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Examination MOT1524

Leadership and Technology Management

Date: November 5, 2014

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OPEN QUESTION 2 (topic: making decisions in organizations, Ch.5)

Imagine that you have invested money in a company, but as time goes on, it appears to be failing. Rather than lose your initial investment, you may invest still more money in the hope of salvaging your first investment. The more you invest, the more you may be tempted to save those earlier investments by making later investments.

a) What kind of decision-related phenomenon best fits your behavior in this particular case, and why?

*The decision-related phenomenon that best fits my behavior in this particular case is escalation of commitment. This distortion refers to staying with a decision even if there is clear evidence it is wrong (**2.0 points** for referring to escalation of commitment). This is exactly what happens here: I invested a lot of money previously, but fail to get return on my investment. It would have been wise to abandon the project, but, instead, I increase my commitment, and invest even more. I "throw good money after bad" to demonstrate that my initial decision wasn't wrong and to avoid admitting that I in fact made a mistake (**2.0 points** for adequate explanation; max score = **4.0 points**);*

Behavioral research points to the fact that people typically approach the decisions they make in systematically biased ways – among others via heuristics. Please answer the following questions below:

b) According to your book, how would you define heuristics?

*Heuristics are shortcuts in judging other people that enable us to make accurate decisions rapidly and that usually provide valid data for prediction. However, they are not foolproof, meaning that they can also result in significant distortions in judgment (such as stereotyping; max score = **2.0 points**);*

Consider the following example:

The government is preparing to battle an unusual disease expected to take 600 lives. Two alternative programs to combat the disease have been proposed, each of which, scientists believe, will have certain consequences. Program A will save 200 people, if adopted. Program B has a one-third chance of saving all 600 people, but a two-thirds chance of saving no one.

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c) Research shows that 72% of the people typically prefer to adopt Program A over Program B (Tversky and Kahneman, 1981). Please mention the well-established decision-making bias they fall victim to? What makes you say so?

*The well-established decision-making bias they fall victim to is the risky choice bias, a.k.a. risk aversion. This is the tendency to prefer a sure thing over a risky outcome. (**2.0 points** for referring to risk aversion). A majority of people perceive Program A as a sure thing (for you will at least save those 200 people), and Program B as the risky option. Research in the laboratory has shown that people display a 75% preference to select Program A over Program B, even though the riskiness of both programs is mathematically identical(**2.0 points** for adequate explanation; max score = **4.0 points**);*

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QUESTION 3 (topic: Organizational Culture and Change, Ch. 15 and Ch.16)

Advanced technology organizations increasingly rely on teams to carry out critical strategic and operational tasks. An important characteristic of such organizations is change. Today's advanced technology business throws managers and their teams into a constant state of flux. The question is no longer "Should we change?" but "How will we deal with change?"

3.

a) In many attempts to change organizations, such efforts are usually met with “resistance to change”. Explain the meaning of “resistance to change”
b) Explain why “resistance to change” often occurs in organizations?
c) What can managers do in order to overcome the “resistance to change”? (Mention three different ways).
d) Explain how organizational change may be culture-bound.

Fill out your answer here:

a) People tend to resist change, even in the face of evidence of its benefits.

b) The specific forces for change are: the nature of the workforce, technology, economic shocks, competition, social trends, and world politics.
1) The nature of the workforce includes multicultural environment, demographic changes, immigration, and outsourcing.
2) Technology is continually changing jobs and organizations..
3) The housing and financial sectors recently have experienced extraordinary economic shocks, leading to the elimination, bankruptcy, or acquisition of several companies.
4) Competition is changing. Competitors are as likely to come from across the ocean as from across town. Successful organizations will be fast on their feet, capable of developing new products rapidly and getting them to market quickly.
5) Social trends don't remain static. Consumers now meet and share information in chat rooms and blogs. Companies must continually adjust product and marketing strategies to be sensitive to changing social trends.
6) World politics is changing. The opening of China and Southeast Asia, and the rise of Muslim fundamentalism are examples of changing world politics.

c) There are various ways of overcoming resistance to change:
1) Education and Communication: Communicating the logic of a change can reduce employee resistance on two levels. First, it fights the effects of misinformation and poor communication: If employees receive the full facts and

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clear up misunderstandings, resistance should subside. Second, communication can help "sell" the need for change by packaging it properly.
2) Participation: It's difficult to resist a change decision in which we've participated. Assuming participants have the expertise to make a meaningful contribution, their involvement can reduce resistance, obtain commitment, and increase the quality of the change decision.
3) Building Support and Commitment: When employees' fear and anxiety are high, counseling and therapy, new-skills training, or a short paid leave of absence may facilitate adjustment. When managers or employees have low emotional commitment to change, they favor the status quo and resist it. So firing up employees can also help them emotionally commit to the change rather than embrace the status quo.
4) Develop Positive Relationships: People are more willing to accept changes if they trust the managers implementing them.
5) Implementing Changes Fairly: One way organizations can minimize negative impact is to make sure change is implemented fairly. Procedural fairness is especially important when employees perceive an outcome as negative, so it's crucial that employees see the reason for the change and perceive its implementation as consistent and fair.
6) Manipulation and Cooptation: Manipulation refers to covert influence attempts. Twisting facts to make them more attractive, withholding information, and creating false rumors to get employees to accept change are examples of manipulation. Cooptation, on the other hand, combines manipulation and participation. It seeks to "buy off" the leaders of a resistance group by giving them a key role, seeking their advice not to find a better solution but to get their endorsement. Both manipulation and cooptation are relatively inexpensive ways to gain the support of adversaries, but they can backfire if the targets become aware they are being tricked or used.
7) Selecting People Who Accept Change: Research suggests the ability to easily accept and adapt to change is related to personality–some people simply have more positive attitudes about change than others. Such individuals are open to experience, take a positive attitude toward change, are willing to take risks, and are flexible in their behavior.
8) Coercion: Last on the list of tactics is coercion, the application of direct threats or force on the resisters. Examples of coercion are threats of transfer, loss of promotions, negative performance evaluations, and a poor letter of recommendation.

Mention 3 of these 8.

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e) Organizational change may be culture bound.

Hofstede (1980) found that differences in **national culture** vary substantially along four dimensions: uncertainty avoidance, individualism, tolerance of power distance, and masculinity-femininity. Two of Hofstede's cultural dimensions-individualism and lack of power distance-are theoretically linked to change and innovation. Power distance represents the extent to which members of a society create the unequal distribution of power in institutions and organizations. Class systems are normal and even desirable in power distant societies, and it is difficult to climb from one social class to another. By contrast, in non-power distant societies, people believe in shared power, equality, and social mobility. Individualism stands for a preference for a social framework in which people take care only of themselves and their immediate families. Group orientation stands for a preference for a tightly knit social framework such as an extended family, clan, or other in-group.

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QUESTION 4 (knowledge and innovation networks, Andriessen, 2007; Dhanaraj and Parkhe, 2006; Ambrecht et al., 2001)

'Ideas from one group might solve the problems of another, but only if connections between existing solutions and problems can be made across the boundaries between them. When such connections are made, existing ideas often appear new and creative as they change form, combining with other ideas to meet the needs of new users. These new combinations are objectively new concepts or objects because they are built from existing but previously unconnected ideas.'

4.

a) Implicit (or tacit) knowledge has proven to be vital for innovation. Explain tacit knowledge and show why this is important for generating innovation output. [2points]
b) Explain the difference between 'managing knowledge assets' and 'facilitating knowledge flow' with regard to Research and Development (R&D) activities. [2points]
c) Charles Dhanaraj and Arvid Parkhe (2006) claim that organizational networks for innovation are very effective with regard to several innovation outcomes. Why? [2points]
d) Dhanaraj and Parkhe (2006) also claim that innovation networks should not be viewed as loosely coupled systems of autonomous firms. What do they propose instead? [2points]
e) In innovation networks, firms may play different roles, such as key actors, triggering entities, strategic centers, flagship firms or network orchestrators. Explain the differences and similarities between these 5 different entities.

Total: 10 points

Answers

a)*Tacit* Knowledge, sometimes also called *implicit knowledge,* consists of mental models, skills, behaviors and perspectives, largely based on experience. This knowledge is difficult to transfer, but KM techniques such as learning by doing or collaboration in communities can help people to share this knowledge. Cooperating employees develop a shared repertoire of routines, vocabulary, stories, symbols, artifacts, and heroes that embody the accumulated knowledge of the community. This shared repertoire serves as a foundation for future learning and for reaching innovation outputs.

b)The difference between "managing knowledge" and "facilitating knowledge flow" can be illustrated by analogy to the flow of a river. Managing knowledge, in its most-commonly-practiced technocentric form, can be compared to the building of dams, embankments, locks, and weirs that regulate, direct and filter the course of a river. Facilitating knowledge flow, in this context, is more akin to ensuring that existing river banks are not washed away, that fallen trees are cleared so tributaries may flow unhindered to join the main course, and that, if the river overflows its banks, skilled farm workers are at hand to exploit the newly-deposited rich alluvial deposits. A central focus for R&D, innovation is the successful exploitation of ideas to create a new, useful offering of product or service. An individual or a development team initiates the process by creatively connecting insight or foresight into the needs of the market with the potential capability to deliver a suitable offering. But knowledge *sharing* is a critical catalyst for creativity and subsequent innovation because it provides a

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means by which innovative ideas can be captured, shared or tested. This leverages the communal knowledge and leads to new and improved ideas. The “sharing” may be face-to-face, across distance with electronic technology, or across time with access to information archived by others. Promoting this knowledge flow in a way that stimulates the knowledge creation process is a major pursuit for R&D managers.

c)Organizational networks for innovation challenge the conventional wisdom on the boundaries of the firm , given the complexity of sharing tacit knowledge across firm boundaries while developing effective antidotes for opportunistic behavior. The dispersed knowledge structure that induces collaborative networks also necessitates an enhanced capability within the network to learn and teach across organizational boundaries. In other words:

1. Organizational networks for innovation enable knowledge sharing across traditional firm boundaries
2. Organizational networks for innovation are a safeguard for individualism but stimulate collaboration
3. Organizational networks for innovation enable learning.

d)Dhanaraj and Parkhe (2006) propose that hub firms orchestrate network activities to ensure the creation and extraction of value, without the benefit of hierarchical authority.

Orchestration comprises knowledge mobility, innovation appropriability, and network stability. We reject the view of network members as inert entities that merely respond to inducements and constraints arising from their network ties, and we embrace the essential player-structure duality present in networks.

e)There are no specific differences. All of these are known variously as HUB firms in a network.

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QUESTION 5 (topic: Managing, HRM, Pay and Performance, Innovation and Exploitation, Becker et al. 1997; Ederer and Manso, 2013)

Ampelmann Operations is an offshore access provider. The company was founded in 2008 and focuses on the development, construction and lease of offshore access solutions. Their core technology is the Ampelmann system, a motion (i.e. waves) compensation platform providing a safe passage from a ship to another (moving) offshore object such as a ship, platform, windmill etc. After 6 years of development, production and testing of the platform at Delft University of Technology 'the Ampelmann' was commercially introduced in 2008. Since then the company grew from 1 to 28+ systems, from a 5-men team to about 225 employees. As a relatively young and fast growing company Ampelmann Operations faces a number of challenges. One of these challenges is to balance both operations and innovations. In other words, how can the company organize its day to day operations in order to be competitive on the one hand while organizing their needed processes to innovate on the other hand?

As a future Management of Technology engineer you are asked to come up with a solution. The following questions need to be addressed.

5.

a) Show why this problem should be addressed on the employee and management level. More specifically, provide 3 arguments why Human Resource Management (HRM) systems and practices lead to competitive advantage?

At Ampelmann innovation projects run in-between the operational processes. The four-man innovation team consists of project managers working with internal and external resources to realize their projects. The use of internal or external resources (employees) depends on the availability of these resources and if the required knowledge is available in-house. Further, the innovation department operates directly under the board. Project ideas are developed in Business Development, Operations and in the Board. This means that the innovation department works for 'internal clients'. Pay and Rewards are important drivers for performance here as the board of Ampelmann strives for both sustainable competitive advantage and more innovations in terms of the development of new products and services.

b) What would be an effective way to reward project managers in order to gain the necessary competitive advantage? Provide a system for pay and rewards for project managers and argue why this could strengthen Ampelmann's competitive position in the market.
c) What would be an effective way to reward project managers in order to stimulate their creativity and exploration that are needed to become more innovative? Provide a system for pay and rewards for project managers and argue why this could strengthen Ampelmann's capacity to be more innovative.
d) In addition to pay and rewards, are there any other areas on the employee and management level that could be addressed here?

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Answer

a) changing market conditions have rendered many of the traditional sources of competitive advantage, such as patents, economies of scale, access to capital, and market regulation, less important in the current economic environment than they have been in the recent past. This is not to argue that such assets are not valuable, but rather in a global economy that demands innovation, speed, adaptability, and low cost, these assets do not differentiate firms the way they once did. Instead, the core competencies and capabilities of employees that help to develop new products, provide world class customer service, and implement organizational strategy are relatively more influential. Unlike conventional assets, this form of intellectual or organizational capital is largely invisible and therefore does not appear on the firm's balance sheet. Although organizational and intellectual capital may well be "invisible," the sources of this capital are not. They are found in a skilled, motivated, and adaptable work force, and in the HRM system that develops and sustains it. These "people embodied skills" are directly reflected in conventional measures of firm profitability. Indeed, as intellectual capital has come to represent an increasing fraction of many firm's total assets, the strategic role of the HRM system has also become more critical. Such HRM systems as the source of organizational capabilities that allow firms to learn and capitalize on new opportunities.

b&c) How should managerial compensation be structured if the goal is to induce managers to pursue more innovative business strategies? In acontrolled laboratory setting, Ederer and Manso(2013) provide evidence that the combination of tolerance for early failure and reward for long-term success is effective in motivating innovation. Subjects under such an incentive scheme explore more and are more likely to discover a novel business strategy than subjects under fixed-wage and standard pay-for-performance incentive schemes. We also find evidence that the threat of termination can undermine incentives for innovation, whereas golden parachutes can alleviate these innovation-reducing effects.

So, fixed-wage and standard pay-for-performance incentive schemes for project managers and tolerance for early failure and reward for long-term success to stimulate innovation.

d) Training and development opportunities for current employees
Recruitment and selection of new employees
Change of the organizational culture
Etc.