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ÉDITORIAL/EDITORIAL

L'innovation et le langage

Le langage est consubstantiel à une vie raisonnable, qui explicite ses expériences, définit ses orientations, structure et exprime le silence initial de l'imagination. Mais, en même temps et par les mêmes opérations qu'il éclaire, le langage risque toujours de favoriser, via l'usage des mots, l'illusion que ce qui apparaît est toujours déjà connu : en ayant les mots, l'on croit tenir la chose.

Ceci est particulièrement le cas au sein des organisations, car le langage y a un statut non pas théorique mais *pratique* : les mots qui servent à désigner les objets et les opérations sont intimement intriqués avec ceux-ci, et font inextricablement partie de *l'expérience quotidienne vécue*, des évidences qui constituent, dans la pratique, la culture organisationnelle.

Les expressions quotidiennes, les locutions performatives ou normatives, les injonctions ou interpellations, font partie du lot ordinaire du déroulement des vécus individuels et collectifs, qui n'appelle pas de réflexion supplémentaire. Une norme qui passe dans les mœurs devient une norme oubliée *parce qu'elle est spontanément agissante*. Il est significatif que des ordres prononcés dans un bloc opératoire deviennent supérieurement efficaces quand ils n'ont plus besoin d'être prononcés : le bon travail des infirmiers instrumentistes se mesure à l'anticipation dont ils sont capables pour tendre aux chirurgiens les instruments nécessaires au bon déroulement des opérations sans que ces derniers aient à demander quoi que ce soit. Le langage disparaît car le signifié est devenu une évidence.

De ce point de vue, qui est celui de la *pratique organisationnelle*, le langage tient du silence de tous les jours ; il renvoie à une sémantique de l'action qui l'inclut et enveloppe au cœur d'une fabrication pratique des significations qui n'est plus "le langage" tout court, mais le résultat internalisé d'évidences réflexes non interrogées, non explicitées – et qui soudain, parfois, ne vont plus du tout « sans dire ».

Cette fonction d'évidence sémantique entraîne tôt ou tard une cécité profonde en regard de ce qui vient et apparaît – ou *voudrait* apparaître – comme *neuf*. Ici se situe et opère une contradiction logique simple et réhibi-

toire pour le bon fonctionnement des organisations : ce qui est neuf, est par construction identifiable fonction d'outils sémantiques qui ne sont paradoxalement pas détenus par ceux-là qui devraient identifier le "nouveau". Autrement dit, le "nouveau" est par définition inaccessible aux langages préexistants, lorsque ceux-ci servent à décrire le connu. Or, le langage organisationnel sert par construction prioritairement – parfois exclusivement – à décrire, prescrire, et opérer sur, le connu.

Pour apprendre, pour comprendre et innover, pour faire place à *ce qui n'existe pas encore* au sein des organisations (nouvelle concurrence, nouveaux produits, nouvelles problématiques), il est parfois indispensable d'abandonner le langage préexistant inscrit dans la pratique et agissant comme telle. Il est capital de libérer la place des mots et des significations réputés *entendus* ; il est essentiel de *désapprendre* ce que l'on sait.

Pour qu'une organisation soit innovante, il lui faut donc d'abord s'exercer à ne pas répéter seulement ce qu'elle sait *déjà* faire, il lui faut apprendre à entendre l'inouï. Une telle disposition, individuelle et collective, est exceptionnellement exigeante, car elle demande en particulier de prendre le temps de ne pas *réagir* à l'urgence, mais au contraire de lever le regard vers les orientations stratégiques à long terme de l'organisation. Elle implique souvent, comme l'expression le dit très bien, une mise en *question* des principes directeurs de l'action.

Dans l'internalisation paradoxale d'une certaine capacité à interroger ses propres évidences, une organisation ne doit pas non plus cependant faire table rase de ce qu'elle sait faire : elle courrait évidemment à l'échec. Si une bonne dose d'imprudence et de non savoir est nécessaire pour que l'avenir prenne sa place, c'est sur le fond de la reconnaissance préalable de compétences éprouvées.

L'équilibre est un rythme entre se taire et prononcer : il doit se pratiquer pour devenir évident...

Laurent Bibard
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DECISION-AID MODELS AND METHODS FOR COMBINATORIAL PROBLEMS OF OPTIMAL PLANNING

Laurent ALFANDARI



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Laurent Alfandari is Associate Professor in the Information Systems & Decision Science Department of ESSEC Business School. His research field is Operations Research and Decision Aid for management. He is member of the French OR Society and has published several research articles in international Operations Research reviews and book chapters.

Given the constant growth of markets and production, mergers of companies and globalization, many planning problems involve so large quantities that every cost saving of 1% may represent millions of euros in some cases. Moreover, operational constraints often become so complex and varied that they require decision-aid tools for supporting the decision-maker. Here are some examples of tactic or strategic planning problems studied in our research, involving a huge amount of data and parameters and, in most cases, important financial stakes:

[*Plant location*]: choose where to locate a given number of plants among a set of candidate sites so that the total demand of clients supplied by a plant does not exceed its production capacity, and total transportation cost between plants and clients is minimized.

[*Crew pairing*]: cover the set of flights of an airline company (Air France, AA...) by crews of pilots, hostesses and stewards, each crew rotation starting from the company base, performing a feasible (in terms of total absence time, working time etc.) sequence of flights and ending at the base, while minimizing the total cost of the selected crew rotations which is a function of the total rest time, hotel nights and meals...

[*Locomotive assignment*]: assign to each train of a railway company (namely, SNCF) a consist of locomotives of different types, each locomotive starting from an initial station, towing a sequence of trains and turning back to the station, so that a minimal number of locomotives is used for covering all trains.

[*Sustainable development in agriculture*]: given seasonal needs and yields of crops of a farmer (rice, potatoes...), decide crop rotations, cultivated surface areas and fallows for the whole planning horizon so that production covers needs while minimizing space consumption (application to the struggle against deforestation of primary forests).

Each of the above problems can be formulated by Integer Linear Programming, with the particularity that many decision variables are binary 0-1 variables (Do we decide to locate a plant there or not? Do we decide to assign this crew to this flight or not? etc.). Generally speaking, Integer Linear Programming is known to be much harder to solve than continuous Linear Programming, the hardest problems being called NP-hard. For large-size NP-hard problems finding the optimal solution is out of range because of combinatorial explosion, so approximation methods or heuristics are necessary for finding a good solution in a short time. The aim of our research is to find the best possible models for a given problem, and design heuristics with a priori performance guarantee (using worst-case mathematic analysis) or a posteriori (using numerical tests and comparing the gap to optimality on smaller problems). We concentrate on covering problems where a given demand is to be covered by the production of human or material resources at minimal cost, and specifically work on designing or improving approximate methods for this kind of problems (so-called column generation and decomposition methods, greedy approximation heuristics, local search or metaheuristics). The decomposition methods and greedy methods both rely on iteratively solving one or several subproblems, which are often also NP-hard but well approximable as they involve much fewer constraints than the original problem. Both theoretical and numerical results generally enable to validate the efficiency of the solving methods proposed.

Bibliography:

Alfandari L., Improved Approximation of the Soft-capacitated Facility Location Problem. To appear in *RAIRO Operations Research*, 2007.

Alfandari L., Nagih A., Optimisation de la construction de rotations d'équipages en transport aérien. In: Paschos V.T., *Optimisation combinatoire 3. Applications (traité IC2)*, Paris, Hermes. Lavoisier, 2006.

Daskin M.S., *Network and Discrete Location - Models, Algorithms and Applications*, John Wiley and Sons, Inc., NY, 1995.

Desaulniers G., Desrosiers J., Dumas Y., Marc S., Rioux B., Solomon M.M., Soumis F., Crew Pairing at Air France, *European Journal of Operational Research*, 97 (2), pp. 245-259.

Ziarati K., Soumis F., Desrosiers J., Solomon M.M., A Branch-first Cut-second Approach for the Locomotive Assignment Problem, *Management Science* 45: 8 (1999), pp. 1156-1168.

Les techniques d'optimisation sont d'autant plus utilisées en planification que, les quantités à gérer croissant de façon continue dans les entreprises, chaque % gagné sur le coût peut représenter jusqu'à plusieurs millions d'euros d'économie, par exemple pour les problèmes de minimisation du coût de transport pour la localisation de centres de production, de construction de rotations de personnel naviguant dans le transport aérien ou de construction de roulements de locomotives dans le transport ferroviaire. Dans un environnement de plus en plus contraint, le manager a souvent besoin également d'une aide à la décision pour s'assurer de la réalisabilité de ses choix. Nous nous intéressons particulièrement à des problèmes combinatoires de couverture à moindre coût d'une demande ou d'une charge par des ressources humaines ou matérielles. Nous cherchons pour ces problèmes, généralement difficiles, des modélisations appropriées et des heuristiques d'approximation adaptées, l'obtention d'une solution optimale étant rarement possible en temps raisonnable pour des problèmes de grande taille.

Ashok SOM



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Ashok Som is Associate Professor and Co-Chair of the Management Area. His research interest lies in the creation and evolution of organizational capabilities and performances during periods of intense organizational re-design. He is interested in the interplay between strategy process and the shaping of human resource practices in turbulent environments, with a particular focus on cross-cultural and post-merger integration. His other interest includes innovation, its transfer and adoption, governance process and its implementation through HR interventions. He has worked on these issues in different environments with a particular expertise on emerging Asia. His most recent work has been/will be published in *Asia Pacific Journal of Management (Forthcoming)*, *European Business Forum*, *International Journal of Human Resource Management (Forthcoming)*.

Cet article constitue un aperçu des recherches menées par le Professeur Ashok Som et de quelques-uns de ses projets futurs.

Il présente également des points-clés permettant de publier dans le monde de la structure organisationnelle, le management innovant des ressources humaines et du R&D en Inde et en Chine.

For the past five years I have concentrated on three main research areas. They are innovative human resource management practices and firm performance, organizational re-design and innovation, its transfer and adoption.

In the first set of three articles I looked at the changing Indian context and tried to understand the role of innovative HRM and firm performance. The first practitioner article spoke about bracing MNC competition through Innovative HRM practices and the way ahead for Indian firms. It harped on the context of increasing globalization when firms entered a dynamic world of international business that is marked by liberalization of economic policies in a large number of emerging economies like India. To face the challenge of increasing competition that has resulted from liberalization, Indian organizations had initiated adoption of innovative human resource management practices both critically and constructively to foster creativity and innovation amongst employees. I show with the help of eleven in-depth case studies how innovative HRM practices are being adopted by Indian firms to brace competition in the post liberalization scenario. Continuing with the same research stream, my second theoretical piece tried to understand the drivers of adoption of innovative SHRM practices in Indian organizations. This article identified, analyzed and tried to underline the drivers of adoption of innovative strategic human resource practices (SHRM) practices in the Indian context. Drawing from SHRM literature this theoretical piece discussed five main propositions of adoption of innovative SHRM practices and dwelled in the generalizability, applicability, acceptability, and the diffusion of such practices. My last article in this series was to understand the role of innovative HRM practices and specifically questions on how HRM practices, like the role of HR department, recruitment, retraining & redeployment, performance appraisal and compensation enhance corporate performance during the change process. With a rich data set consisting of a multiple-respondent survey of 69 Indian organizations I tried to explore the link of innovative HRM practices and firm performance. The survey found that the innovative recruitment and compensation practices have a positive significant relationship with firm performance. It was observed that recruitment, role of the HR department and compensation practices seem to be significantly changing within the Indian firms in the context of India's economic liberalization. The synergy between innovative HRM practices was not significant in enhancing corporate performance during the liberalization process.

Moving to my second research theme on strategy process and organizational re-design, in my first article I looked at the process of re-designing at Lafarge. In this exploratory article using case based methodology, I detailed the process of redesigning and implementing the human resources (HR) function at Lafarge. This article argued that a well articulated and integrated approach of (1) recruitment, selection, and induction; (2) retraining and redeployment; (3) performance appraisal system; (4) compensation and reward mechanism, and (5) rightsizing is required to be aligned with the overall business strategy of the organization. It also reinforced that the foundation of a value-added HR function is a business strategy that relies on people as a source of competitive advantage. My second research paper on this topic was to understand the strategic organizational response and its re-design of an Indo-Japanese Joint Venture to India's Economic Liberalization. This research paper tried to build a conceptual model of strategic response through effective human resource management policies and practices within a turbulent and hyper-competitive market environment. It tried to understand this phenomenon from a contingency perspective through a single detailed case-study of an Indo-Japanese Joint Venture. I took the opportunity to discuss several issues relating to organizational redesign, effective corporate responses like organizational redesign, professional and employee oriented modes of management and proposed a hybrid model of Indo-Japanese interventions.

In my third and final research stream, I (with my co-author Dr. Kazuhiro Asakawa, GSB, Keio University) dwell on an interesting and scarcely explored research area. We observed that in spite of a growing trend of foreign R&D investment in China and India, academic research in this field has not kept pace. In our perspective paper we tried to explore the research question: - *To what extent are opportunities and challenges of managing R&D innovation different in these countries from those in the West?* We suggest that MNCs should not forget the conventional wisdom of managing their innovative R&D policies but should also learn from the unique challenges and capabilities in China and India. By presenting our alternative view of established wisdom by incorporating today's rapid R&D innovation and internationalization in China and India, we propose that there is no "either/or" solution but an orchestrated strategy that may bridge the gap between conventional wisdom and reality.

My future research projects dwell on the interaction of organizational redesign and HRM practices for superior performance, cross-cultural and post-merger integration and HR governance process in organizations. I dwell more on these issues in my forthcoming book on International Management: *Managing the Global Corporation* to be published by McGraw-Hill Irwin.

REMISE DE PRIX/AWARDS

Professor René DARMON has won the Best Paper Award for the Marketing Division of ASAC at the 2007 Conference for this paper entitled: "A Measure and Method for Assessing Strategic Sales Effectiveness"

SÉMINAIRES & CONFÉRENCES/SEMINARS & CONFERENCES

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ESSEC Business School, Cergy-Pontoise
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The theme of this first Workshop in the Series is "PLS Path Modeling in presence of a Group Structure: Multi-Group Analysis and Latent Class Detection". PLS Path Modeling is a statistical methodology allowing the estimation of a causal theoretical network of relationships linking latent complex concepts. In many real-world applications (e.g. when modeling customers' behaviors and choices to exploit opportunities resulting from customer heterogeneity), it is reasonable to expect that different sub-groups with heterogeneous behaviors exist. Heterogeneity may be related to a multi-group structure defined by observable variables or to latent classes defined by unobserved discrete moderating factors. This Workshop addresses both issues by discussing methods, showing applications and presenting software.

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3^e COLLOQUE FRANCO-ALLEMAND-AUTRICHIEN/ THIRD GERMAN FRENCH AUSTRIAN CONFERENCE

Le troisième colloque Franco-Allemand-Autrichien sur le marketing quantitatif se tiendra dans les locaux de l'ESSEC Business School, à Cergy-Pontoise, les 21 & 22 septembre 2007. Il est organisé par Albert Bemmaor, ESSEC Business School, Lutz Hildebrandt, Universität Humboldt et Udo Wagner, Universität de Vienne. Pour plus de renseignements, voir l'adresse suivante : <http://www.univie.ac.at/gfaconference/>

9^e JOURNÉE TRANSPORTS

La neuvième Journée Transports se tiendra dans les locaux de l'ESSEC Business School, le 9 mai 2007. Elle portera sur « Modèles de choix discrets : applications en transports et en marketing ». Les organisateurs sont André de Palma et Nathalie Picard, Université de Cergy-Pontoise, et Albert Bemmaor, ESSEC Business School. Pour plus de renseignements, contacter : depalma@eco.u-cergy.fr

OUVRAGES RÉCENTS / RECENT BOOKS



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Paris (France) : ANACT, 2006, 189 p.



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Patron et premier manager de mon entreprise
Paris (France) : Gualino éditeur, 2007, 332 p.



Peretti J.M. (Editeur Scientifique)
Tous différents
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