A META MODEL OF ORGANIZATIONAL STRATEGY

Robin Matthews

Professor Emeritus
Kingston University London

Visiting Dean and
J.M. Keynes Professor of Management
Moscow School of Social and Economic Sciences
Academy of National economy
Moscow

http://www.robindcmatthews.com
http://www.tcib.org.uk/about.html
http://kpp-russia.ru

Please do not use without acknowledgement
A META MODEL OF ORGANIZATIONAL STRATEGY

1. INTRODUCTION

The meta model of strategy described in this paper is part of the enneagram approach to organizational strategy\textsuperscript{11}. It enables you to analyze your own organization and other organizations. It is a consultancy tool: a tool for deconstructing and analyzing the situation of organizations.

We use the term organization, rather than firm or business because the meta model applies to a wide variety of organizational structures; political and social organizations and institutions, profit and not for profit firms, charities, formal or informal structures, small and large organizations, or subsets of any of these entities. We might include households in the category of organizations.

System states and trajectories

Perhaps the best metaphor to describe organizations is as networks of relationships between assets, functions, processes, projects or activities that produce something sell something, dispose of something, distribute something or consume something.

We should distinguish between two conditions of an organization in time:
1. **The system state** it is in at a point in time.
2. **Processes or trajectories of system states** through time. Processes describe how system states evolve over time.

Most of this note concentrates on the determinants of the system state of an organization. In the last section we sketch;
(a) How system states evolve over time and
(b) Consider organizations as complex adaptive systems.

No great man theory of decisions and strategy

You will find the account of popular concepts in management, strategy, decisions; leadership differs in this note from what you might read or what you are told elsewhere.

I. First we do not agree with the *Great Man* (usually a man) view of strategy of the popular texts. Decisions, like computing are distributed throughout an organization and people who are often considered unimportant in an organization are as significant or more significant in making and determining the outcome of decisions as chief executives. In just the same way as soldiers not generals win wars, so the implementation of (so called) strategy is critical. And implementation takes place often at the *grass roots level*.

II. Most decisions and strategies are not deliberate: they are programmed habitual conditioned responses to situations. Programming or conditioning takes place through organizational grammar operating at the personal level.\textsuperscript{2}

\textsuperscript{1} See Matthews (2007) and other papers the websites http://www.robindcmatthews.com and the centre for international business at http://www.tcib.org.uk/about.html and http://kpp-russia.ru

\textsuperscript{2}
2. OUTLINE OF THE META MODEL: SYSTEM STATES

Figure 1 illustrates how the interaction of four elements affect the system state of an organization at a moment in time. Most of models that you meet in books and discussions about corporate strategy (the discourse of corporate strategy) focus on only one or a few more aspects of the meta model. The meta model gives an overall picture of the factors affecting the system state of an organization at a moment in time.
3. ELEMENTS OF THE META MODEL

To understand the system state of an organization it is useful to distinguish between four different elements. We emphasize that they are not entirely independent. Elements interact with one another. We separate them only to make it possible to deconstruct the various factors that influence organizations. Figure 3 gives a more realistic picture in that it highlights intersections between the four elements as well as their differences.

**Outer dynamics**

Outer dynamics are made up of factors that are more or less outside an organization’s control: factors that affect organization but are more or less unaffected by the organization. Outer dynamics can be divided conveniently into two sets (a) competitive dynamics and (b) macro dynamic factors. Competitive dynamics should include co-operation as well as competition: suppliers, customers, distributors are as much a part of competitive dynamics as rival firms. Sometimes we speak of co-opetition or co-evolution rather than competition. Macro dynamics include the global effects, technology, political and diplomatic factors and social, technological, ecological factors.

**Inner dynamics**

Inner dynamics describe the tangible and intangible assets of an organization: roughly speaking they are within its control. Tangible assets include human capital or human resources (people in the organization), physical capital, plant, real estate, and machinery and financial capital (working capital, access to sources of finance – debt or equity, liquidity). Intangible assets include the organization’s brands, reputation, relationships (with customers, suppliers, governments) the stock of knowledge embedded in the organization.

---

2 On co-opetition see for example Brandenburger & Nalebuff (1996).

3 On co-evolution see for example, Kauffman (1993, 1995).
Payoffs
Payoffs are the outcomes produced by organizations for their stakeholders. They include quantitative outcomes, sales, profits, market shares, rates of return on different assets which relate to their owners (shareholders). They also include outcomes that relate to other stakeholders of the organization; employees, customers, the local, national and international community.6

Payoffs or outcomes to stakeholders can be qualitative as well as quantitative; qualitative in the sense that they contribute to the quality of life or welfare of customers, employees, and the community; quantitative in so far as they are wages, salaries, profits, prices, costs, productivity and efficient use of resources.

Organizational grammar 4
Organizational grammar describes the rules, laws, treaties, agreements, cultures, traditions and conventions that together with the attitudes, values, motivations that exist in society in general and in the people associated with the organization. Organizational grammar conditions the other three components of the meta model. Organizational grammar has a number of dimensions: internal and external, formal and informal, social and personal.

Organizational grammar has external and internal aspects. External grammar includes structures such as treaties, rules, laws, regulations, national cultures that are external to the organization. Internal grammar includes rules, contracts and conventions routines and corporate culture that are internal to the organization. Organizational grammar has formal and informal aspects. Formal grammar includes structures that are formal and written (laws treaties, regulations and so on). Informal grammar includes traditions, cultures, habits and routines that are informal and unwritten. Organizational grammar has social and personal aspects. Social grammar includes values norms, cultures, traditions and structures that are shared by members of a society. Personal grammar reflects the personal values, and habits of thought, feeling and behaviour, attitudes and mind sets of individuals.7

An acronym is introduced to describe organizational grammar. Organizational grammar refers to the inner personal grammar, (mind sets) that governs decisions, and outer grammar, the rules, regulations, formal and informal, (architectures, routines, cultures, structures) that constitute organizational grammar, the rules of the game in the world we live in (marcs).

The meta model as a Venn diagram
The meta model may also be pictured as a Venn diagram in Figure 3 which better captures interdependence between the four elements.

---

4 For the origin of the idea of grammar as a programming process see Wittgenstein (1953).
Interdependence

When applying the model it should be noted that what constitutes inner and outer dynamics depends on what level of organization we are speaking about. In a divisionalised organization for example, as far as a subsidiary or business unit is concerned, headquarters is part of outer dynamics. As we examine an organization more and more microscopically, the set of things included in outer dynamics increases.

Organizational grammar is fundamental

Organizational grammar is fundamental to understanding organizations. As suggested in Figure 3 grammar has an inner and outer component: every organization has its own inner rules, traditions, cultures and structures as well as being subject to rules, laws, treaties, cultures and so on that come from the outside. Figure 4 is perhaps an even more realistic picture: it shows the other three elements of the meta model as being embedded in organizational grammar.
4. NETWORKS AND GRAMMAR

Figure 5 pictures an organization as a network of activities; it consists of nodes or vertices and linkages or edges; terminology differs.

We can interpret Figure 5 in many different ways. The diagram can be interpreted in many different ways: the nodes may be different asset or activities or processes in a firm, and the connecting lines are linkages between them they might different firm; nodes may be different firms linked by relationships of cooperation and competition; nodes may be separate elements of the meta model political, economic, technological, ecological factors in outer dynamics; or different payoffs, profits, sales, wages, rates of return (ROI, ROCE, ROS, CAGR for example). Nodes or vertices are linked together in complex ways in all these interpretations.

This brings us to another important aspect of organizational grammar. Two features of any grammar are

(a) Morphology (*parts of speech*, nouns, verbs, adjectives prepositions and so on)
(b) Syntax (the rules for connecting *parts of speech*).

In the network diagram in Figure 5 the nodes constitute the morphology of (various aspects) of organizational grammar and the linkages or edges represent the syntax, the rules for linking parts of speech together.
5. PROCESSES OR TRAJECTORIES OF SYSTEM STATES

System state refers to the current state of inner dynamics, outer dynamics, payoffs and organizational grammar. System states change from one moment to another. You should imagine Figure 6 in four dimensions: three dimensions, inner and outer dynamics and payoffs, set in organizational grammar and a fourth dimension indicated by the arrow which indicates the path of changing system states over time. The arrow points from the past, through a particular moment in time and projects forward into the future.

The term trajectory is designed to remind us that adaptation is always necessary because of the factor of hazard or uncertainty. We are always faced with changes in inner dynamics, outer dynamics, and organizational grammar that lead to a changing set of payoffs over time.

Path dependence refers to two aspects of the system state; (a) the current state (where we are now) depends decisions and events from the past and (b) the future is to some extent conditioned by the past (history matters).

---

5 See Taleb (2007) and
So many variables enter into the system state that it is tempting to treat the trajectory from one system state to another as Brownian motion or a Weiner process\(^9\) in which movement from one system state to another is a random process that is normally distributed. Although this assumption is widely used in management, it is clearly falsified in practice. Extreme events are usual not rare\(^10\). System states show a great deal of variability. Financial crises are frequent; in the last 30 years there has been over 30 financial crises globally: management problems mostly concern extreme events. In spite of this management theory and financial economics continues to assume that change is normally distributed.

Here we assume that the variation of system states over time follows a fat tailed distribution in which change on all scales is possible\(^11\). The problem with extreme events and catastrophes is not that they are rare; they are inevitable; the problem is that we cannot predict exactly when they will occur.

6. STRATEGIC DECISIONS

Considering Figure 5 again we return to the point made at the beginning of this note that decision are distributed throughout an organization. Generally there is no single decision maker and no single goal.

The task of management which again is distributed throughout an organization is twofold:

a. To create positive sum games
b. To encourage people within an organization coordinate their decisions.

Decisions can be broken down into the processes of search, choice, implementation and adaptation; search (among alternative possibilities), choice and implementation
of the chosen alternative and *adaptation*. *Adaptation* is always necessary because there is always an element of hazard or uncertainty associated with strategic decisions. The state of all four elements of the meta model changes continuously. Things rarely turn out as we expect. It becomes necessary to revise and sometimes even abandon the original decision because circumstances have changed, or misunderstood.

<table>
<thead>
<tr>
<th>Search</th>
<th>Vision of alternative scenarios, and valuation of potential payoffs</th>
<th>Conceptual stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice</td>
<td>Commitment to chosen alternatives</td>
<td>Imagination</td>
</tr>
<tr>
<td>Implementation</td>
<td>Implementation of chosen alternatives</td>
<td>Realization of strategy and payoffs.</td>
</tr>
<tr>
<td>Adaptation</td>
<td>Adaptation to changes in outer dynamics, inner dynamics and grammar, or miscalculations, unexpected events and disappointing payoffs.</td>
<td>Monitoring and control</td>
</tr>
</tbody>
</table>

Table 1: the strategic decision process

7. COMPLEX ADAPTIVE SYSTEMS (CAS)

Interdependence is a characteristic of a complex adaptive system. Examples of complex adaptive systems are the brain, the global economy, ecological systems in nature. Complex adaptive systems (CAS) are sometimes described as networks of relationships; telecommunications networks, networks of neurons in the brain, computer networks are examples of CAS. It is useful to think of a complex adaptive system as a network of connected nodes as in Figure 5.

Interdependence in a complex system means that the whole is different from the sum of the independent parts. Interdependence is important: sometimes it is described as non linearity, increasing returns or learning curve effects. CAS systems are sometimes called adaptive non linear networks (ANN’s). They have two basic characteristics:

i. Synergy: the value of the system as a whole is different from the sum of the parts. In the case of a positive sum game, the value of the whole is greater than the sum of the parts separately.

ii. Feedback effects: parts of the system interact with one another over time. Causing fluctuations and instability.

Figure 7 illustrates the positive feedback effects at the root of globalization.
In just the same way as positive feedbacks brought extraordinary growth in the early part of this decade, they brought financial collapse in 2007, whose effects are persistent.

The **adaptive** aspect captures the characteristic of agents (managers, actor’s stakeholders for example) in a CAS. Agents are active; they react to circumstances, make plans and revise their plans. They are not passive with respect to change but they attempt to adapt to them.

The meta model in figure 4 is a complex adaptive system. The four elements of the model interact. Each of the four elements is itself a complex adaptive system.
8. REFERENCES

NOTES


2 A similar view is taken by Tolstoy in War and Peace, where he saw the decisions of great men as being determined by a network of seemingly insignificant circumstances that determined outcomes. The view that decisions are the result of programming or hard wiring of neurons in the brain is also the predominant view of neuroscience. Programming is not inevitable. Various techniques enable creative thinking. See some of the papers and references on the website for references.

3 Interdependence is a key feature of complex adaptive systems.

4 Say ‘more or less’ because the boundaries of organizations are difficult to define and indefinite.

5 The qualification more or less, is necessary because, for example, large organization do make an impact on their environment, merely because they are large or because they can exercise influence through other means, public relations, lobbying, advertising and so on. Broadly speaking though, outer dynamics affect organizations but organizations can exert limited, if any influence upon them.

6 From a holistic point of view the eco environment is an interdependent living system which includes the eco system, humans, other animals, plants the atmosphere and so on the ecology becomes a stakeholder of organizations (see for example James Lovelock (2006). The Revenge of Gaia: Why the Earth Is Fighting Back - and How We Can Still Save Humanity. Santa Barbara (California): Allen Lane.

7 The philosopher Wittgenstein (1953) used the term grammar to describe the rules of the game operating on language and the interpretation of what we say when we speak to one another. As far as I know, the idea of organizational grammar that I use here and a number of papers is novel and I’m sure that philosophers would say that I use it differently from Wittgenstein; certainly this seems to be so when I link grammar in other papers to mysticism. But Wittgenstein’s use of grammar has been a powerful influence. Discourse in Derrida (1997) owes much to Wittgenstein, as does Foucault’s archeology and genealogy (1967). Lyotard (1979) uses Wittgenstein’s concept of language games effectively in his writings on postmodernism.

8 The system state; is path dependent (a) the current state (where we are now) depends decisions and events from the past and (b) the future is to some extent conditioned by the past (history matters). See Arther (1994).

9 In a Weiner process or Brownian motion increments or changes from one system state to another are independent random variables: every increment is normally distributed with a standardized mean of zero and a variance of 1.

10 Rare events are such that the size of the even (favourable or unfavourable) does not diminish as the interval of time between system states decreases.

11 In a fat tailed distribution the tail approaches zero more slowly than exponentially; 

Pr[X> x] ∼ x^{-(1+α)}, x → ∞, α > 0 ∼ x^{-(1+α)}, x → ∞, α > 0 ; for a thin tail distribution α = 0 .

Taleb (2007) should be read by every student of management or finance and by some of their teachers too.