

21 March 2007

## Roundtable on “Exploration and Experimentation: The Organisational Imperative”

Governments face massive uncertainty about the impact of their actions on the economy and society. Both are complex entities, and in Singapore’s context, highly porous and susceptible to external influences. At this roundtable, Professor Max Boisot used his framework, Information Space (*I-Space*), to explain why he thinks the Singapore government is good at refining and making sense of existing information but lacks capacity in injecting new ideas and insight. In order to deal with complexity, Prof Boisot argued that the government required a more entrepreneurial mindset. During Q&As, participants also engaged Prof Boisot on his views on markets, China’s development, and the role of market regulation.

### The I-Space and Cultural Orders

The I-Space can be mapped onto a graph, with the x-axis depicting the level which knowledge is diffused and y-axis depicting the extent which knowledge is codified.

Applying the I-Space onto institutions and belief systems, Professor Boisot draws out four distinct cultural orders: **Markets, Bureaucracies, Clans and Fiefs**, varying in degrees of organisation and control on information.

Markets describe institutions where information is highly codified and diffused. There are no barriers to entry and exit. Relationships are impersonal, and everyone looks after his own interest. In markets, all attributes can be captured in a single measure known as “price”.

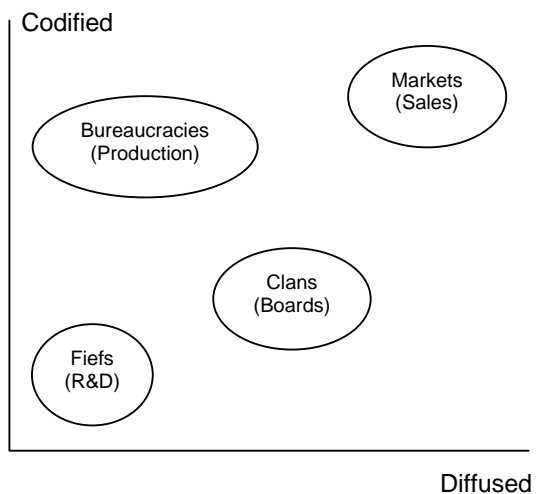
In contrast, fiefs signify the epitome of personal power and charisma. Knowledge resides within a few individuals, making relationships hierarchical and personal. It is difficult to delegate or decentralise work as mastery of contextual knowledge is everything.

A fief could describe the culture of a R&D outfit in an organisation, where a prominent scientist usually helms the entire project with the aid of junior scientists. As shown in parentheses in the diagram, it is possible for all 4 cultural orders to exist in one organisation.

Efficient government agencies, Professor Boisot explained, resemble bureaucracies. They possess strong capacity in structuring information; often, in the bid to make things measurable against KPIs. Professor Boisot terms this capacity *exploitative learning*, or the ability to refine and make sense of information. He noted that organisations, especially bureaucracies, tend to invest in and reward exploitative learning. However, governments today require more than that to effectively manage uncertainty.

Increasingly, complexity will become the order of the day and governments will need to develop comfort with higher degree of ‘messiness’. Singapore, observed Professor Boisot, is “deeply possessed with order” and in danger of equating managing risk with managing uncertainty. While one should strive to manage and reduce uncertainty, risk should be seen as a bearer of both threat and opportunity. To complement its strength in *exploitative learning*, the government should also cultivate *exploratory learning*, or the skills to generate insights from new and unstructured information.

### INSTITUTIONS & CULTURES IN I-SPACE



When asked for suggestions on how this could be done, Professor Boisot emphasised that independent thinking and an entrepreneurial mindset must be introduced into the system, to facilitate diversity in generating insights. **Networks** could help a government to leverage on new learning and sensing entities. In theory, this could be in the form of new internal agencies or outsourced functions. The latter could be a more viable option in areas where barriers to internal cultural adjustments are high. However, the corresponding challenge would be to maximise the collaborative value of such networks and prevent them from being side-lined.

### **Markets and China's Development**

Stemming from Professor Boisot's explanation of I-Space, a question arose on whether it was natural tendency for societies to move towards free markets, or a western conception that markets are the best. In response, Professor Boisot clarified that markets, as with the other cultural orders, are not resting places. Absorption of knowledge occurs rapidly when information is made available in the market place, generating a new cycle of knowledge/products. Historically though, societies have shown the ability to move from feudalism to autocratic states to free markets.

Another participant commented that both the question and response spoke of the rightward shift to free market as a choice. How could one make it easier for government agencies – which were earlier said to be mainly bureaucracies – resistant to the external pressure to shift rightwards, to make the change?

Professor Boisot explained that democratisation of information achieved through technological leaps has already shifted the learning curve to the right. He cited his experience as a correspondent in Beijing many years ago, relying on telegrams to transmit information. Messages then had to be abbreviated, and corresponded through the telegram company. Clarifications, if needed, were cumbersome and expensive, almost an impossible task. Today, emails/ tele-conferencing make communication almost instantaneous. Beyond transmitting content, it also makes it possible for a correspondent to build a relationship with the headquarters. In other words, for the same level of codification, technology enables a higher degree of diffusion than before, facilitating the rightward transition.

Making comparisons between Russia and China, Mr Lam observed that China was more successful economically, even though it practised central planning because it was able to control the rate of diffusion of information, instead of rushing towards the right, as Russia did through its glasnost reforms.

Subsequent discussions on the comparative successes of China and Russia led Professor Boisot to opine that China succeeded despite its central planning. Their state-operated enterprises (SOEs) was a disaster and most of China's success in fact came about by letting foreign enterprises enter the market, improve infrastructure and logistics and transmit technical know-how.

### **Incentives and Role of Market Regulation**

Finally, the roundtable discussions touched on the issue of incentives driving the learning process. A participant asked what is the incentive for someone with proprietary knowledge to want to share it (i.e. move to the sphere of public knowledge/ markets)?

Professor Boisot agreed that the issue of incentives is an important one. Given a choice, no one would want to operate in a free market (i.e. no comparative advantage). In other words, market-operators tend to move towards fiefdoms. Government's role in promoting competition is to encourage people to move towards markets. This is where market regulation comes in. Professor Boisot stressed that market regulation is necessary, in so far as to facilitate flow of opportunities. One must not to over-regulate and stifle the creation of new knowledge.

Following the last question, Mr Lam Chuan Leong, Chairperson of the roundtable thanked Professor Boisot from sharing his insights in the first roundtable in the Managing in Complexity Series.