CASES IN STRATEGIC THINKING FOR EMBA

JANUARY 2011

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Additional materials can be found at

http://www.robindcmatthews.com/lectures

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CASE 1

Networks and organizational grammar

Complexity, interdependence and the role of organizational grammar can be effectively illustrated by networks. Networks consist of nodes and linkages or edges between nodes as in the figure below.

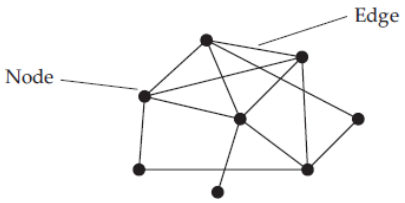
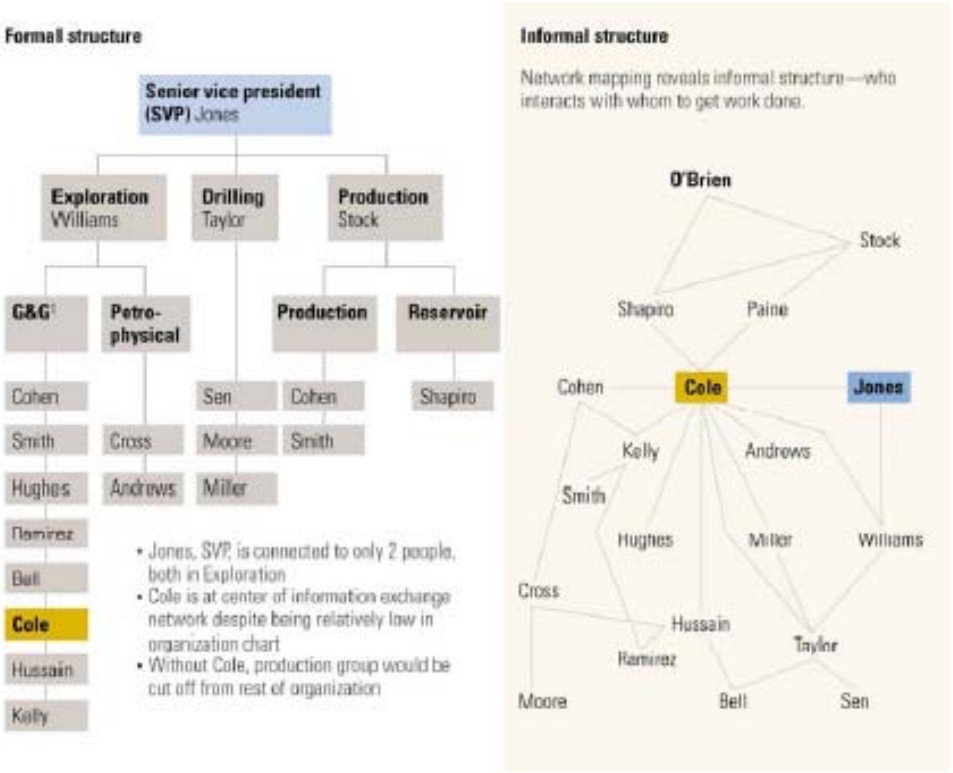


Figure 1

Here is an example of formal and informal networks[1].



[1] Please see Lowell L. Bryan, Eric Matson, and Leigh M. Weiss (2007), Harnessing the power of informal employee networks, *Mkinsey Quarterly* November.

The default state of many networks appears to small world[2] networks

Networks: default state
Small world: highly clustered, short path lengths

- Degree of a node is the number of edges (***k***) connecting it to other nodes.
- High degree nodes have many connections (high ***k***); low degree nodes have few (low ***k)***
- ***P(k)*** probability of degree ***k*** follows a power law
- $P(k) \approx k^{-\alpha}$..

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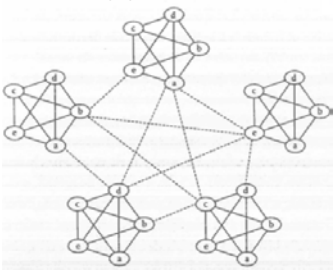

CASE 2

Competition in the old and new economy

Creative destruction

According to Joseph Schumpeter the innovation is the dynamic of capitalism. Capitalism, he thought was unstable. It oscillates between boom and slump. An upswing results in a boom and is inevitably followed by a downswing and a recession or more severely a slump. What drives the upswing? According to Schumpeter, it is a spate of innovations that create new profit opportunities; new products, new technologies, new markets. What turns a boom into a downswing and eventually a recession? According to Schumpeter, this happens because eventually the rate of profit declines as profit opportunities are eroded by competition and market saturation. Creative destruction then occurs. Firms are either destroyed and go into bankruptcy, or they are forced by losses or declining profitability to seek new sources of profit. In any case as firms are destroyed, resources are freed up to await new profit opportunities resulting from a new phase of innovations. Destruction is creative in that it frees up resources; enables them to be transferred from the old to the new. It probably is a painful process; bringing unemployment, losses, bankruptcy, the death of firms. But it forces an economy to innovate.

The red queen effect

In *Through the looking glass,* Alice, running after the red queen, finds that neither is moving. They remain exactly where they began and the red queen observes that "it takes all the running you can do, to keep in the same place." Similarly sometimes firms invest in innovation only to find that their profits are eroded by competitors who copy their innovation, and can sell their products cheaply, because they have not had to undertake the initial investment in innovation. They simply copy and hence the margins of the innovating firm are eroded they are no better off that when they started. This happens time and time again in new economy businesses such as telecoms, communication, information technology. It happens also in (so called) old economy businesses such as automobiles and pharmaceutical. To prevent this happening firms need somehow to create barriers to new

[2] See Mark Newman, (2008) The physics of networks, *Physics Today*, November, pp. 33–38. also at ftp://ftp.elet.polimi.it/users/Carlo.Piccardi/VarieCda/Articoli/CdA-Art-Reti-3.pdf

competition, though patents, or scale economies that make the cost of entry into an industry prohibitive; that is by establishing some kind of monopoly power. Schumpeter maintained that monopoly power in this sense was a prerequisite for capitalism and innovation, because it enabled profit to be accumulated in the upswing of a cycle that could be used to finance innovation.

A new economy business: telecoms

Telecoms illustrate typical situation facing new economy businesses that have reached a level of maturity. Technology moves quickly. So there is a need to invest. Invest involves large setup costs, not only in R&D and product development and testing, but in marketing sales and setting up distribution networks. Firms have a choice either they invest or they wait for competitors to invest, save some setup costs and perhaps learning costs, but lose market share. If they invest, then competitors quickly follow making the product cycle short, reducing margins through price competition. Thus it is difficult to recoup setup costs because margins on operations costs are so low. Alternatively if they wait and follow they are subject to the same processes: they may save on setup costs but they lose market leadership. Most companies follow the same pattern. Margins on additional services associated with telecoms are usually higher. So they invest in add on services. The same process results however. Margins are eroded. So the red queen process proceeds.

CASE 3

An archetypal model of firm growth

The logistic curve

The logistic curve describes the typical growth pattern of a species; rabbits for example. Population growth begins slowly then accelerates into exponential growth. As the population of rabbits for example grows, this attracts in predators foxes for example. Predators, together perhaps with a rise in the number of rabbits relative to the food supply, causes the rate of growth of the population to decline and perhaps even to become negative; the population declines.

Box 1

The logistic curve:
formal representation

$$x(t+1) = k\,x(t)[1-x(t)]$$

$2\,solutions$

$x = 0$

and

$$x = \frac{1-k}{k}$$

It is easy to see how the logistic curve can be generalised into a business context. Market share in one year depends on market share in the previous year. When the share of the market is small, then increase in the market share are relatively easy; growth of market share is exponential. Eventually it as market share increases it becomes more and more difficult to increase market share and growth slows down and may even become negative. Similarly the same idea can be generalised to describe sales growth. Marketers speak of the product cycle. A new product is invented. First sales grow slowly then the product takes off and sales grow exponentially. Then, as a result of competition or market saturation the rate of growth of sales slows down and may even become negative (sales

decline). Another business example of the logistic curve is the life cycle of firms. They begin small, then take off into rapid growth. Eventually the rate of growth declines. The firm reaches maturity. Perhaps at some point in the future the firm actually declines and becomes extinct.

Application: Distribution in the old and new economy

For reasons that will be clear, the firm has to be anonymous; so call it firm X. Firm X is a private company, distributing low value pharmaceutical products. It bought pharmaceutical equipment and accessories from suppliers, stored them and then sold them to their customers, hospitals and clinics. Their market and their share of the market was growing exponentially: Firm X was on the exponential phase of the logistic curve.

The story begins in the early part of this century. The market was expected to grow even faster because of increase injections of government spending into the health sector. In other words the logistic curve was expected to shift upwards, signifying even faster logistic growth. Projections were that market growth would accelerate further over the next three or four years. As the market grew new firms could be expected to enter to compete with X (entry barriers into the market were low). So unless X expanded it would lose market share and might even decline. The reason being that hospitals and clinics were expected to increase in size and expand their demand for products and since it is most economical for them to deal with a single supplier, unless X increased in size, held more products, to satisfy this increased demand, custom would switch to other suppliers. Also X needed to increase in size as the market grew to get better terms from its own suppliers by buying in bulk from them. A further risk was that suppliers to X might decide to sell directly to final customers (hospitals and clinics) and in so doing dis-intermediate X. Thus X's potential competitors included, not only existing competitors, but new entrants including new competitors augmented perhaps by existing suppliers.

X needed to expand. X's biggest most costly asset was working capital, in the form of goods helds as stocks and accounts receivable; that is goods delivered to customers, who paid after a period of time. So X's cash flow was held up until accounts are settled. A further complication was that typically, although customers wanted delivery of goods throughout the year, because of their own cash flow situation (they were financed by the government) they tended to settle accounts at the end of the year, November or December. So bills waited for up to 10 or 11 months before they were settled. This situation was understood to be unchangeable.

The first problem arose as to how to raise additional funds for working capital. X had little or no debt. It was funded by a single entrepreneur/investor. Should the funds be raised by issuing debt instruments, borrowing from the bank or by raising new equity? The latter would involve taking additional partners into the business which would, the current owner felt, possibly reduce his control over the business. Interest rates in the early years of the century were low, credit fairly easy to get. The owner raised funds skilfully; borrowing short term, selling off the real estate on which his warehouses were sited to another company, who then leased it back to him. Real estate was booming at the time so this was easy to do.

The second problem arose because at some point the owner wished to sell the business outright; maybe through public offering of shares, effectively reducing or even liquidating his own holding, or selling to a single investor. The question was; if and when should he do this? What is the best timing? What timing will result in the highest price for the company? In other words; at what point would the company have its highest expected net present value? The answer to those questions was that nobody could really know.

However, times were propitious. Asset prices were rising. The company was growing exponentially since the product curve continued to shift upwards. The hired a manager who had extensive logistics experience, paid him extravagant bonuses if to shave costs off the business. This the manager by drawing on his relationships with customers, and using information not only about their needs on average but about the variance of their needs, thus re-aligning stocks held by X not only with average

demand but with variations in demand. This information was channelled to suppliers bringing the situation closer to just in time supply. Scheduling was also rationalised so that delivery was to a greater extent optimised.

All these things meant that the value of the firm increased. Three things determine the value of a firm; (a) the expected revenue stream, (b) the expected cost stream and (c) the cost of the firm's capital. The bigger are expected revenues and the smaller are expected costs the greater the value of a firm: the lower its cost of capital the higher the value of the firm.

As we explained revenues were growing and fortunately for the owner, people's expectations are invariably based on recent experience. Similarly costs had been reduced. The cost of debt capital was low so there was a ready market for the firm. The owner, somewhat fortuitously chose to sell out at the end of 2006, when the growth rate of the firm was at the highest level he considered feasible. Asset prices generally were at their highest at that point in time. Had he sold one year later, in 2007, after the financial crash, and at a time when government expenditure was expected to fall then h would have got a considerably lower price. So we might argue, he obtained a windfall gain.

CASE 4

Organizational grammar creativity and change

Beinhocker[3] illustrated 3 examples of barriers to change: fixed mind sets, the danger of complexity catastrophe and path dependence. Briefly: fixed mind sets refers to the fact that peoples thought patterns become fixed and inflexible; complexity catastrophe can be illustrated by networks that are organized in such a way that if one part is disturbed there are blowbacks that disturb other parts of the system; path dependence means that often early choices have a huge effect, often constraining later choices.

To introduce adaptability Beinhocker suggests reducing hierarchy, increasing autonomy and introducing diversity into an organization. The following situation illustrates the applicability or inapplicability of Beinhockers diagnosis of adaptability.

It also illustrates a fundamental concept I have developed: organizational grammar.

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3 3 Beinhocker, Eric. (2006). The **adaptable** corporation, *The Mkinsey Quarterly*. May.

Box 2
Organizational grammar[4]
Ogrammar

- *If we think of strategy as the interaction of 4 CAS, expressed as networks, then* ***O*grammar** *determines the nature of the interactions: how parts (or nodes) relate to one another and how they relate.*

- *Using the notion of games as situations in which individuals and groups interact, strategy becomes a series of games of many different types, and* ***O*grammar** *is represented by the rules of the various games, implicit and explicit, and also the processes, mostly hidden that determine and condition the rules.*

- ***Ogrammar*** *is a complex form of conditioning. It includes rules, laws, regulations, cultures, and ways of thinking about problems and so on. It includes formal and informal routines (R), the architectures that bind routines together (A), influences of national and corporate culture (C) and mind sets (MS): the acronym MARCS is a useful way of describing the influence of grammar.*

- ***Ogrammar*** *may emanate from the outside of organizations, external grammar; or from within, internal grammar.*

- ***Ogrammar*** *corresponds in a sense to Wittgenstein's notion of grammar. It governs moves – permitting some and forbidding others, serving as a standard for judging success or failure, including, commands, laws and imperatives, explicit and implicit. It can be definite but seem vague, fluctuating, or even contradictory.*

- ***Ogrammar*** *itself is a CAS and its elements (nodes) interact with one another, conflicting with, reinforcing or dampening one another, whilst still retaining an internal cohesion.*

Organizational grammar and adaptation in local government in Russia

Igor manages a small of 40 team of advisors to the governor and his deputies in a small Siberian town of approximately 70 thousand people. Within the region there are about 200 thousand people. The team has an executive role:

1. providing advice and assistance on policy and together with local leaders in education, health, transportation, policing, welfare, etc., and
2. implementing policy.

Senior staff in the governor's office have long term connections in the locality, but according to Igor attitudes are stuck in a Soviet style mentality. The governor and his administration are new and want to institute radical reforms. Igor is one of his new appointments and there are 10 new members in the team. The rest have long experience of working in the governor's office, and are resistant to any changes in work practices or in their attitudes to clients. Wages for professionals working in the region's oil sector are relatively high and local government rates are not competitive. So hiring new people is not easy.

[4] See Robin Matthews The meta model at http://www.robindcmatthews.com/lectures

Igor is short staffed. Much of his time is spent dealing with emergencies and there is little time for long term strategy. He needs to double his staff and there are resources for this. Legislation says that he must hire in the region. This is difficult because of competition from the oil sector for educated people. Staff attitudes are poor. Igor says there is a real motivational problem. Except for the new staff there is generally no sense of service to customers. Management training is available from the local university, but it is outdated and Igor judges it to be very unsatisfactory. However he is required to use the university and not to send trainees outside the region for management education. It is difficult to promote because promotion must be based on years of service. For this type of problem[5] Beinhocker distinguishes two aspects of organizational grammar that inhibit adaptation: 1. **fixed mind sets** and 2. **complexity catastrophes**.

Mind sets: Mental models become more rigid, more **locked in**, and more averse to novelty as we gain experience. Many cognitive scientists believe that one important way people learn involves condition-action (or if-then) rules. This set-up of mental rules, weightings, and hierarchies has tremendous benefits. It enables us to learn from experience, to make decisions using ambiguous information, and to make inferences across experiences. But the downside is that our mental models tend to become more rigid. As mental models become more complex over time, major rearrangements become more and more difficult. There are 20-year-olds who have fixed mind sets and creative people of 70. But in broad terms, the structures of mental models change over time, and each stage of development has its strengths and weaknesses.

Structure and complexity catastrophes: Organizations can be viewed as a form of network in which webs of people interact. A very general phenomenon in networks, called a *complexity catastrophe*, helps explain why large organizations often find it harder than small ones to adapt. In any network with more than one connection per node, as the number of nodes grows, the number of connections or interdependencies grows even faster. The more interdependencies there are, the more potential for conflicts that constrain the range of solutions. Highly interdependent systems can sometimes become so complicated that they go into gridlock either because (a) they become catatonic, frozen in a state such that any change (except increasing entropy) becomes impossible, or (b) people are fearful of changing anything in case even a small change brings the whole system down.

Case 5

KRAFT AND CADBURY

(MANCHESTER UNITED AND GLAZERS)

A business firm is a collection of different projects; projects in production, training, cost reduction, marketing, operations, projects in finance, etc. Acquisition is a popular project for many firms. This case is typical. Success of the merger depends on 4 things.

1. Realising payoffs from anticipated synergies; making them happen.
2. Over estimating synergies
3. Kraft not paying more for Cadbury than the value realised synergies.
4. The structure of the deal.

Points 1-3 are dealt with in many studies. Kraft agreed to pay £11.5bn or 840p a share for Cadbury, which pleased most Cadbury shareholders(four months before the takeover Cadbury shares traded at 568p). Normally most gains go the shareholders of the company taken over. Other stakeholders may not be so happy. Normally managers of the takeover company overestimate payoffs. One reason is the principal agent problem. Managers gain prestige and celebrity from big takeovers: it makes them feel important, whether or not the takeover results in gains for their own shareholders. Anticipated synergies are nearly always outweighed by high integration costs and conflicts of business and operational cultures. Point 4 refers to the way the deal is financed. It was a leveraged buyout financed by debt which secured on Cadbury assets. The biggest is that Kraft is funding the acquisition with £7bn of debt, meaning that the new groups debt to EBITDA (Earnings before interest, taxes, depreciation and amortization) ratio is 4. If cash is generated on this type of acquisition, it is usually not spent not on investment, but on interest payments, management fees, and directors bonuses.

Manchester United and Liverpool find themselves in much the same situation. The present value of their profits is securitized into the debt used to finance the leveraged buyout; plus they are required to devote part of future revenues to management fees accruing to the owners, who periodically must finance the debt.

One of the former Cadbury UK plants was already scheduled to be closed. Commentators predicted that jobs would be lost if Kraft was to gain from the merger. But Kraft vowed to protect other Cadbury jobs in the UK: and convinced the then business secretary, Lord Mandelson; apparently.

Luckily we don't have to worry about Sir Roger Carr the CEO of Cadbury at the time. Kraft has decided to move Cadbury headquarters to Switzerland to avoid UK taxes. But Sir Roger was awarded a Knighthood in 2011for services to British industry. He is also Chairman of Centrica, the parent company of British gas which recently announced an increase of 7% in prices. Centrica profits for 2010 are likely to be 2.2 billion UK pounds.

QUESTIONS FOR DISCUSSION

Case 1

1. Illustrate this emba cohort as a formal or informal network.
2. Who are the key connectors.
3. Apply to your own organization

Case 2

1. Explain and illustrate creative destruction and the red queen effect from your own experience.
2. Can the great recession (2007-) be explained as creative destruction.
3. Contrast the two principles (creative destruction and the red queen effect) with Porter's (infamous) 5 forces model.
4. Which of the two principles predominate in your industry?

Case 3

1. Outline at least 6 basic principles of strategy that are illustrated in case 2. Critique/discuss them.
2. Illustrate the logistic curve with reference to your own experience as managers.

Case 4

1. Illustrate the concept of organizational grammar and Beinhockers analysis of adaptability with reference to Igor's problem.
2. How would you advise with Igor problem?

Case 5

Analyse case 5 in relation to what the academic programme this session: ie. Think across the different disciples