

In this Issue

Mensch's "Innovation management"

Management of innovation is receiving unusually vigorous attention from researchers and practitioners alike. Professor Mensch concentrates on problems of developing a new product line within the existing lines of products within an ongoing business. Professor Mensch struggles with some limiting assumptions of neoclassical theory of the firm: although the firm as a whole does not "behave" as *homo oeconomicus*, its members (individuals and groups) just might. This inconsistency (a firm is a large group after all) is of course unacceptable and Mensch, relying on Leibenstein and March-Simon, affirms that the long-term behavior of the firm can only be understood when taking internal micro-political factors into account.

Mensch describes a field study of corporate innovation process in 118 firms in West Berlin. As expected, their innovation performance was dismal. Large average lead time, frequent failures and abandonments, reduction of product innovation to simple product variation, incompetence in dealing with new technologies, and so on, attest to the fact that innovation management, both theory and practice, is relatively undeveloped and a badly practiced art (not to mention science at all).

Very often we hear arguments that certain theories and concepts are of no use in practice, that reality is much more complex, and that practitioners are doing their best with whatever means they choose to deploy. Only rarely we acknowledge that much of what is going on in business today is simply and plainly *bad and incompetent management*. Incompetent managers abound and are being "produced" by graduate schools of business at unprecedented rates. Corporate ladder climbers, foot-dragging and wait-and-see "hedgers", short-term profits "reapers", bottom-line technicians, and "business-as-usual" bureaucrats are all contributing to the prevailing "chryslerization" of management practices. Very

little of entrepreneurship and risk taking, creative problem solving, imaginative innovation, competent decision making and conflict resolution, mastering of high technology, or strategic leadership: bad management is an international malaise resulting from decades of inadequate and misplaced business education.

Mensch introduces the above malaise as characterized by a transition sequence: dynamic entrepreneur – calculated risk-taker – careful controller – consolidator. We are in the age of "consolidators" who typically make it to the top in times of economic decline. Consolidators do not develop new lines of business, they rely on short-term profits and discourage spending on long-range innovation projects – they gradually define their firms and themselves out of running and ultimately out of existence.

The consequences of this "satisficing" behavior, i.e. avoidance of "sticking your neck out" – which has become acceptable behavior (Champignon Effect), are devastating. No drive for excellence, no search for the ideals, no risk-taking, no professional satisfaction – just survival, safety, and mediocre albeit satisfactory (or satisficing) goal structure: such managerial attributes signal the end of an era. New high-technology industries cannot afford not to bypass this generation of managers.

Mensch concludes, unmercifully, that so called "external obstacles" to innovation can be traced to internal primary causes: the flops are internally generated by incompetence, myopia, and excuse-making (chryslerization). He also presents three basic sources of corporate irrationality:

(1) interfunctional boundaries interactions and interfaces, i.e. intraorganizational competition, non-cooperation, and plain sabotage of functional groups (e.g., marketing versus technical people);

(2) hot-headed and emotional approach to conflicts where cool-headed conflict history revision and creative initiatives are needed;

(3) inconsistency between corporate overall strategy and individual product/market strategies of firm's comprising units: very often there is no strategy to be revised; an organized chaos reigns.

Kozminski and Tropea's "Negotiation and command"

Dissolution of centralized control of public institutions is the solution recommended jointly by Kozminski of Warsaw and Tropea of Washington for both socialist and capitalist countries. Governmental parasitism, inflation-making, marginal performance and wastefulness are traced down to the same roots in both of these basic societal models: ossified formal structures conflicting with and choking off spontaneous and informal human networks and organizations.

Informal organizations and networks emerge spontaneously within formally "designed" (or socially engineered) social structures. They are characterized by their own rules of conduct and behavior, their own "rules of the game". Their existence and persistence has been formally recognized at least since 1941. Yet, they were usually perceived as interfering phenomena: compromising organizational goals (as if organizations could have goals at all!), eroding hierarchical formal structures, causing headaches to dictators and their organizational theorists-apologists. It appears that just the opposite is true.

Formal systems not only spawn informal networks but are actually dependent on them and sustained by them. More and more we see socialist governments to be less and less willing to crash down on intricate systems of corruption, black markets and parallel barter economies. Their very existence, as bureaucratic skeletal structures, depends on such "realistic" tolerance. Similarly, in the West, parallel informal economies, self-help and self-sustaining neighborhood groupings are gaining in their significance and, under the label of voluntarism, their role is being increasingly recognized by more progressive governmental models. It is the old-fashioned conservative "liberalism" which is trying to preserve the commanding central governmental interference in most areas of human affairs. Informal networks are discouraged by definition and described as tax-avoiding schemes of the rich.

In terms of social self-production paradigm, social autopoiesis, Kozminski and Tropea are intuitively grasping the difference between social *organization* (a dynamic, self-evolving and self-renewing set of human rules of conduct), social *structure* (a static, temporally and spatially "frozen snapshot" of the underlying organizational dynamics), and social *design* (externally imposed social structure, usually unrelated to the underlying organization). The theory of *autopoiesis* teaches us that one cannot change a social

system by changing its structure – a fatal blow to the tinkering of social engineering. Kozminski and Tropea are unaware of autopoiesis of social systems, yet they provide a number of examples and theoretical hypotheses identifying informal networks as social organizations and formal networks as social structures (emergent or imposed).

Public institution, by its very structural design, is going to conflict with the underlying self-organizational forces. These spontaneous organizations are the only true reflection of the underlying rules of human conduct. Informal networks compensate for the inability of formal hierarchical systems to respond to both internal and external perturbations in human needs, goals and modes of behavior. The authors suggest a dissolution of centralized hegemonic control of prerogatives, information and interpretation. Government, especially in its hierarchical, command-based, overblown central version, is not the solution to a problem – it *is* the problem. Kozminski and Tropea changed this recognition from a cliché to significant social observation.

Kozminski and Tropea, both sharing with the readers their strong and bitter experiences of a real life, present a strong indictment of current organizational theory as being more a legitimization of centralized authority than an application of a science. Their "cases" – almost anecdotal when read out of context – become graphic illustrations of what humans must endure within incompetently managed "human systems".

Ghani and Lusk's "Human information processing"

The message-part of this paper deals with ten MIS-design considerations which are emerging as being essential for designing useful and human-oriented MIS. The rest is a review of selected related research literature. Earlier relevant HSM articles include those by Grossman and Lindhe (*HSM* 1 (3) (1980) 261–267), Kochen (*HSM* 1 (3) (1980) 247–251), and Lusk (*HSM* 2 (4) (1981) 285–293).

Professor Lusk has recently become an HSM editor in charge of Decision Support Systems area so that his views and research are of interest to HSM readers and potential authors. Mr. Ghani works mostly in Pakistan. Both authors obviously subscribe to Simon's notion of "bounded rationality" of human animals. This is essentially based on a computer-analogy view of human beings: input–output

mechanism, information-processing decoders, memories for storing and retrieving information, sequential problem-solving, and so on. Recent advances in cognitive science are now seriously questioning all of the above “human-as-machine” notions. Yet the difference does not matter when authors talk about the actual MIS design.

“MIS can be organized to facilitate decision-making performance”, the authors say. That is, in a more up-to-date terminology, they talk about Decision Support Systems (DSS). What is most interesting about their presentation is the series of six headline-statements which are then further elaborated, analyzed, referenced, and their relevance to MIS-design emphasized. For example, “Decision makers tend to form problem-solving strategies based upon the availability and usefulness of information”. That is, my *approach* to solving a problem will be affected by the quantity and the quality of information available to me. This is a far cry from the mechanistic attempts to classify problem-solvers into stable groups like left-brained “accountants” and right-brained “artists”.

Similarly, problem-solving strategies are “context-dependent”, that is, preferences, attitudes (for example towards risk), choices, importance weights, and so on, are all dependent on a given situation; they are not fixed and independent attributes of a decision maker. Context-free separation of means and ends in modern economic analysis is not even worthy of additional discussion: the remarkable failures of utility theory and its derivatives like multiattribute utility theory (MAUT) are sufficiently convincing. In a plain language, you can’t put a decision maker on a “psychiatrist’s couch” and diagnose his preferences through elaborate questioning, you can’t ignore the context of the real situation. Such Freudian view of decision making can still be found floating around in some circles.

Further statements of Ghani and Lusk are simply variations and elaborations of the dimensions of “context”. But the examples given and the literature discussed are still interesting and maintain reader’s attention. For example the authors militate against “color encoding” of information without discussing the widespread preferences for *color* TV, video-discs, photography, paintings, film, clothing, journals, and other means of information transfer.

It is extremely important that the relationships among MIS and Decision Support Systems, normative and descriptive decision making, heuristic and

analytical algorithms, high-technology means and human-humane ends, and other dialectical contro-categories be given a full attention and hearing on the pages of *HSM*. In this respect the Ghani–Lusk paper merely scratches the surface of the incredible richness of holistic understandings of what decision aids (if they are needed at all) should be all about. Thus, should not we devise the means to amplify human intuition, to take advantage of human decision-making faculties, rather than attempting to *replace* them by an efficient but dumb machine?

Yilmaz’s “Elimination by risk attributes”

Mustafa R. Yilmaz, although having a doctorate in Mathematical Sciences, is very much concerned about *human* aspects of decision processes – a concern which is a breed apart from the mechanistic mathematization which so often plagues economically oriented risk studies of portfolio selection theorists.

Yilmaz elaborates the presupposition that risk refers to a complex, multidimensional set of perceptions evoked by a human decision maker in a particular decision situation. This is a far cry from saying that risk can be adequately measured by variance or other ad hoc measures of statistics, or that humans have attitudes toward risk independent of particular decision situations. Neither assumption takes into account the actual human decision-making processes, ignoring that perception of risk and attitude towards risk are themselves “evolving” in the course of such decision-making processes, and avoiding the conflict-resolution struggle between the multiple and many dimensions (or attributes) of risk.

Yet, the 1981 Nobel Memorial Prize in Economics was awarded for contributions to the analysis of financial portfolios based precisely on such unwarranted, ad hoc, and unscientific measure risk: statistical variance. In addition, a wrong person was credited with the “invention” who then had to make clear that he did not actually do it. Thus our understanding of risk, after the decades of mean-variance model of Markowitz, is even worse than before the fifties. At least we had had people like Fisher, Pigou and Hicks who started on the right track.

More and more we now recognize that risk consists of multiple and often conflicting dimensions or attributes. Risk is less seen as a singular and precisely measurable attribute – such as for example “weight”, and more as a multidimensional, relativistic, fuzzily

measurable, and situation-dependent attribute such as for example “quality”.

Yilmaz adopts an extremely simple approach to partial ordering and elimination of risky prospects: a lexicographic ordering, i.e. a “one-by-one” treatment of multiple attributes of risk. He shows how certain “paradoxes” (like for example the Allais paradox) lose their meaning in the face of a broader, more adequate definition of risk. Such paradoxes are only paradoxical with respect to a narrowly defined set of assumptions and axioms – itself a highly paradoxical achievement.

The one-by-one ordering of risk attributes is still a controversial issue: a preemptive ranking of importance of attributes must be performed where a decision maker may in fact consider several of them to be of equal importance and strive for their simultaneous, parallel processing. However, the Allais paradox is easily explained in terms of sequential processing of risk attributes.

A more significant limitation of Yilmaz’s procedure: he insists that only stochastically nondominated prospects be considered as a starting set. This is fine if one and only one prospect is to be selected; if more than one prospects are to be selected the assumption loses its persuasiveness. The “second best” prospect is not necessarily nondominated.

The interactive nature of ERA (Elimination by Risk Attributes) makes itself suitable for further elaboration as a computer-supported procedure. Developing such decision support system for choice under risk is still to be accomplished. How a set of relevant risk attributes is actually selected, and how it may be itself changing and evolving during the process of decision making, remains to be explored. Yilmaz seems to be aware of all such shortcomings and unfinished businesses – let us hope that the next steps are to be taken in the near future.