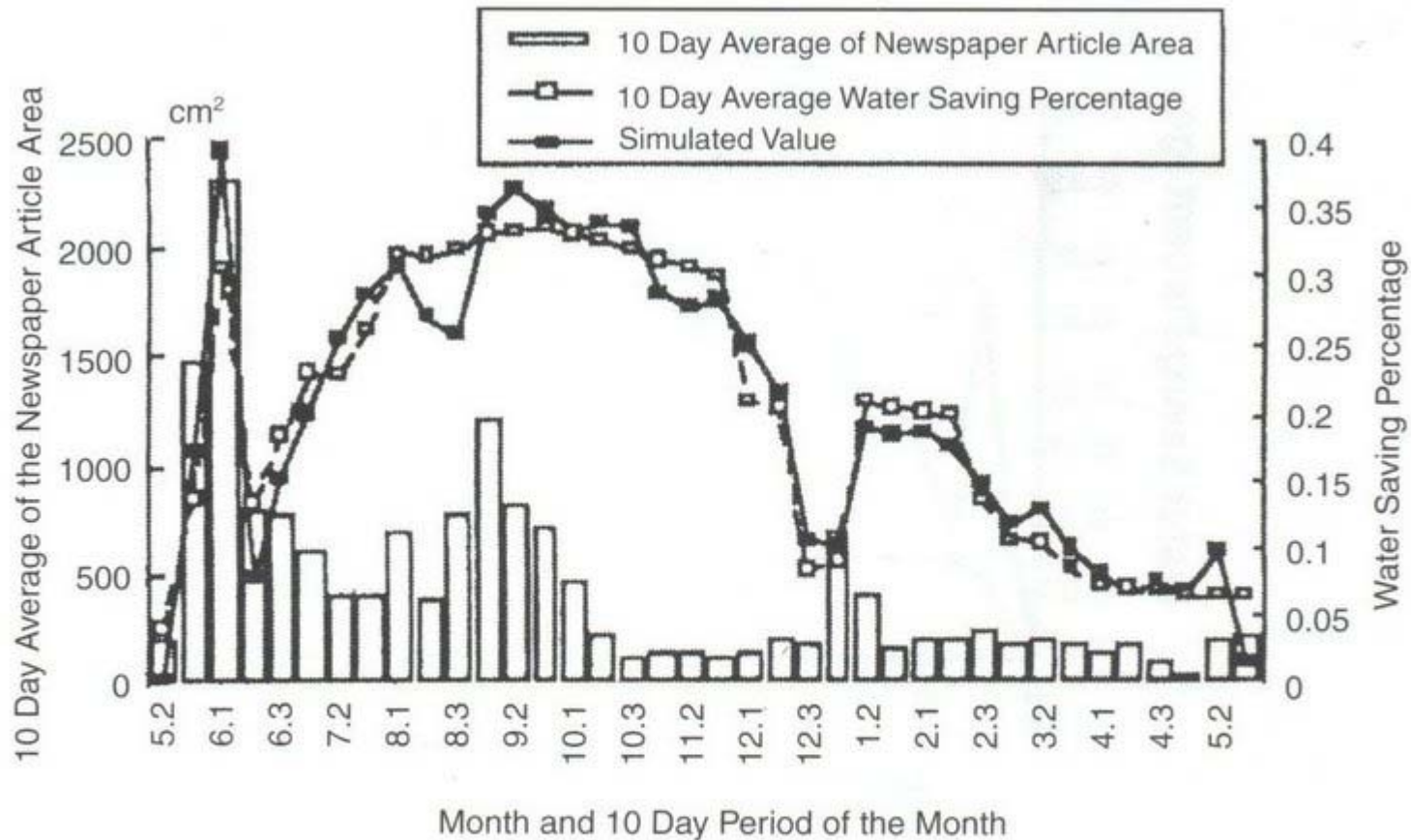


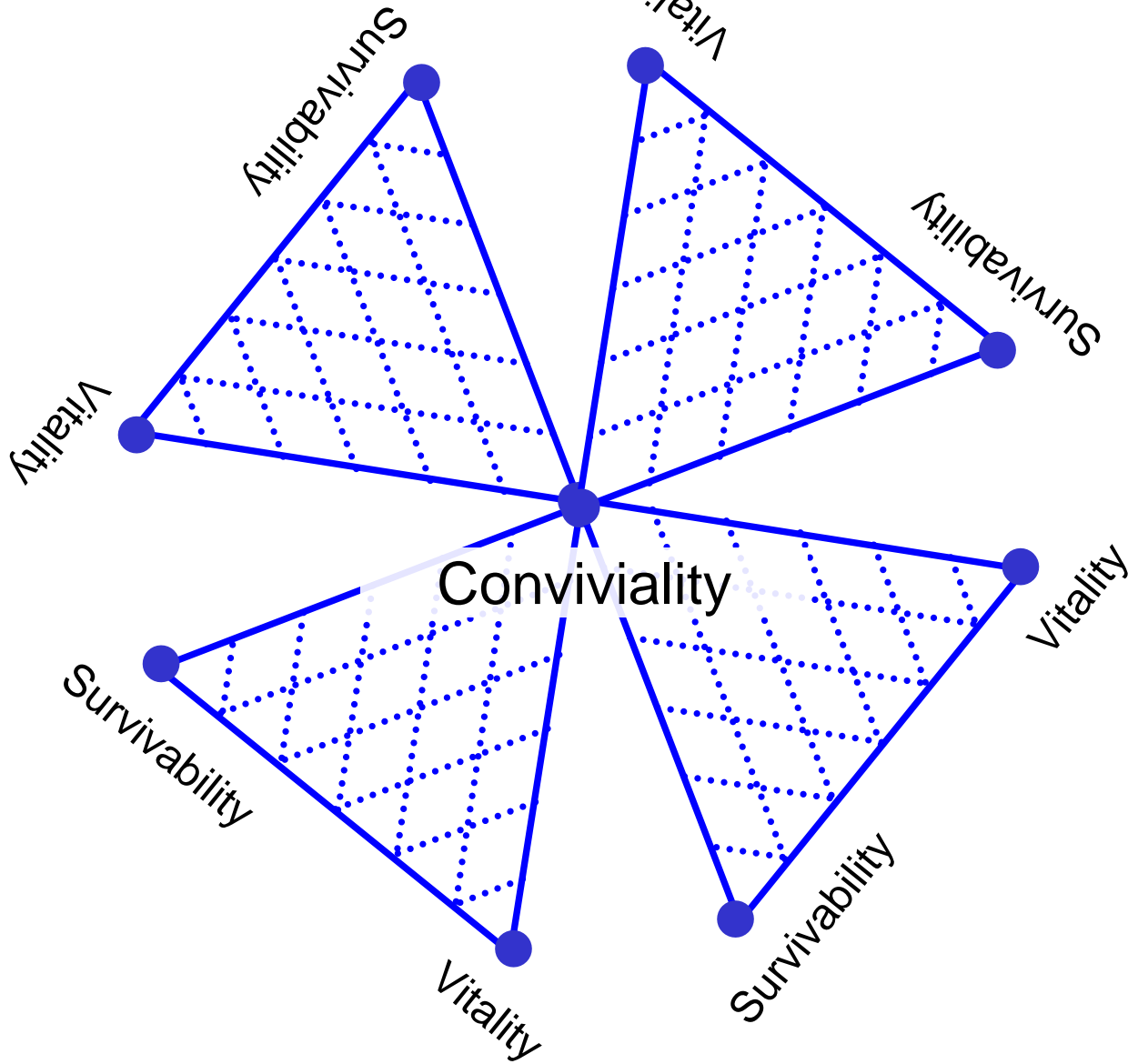
Figure 8.12. Comparison of observed PRD, WSP, and simulated WSP (Fukuoka, 1978–79).

Vitae System Dynamics

- S=Survivability, V=Vitality, C=Conviviality
E=Environment, t=time
- S (t) as Stamina= Function of V (t) and C (t).
- V (t)=Function of S (t) and C (t).
- C (t)=Function of S (t), V (t) and E (t).
- S (t), V (t) and C (t) are mutually interactive and interdependent.
- The Dynamism is highly nonlinear and complex.
- The System is semi-open-ended.
- The 21st century still misses the knowledge of this kind.
- This is a part of implementation knowledge (science).

Communalism

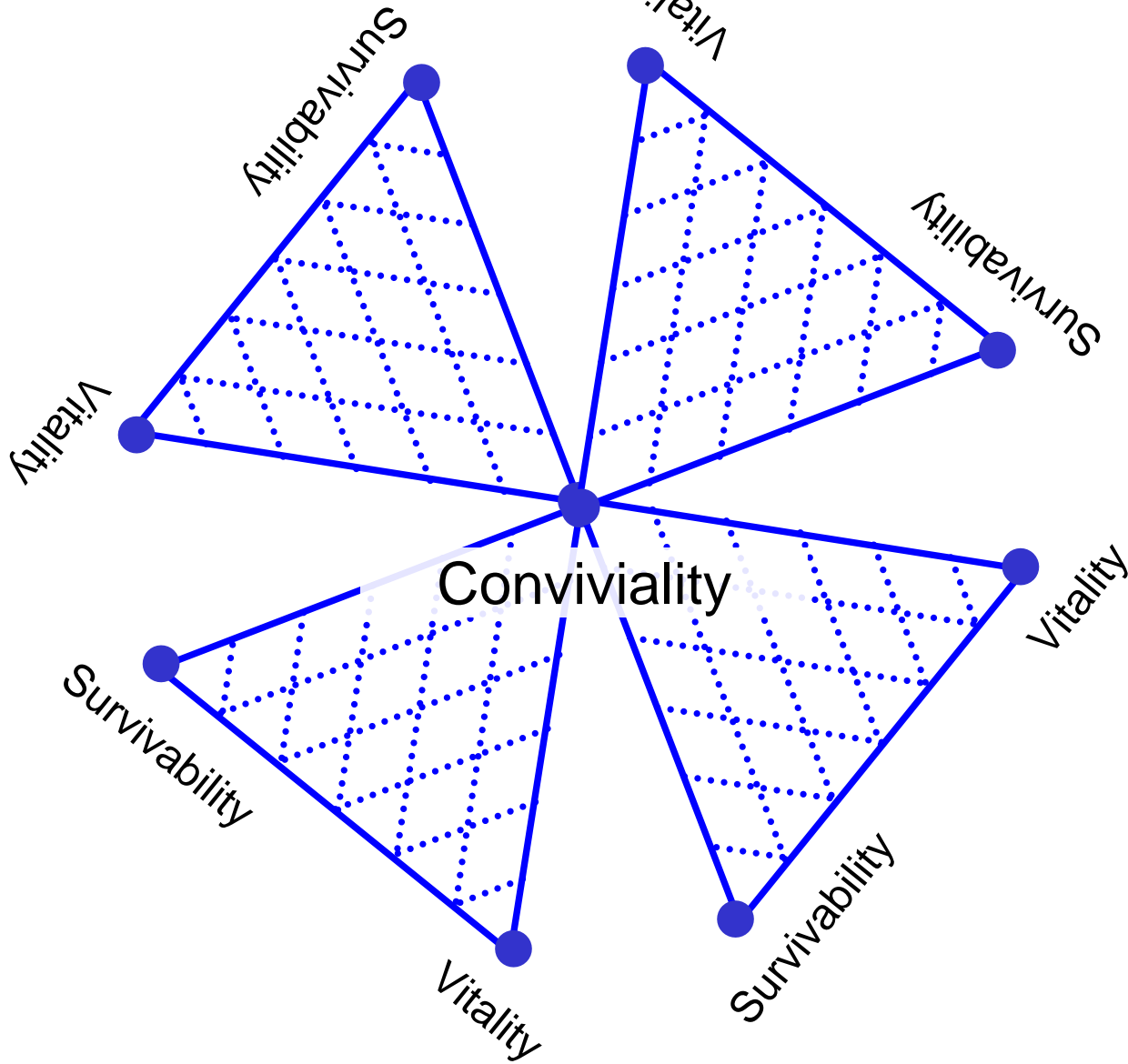
Networking of Vitae systems



Networked Vitae System

- Every vitae system covers a marginally extended and thus a more resilient system is expected.
- Thus each governs the area of one's own locality, and thus to be networked to service the entire region.

Networking of Vitae systems



Conviviality

共



伝統的防災計画

Threat

Vulnerability

伝統的都市計画

Opportunity

Grow-ability

Vitae system

新総合都市マネジメント



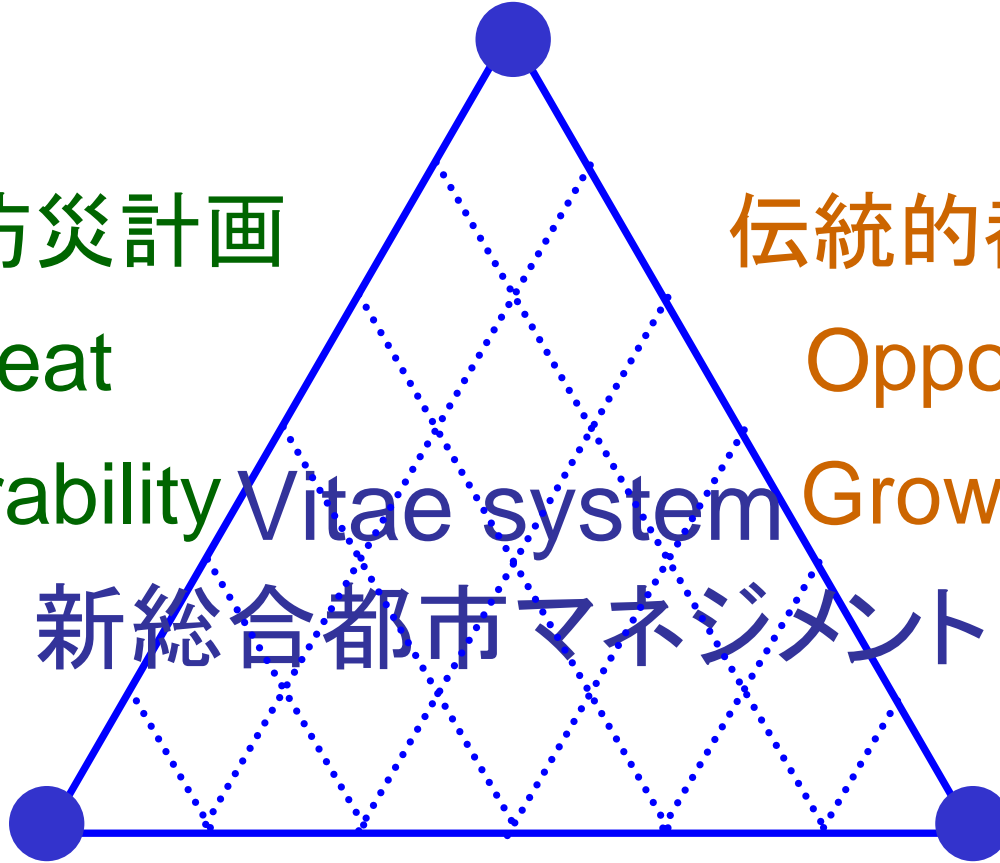
Survivability

命



Vitality

活



Mindset set-off and reset

- Social trillema
to survive, to vitalize and to communicate
- Social triage
to survive, and if extra
- Social triumph or Social tragedy
to see social coping capacity enhanced ot
collapased