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“How does the management of people influence
the performance of the organization?”

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Remark: Figures in section 2.3 are adapted from different sources on the Management Compass (see bibliography).

Introduction

Before the birth of the division of labour and its proven benefits on employees' performance in the pin factory¹, the issue of the management of people already existed and was implicitly narrated in many books: for instance, the French author from the 16th century Montaigne² wrote on education and recommended "a well-made head rather than a well-filled head". In the literature of Montaigne as well as in the one of Rabelais, wise education is a major concern. The Enlightenment in the 18th century goes in a similar way, considering knowledge as the fundament for a life that belongs to the individual himself. All this literature seeks human well-being and a way for people to benefit of their intelligence. This is rooted in the question of managing people: leaders have the choice. And at the time of the Enlightenment, as Voltaire describes it in *Candide*³, the monarchs could either keep their population illiterate and subservient, or they could lead with new ideas of this philosophical era, implementing a kind of *enlightened despotism*. The monarchs who implemented this step forward usually left good memory after their reign, as it is the case for Maria-Theresa in Austria.

The management of people, or Human Resource Management (including both Human and Social Capital), has become a central economic issue as soon as mankind started to organise production of wealth. The first industrial revolution brought a huge amount of changes to Humanity. It corresponds to the beginning of the production lines, in which each worker has his own task and repeats it continuously. This way of organising production has had its days of glory until the end of the Second World War⁴. It is linked to many aspects of the society that we will have the occasion to discuss in this thesis. Level of education, level of needs, and complexity of the process of production are factors among others.

¹ Adam SMITH, *The Wealth of Nations*, 1776

² Michel de MONTAIGNE, *Essais, On the Education of Children*, 1580

³ VOLTAIRE, *Candide, the Eldorado Episode*, 1759. See review by William F. Bottiglia, *The Eldorado Episode in Candide*, PMLA, Vol.73, No.4, September 1958, pp. 339-347

⁴ See Frederick Winslow TAYLOR, *The Principles of Scientific Management*, 1911. See the film "The Modern Times" from Charlie CHAPLIN (1936).

Although it seems to be paradoxical, at the time philosophy blossomed with ideas of individual liberty for the subjects, the economic organisation of production led to the complete alienation of the individual, considering the worker as a machine. Why? The basic equation of profit maximisation does not take into account the mindset of people.

Before, it was sustainable not to take mindset into account, because it did not count for much in the organization's productivity. What to think nowadays?

During the 20th century, incommensurable changes happened in our societies. Workers got more rights and better education and the world became more and more complex⁵: at the very beginning of industrialisation, a small manufacture did not have to bother about the rest of the world. Competition was very local. Nowadays, many aspects must be taken into account in order to run a business: there are norms, rules, preferences and plenty of details making a difference in the various markets where products are being delivered. We have entered the era of information. Gains in productivity cannot only be the result of a better division of the process of production. Knowledge sharing is important and creating the best fitted environment for it is the key to success, or at least makes it possible for a business to thrive.

Knowledge sharing, best fitted environment, mindset... These terms are rarely used in the economic analysis of the organisation, because they are not tangible notions. Because of this, they are most of the time just ignored. And ignoring them has a cost.

Year 2003, the NASA experienced a disaster: the space shuttle Columbia was lost during its return to Earth. The Committee in charge of determining the causes

⁵ Kenneth Arrow remarks the same regarding the increasing complexity at the beginning of his paper *Informational Structure of the firm*, The American Economic Review, Vol.75, No.2, Papers and Proceedings of the Ninety-Seventh Annual Meeting of the American Economic Association, May 1985, pp. 303-307

of the accident, the CAIB (Columbia Accident Investigation Board), has come to the conclusion that the culture of the NASA organisation is as much responsible of the accident as the physical dysfunction that occurred on the space shuttle⁶. Some engineers knew, an accident would happen, but their warnings were ignored by the administration.

We easily agree on the following basic definition: an organisation is a gathering of people who work for a common purpose. Assessing people mindset and being able to optimize knowledge sharing in the organisation is essential, as it is part of today's processes. It corresponds to the second element of the economic equation of the firm for profit maximization. This thesis will deal with that part of the equation.

In a first chapter, we will introduce the fundamentals on organisation that are necessary to understand the environment of the organisation. We will point out the finding of Leibenstein and his work. We will define a few concepts that are useful for the analysis of the organization. In a second chapter, we model the organisation. After a quick look to the model of Rotemberg and Saloner, we will study the model of the Management Compass. We will see how to measure mindset and map behaviours of the members of the organization. The third chapter will focus on a case study: experimental measurement of mindset in a firm and conclusions resulting from the model of the Management Compass. The fourth chapter will deal with an application to a non-profit organisation and extrapolate the model of the Management Compass to the forms of government, with the analysis of the German case.

⁶ The CAIB Report can be downloaded here: <http://caib.nasa.gov/news/report/default.html>

1. Fundamentals on organizations

This first chapter defines important concepts on organisations. We first introduce the theory of the X-factor from Leibenstein. Then, we will consider the concept of information asymmetry. In a third part, we define the different styles of management and present analyses. In a fourth part, we define human and social capital. Finally, we develop the theory of needs from Maslow and the concept of mindset, which will be used to model the organisation in chapter 2.

1.1. Assessing X-efficiency

The classical economic theory obtains the output of a process using a production function based on labour and capital. However, it is clear nowadays that these two factors do not explain 100% of the output production. This statement is the result of the works of Leibenstein and others on the topic.

Leibenstein mentions the term “X-efficiency” in 1966 in an article for the *American Economic Review*⁷. This term is used to consider the unexplained part of the outcome which is obviously not due to a classical factor of production or to *allocative efficiency*, as Leibenstein names it. Leibenstein does not call the X-efficiency “motivation” or “incentives” efficiency, since it would be too simplistic. X-efficiency includes more than just motivation.

In the second chapter of his article, Leibenstein demonstrates the empirical evidence of X-efficiency. He quotes the statement from L. Rostas in his paper on productivity in British and American industry⁸, namely that “(...) in a number of industries (or firms) where the equipment is very largely identical in the U.S. and U.K., eggs, boots and shoes, tobacco, strip steel (or in firms producing both in the U.K. and U.S.), there are still substantial differences in output per worker in the U.K. and the U.S.”

⁷ Harvey LEIBENSTEIN, *Allocative Efficiency vs. „X-Efficiency“*, The American Economic Review, Vol.56, No.3, June 1966, pp. 392-415

⁸ L. ROSTAS, *Comparative Productivity in British and American Industry*, Nat. Inst. Econ. Soc. Research Paper 13, Cambridge (England) 1964, pp.64 ff.

The ILO studies from P. Kilby⁹, largely imparted in Leibenstein's article, show that productivity can be increased considerably when the production method is different. New ways of managing people also generate more output.

It is empirically clear that X-efficiency exists and its impact on the outcome is most of the time more significant than the impact of a better allocation of the inputs.

In the third chapter of his paper, Leibenstein defines X-efficiency as being of three different components:

1. Intra-plant motivational efficiency;
2. External motivational efficiency;
3. Non-market input efficiency.

The first efficiency is linked to the specification and performance of the inputs. The classical theory stipulates that inputs have a fixed specification. Each specification corresponds to a fixed performance. There is a kind of bijection between the two sets of specifications and performances, which is empirically false. Two employees with the same specifications will not have the same performance. Leibenstein points out here that contracts for labour are incomplete. Working on motivating employees can cope with uncertainty of the contracts and generate intra-plant motivational efficiency.

The external motivational efficiency is related to the function of production. A production function cannot be exactly known and changes in the input ratios can be a source of productivity. This is mostly linked to the leader's judgement.

The non-market input efficiency corresponds to the capacity of obtaining an input or information. For instance, on the labour market, managers might not be available everywhere, and when they are available, their management capacities are not known. Then, good management capacities might be useful in order to obtain some inputs at an advantageous price, or to obtain information that is not marketed.

All these elements lead to the following conclusions:

- It is not given that firms produce at minimum cost;
- When the assumption of cost minimisation is not fulfilled, firms can still thrive on the market. This explains the differences of productivity

⁹ P. Kilby, *Organization and Productivity in Backward Economies*, Quart. Jour. Econ., May 1962, 76, 303-10

empirically observed;

- Working on X-efficiency makes possible more significant increases in productivity by reducing the costs. This involves working on motivation, management of the employees, getting people with specific knowledge and proficiency.

Leibenstein uses a model based on two periods to stress the behaviour of the firms in respect to the average industry unit cost. (Figure 1)

The following assumption is made: it is easier for any firm to reduce its unit cost when the average industry unit cost is high. Therefore, the incentive toward cost reduction will lead to many successful breakthroughs. Hence, the average unit cost curve C^A is convex and increasing.

The curve P corresponds to the set of equilibrium prices.

The incentive of the firms for searching new means toward cost reduction sets in motion a dynamic process that leads to the equilibrium point E . At point E , industry cost and firm cost match.

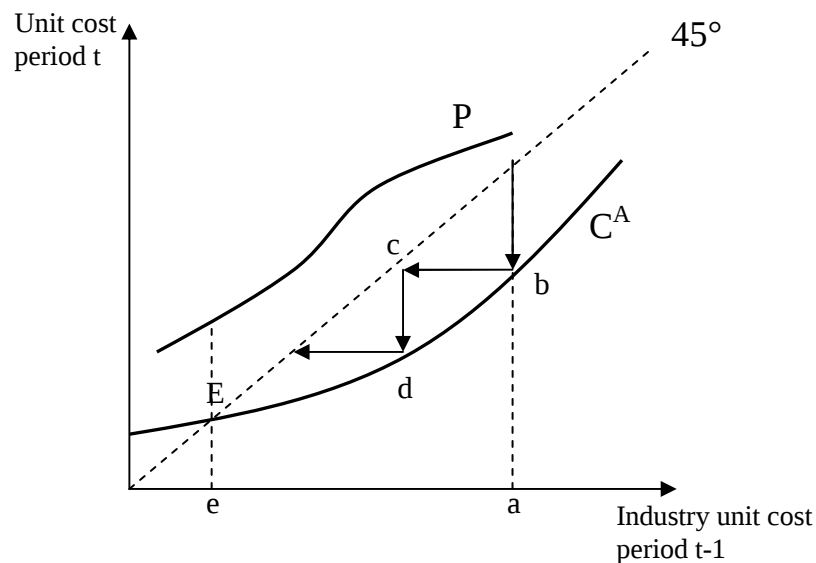


Figure 2 – Dynamic process to the equilibrium point E.

The equilibrium point is not the point where unit cost is minimal. This outcome of the model demonstrates that the fulfilling of the cost minimisation condition is not obligatory for a firm to thrive. It emphasizes the role of X-efficiency to reduce costs and increase productivity.

Considering the X-efficiency theory in terms of creation of value, we see here that Leibenstein considers that allocative efficiency is not the only way to create value. X-efficiency, that is to say motivation, management capacities, knowledge, etc., are contributing as well. Figure 2 illustrates the idea.

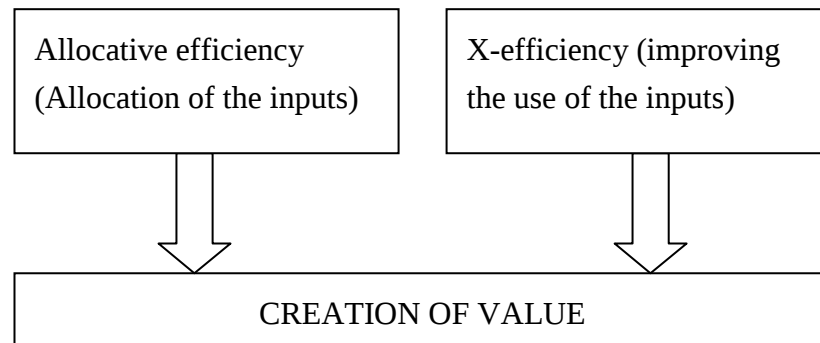


Figure 2 – creation of value as outcome of allocative efficiency and X-efficiency

John Shelton published a study in the American Economic Review in 1967, which corroborates the X-efficiency theory¹⁰. The purpose of the analysis is to assess the impact of different management styles on the performance of the business.

Two operating types have been tested on a sample of 22 separate restaurants of a restaurant chain: franchisee owner and company manager supervision. The results are the following: in both cases, sales are about the same, but profits are much higher in the case of a franchisee owner. One could think, the franchisee owner can make cuts on security and therefore increase the profits, whereas the company manager would not make cuts because of the firm policy and he would not risk to be dismissed in case of a problem. The profits are though much higher, and cuts cannot explain such a difference on their own. Shelton states that the higher profits are the consequence of a better use of the workforce. Indeed, the management is

¹⁰ John P. SHELTON, *Allocative Efficiency vs. "X-Efficiency": Comment*, The American Economic Review, Vol. 57, No. 5, December 1967, pp.1252-1258

nearer to the employees. Moreover, the profits constitute the salary for the franchisee-owner, meaning that he is more self-motivated than a supervisor and wants to reduce wasting.

Restaurant	Type of Management	Number of Weeks	Average Weekly Sales (dollars)	Average Weekly Profit (dollars)	Profit Divided by Sales
F	F.O.	18	3,922	-270.62	- 6.9
	C.M.	10	2,835	-107.73	- 3.8
G	C.M.	85	2,340	-102.96	- 4.4
	F.O.	60	2,449	115.10	4.7
	C.M.	33	2,758	- 35.85	- 1.3
H	F.O.	35	3,497	304.23	8.7
	C.M.	10	3,404	- 44.25	- 1.3
	F.O.	46	3,100	179.80	5.8
I	F.O.	28	4,030	245.83	6.1
	C.M.	17	4,612	599.56	13.0
	F.O.	59	4,790	507.74	10.6
R	F.O.	40	1,778	312.92	17.6
	C.M.	64	1,791	318.79	17.8
S	F.O.	13	424	61.48	14.5
	C.M.	91	634	- 32.96	- 5.2
T	F.O.	59	672	30.91	4.6
	C.M.	84	660	3.30	.5
U	F.O.	41	1,767	321.59	18.2
	C.M.	23	1,571	285.92	18.2

Table 1 – Selected restaurants out of the results of Shelton’s study

Looking at the table published in the article (table 1 above), we can see that in very few cases, the gap between profits is not very significant (T and U), and sometimes even the profits are higher with supervision from the company manager than with a franchisee owner (F, I and R). The following question arises: is franchise always better than supervision? It seems that the choice of management depends on more variables than the ones observed in the study. The employees of the restaurant might prefer working in a supervised restaurant for any reason than in a franchise restaurant, and therefore be more productive in the first case than in the latter.

1.2. Information asymmetry

One recurring question when talking of management of people is how to observe that the employees really work. Their effort at work cannot be quantified. It is a situation of information asymmetry: the manager does not exactly know how

much time its employees are working on the project they are assigned to. He only can guess it through different indicators. Presence at the workplace and the outcome of the project or the many deadlines of the project can be used as indicators. However, two main issues show up:

An employee can be present at work and do something else. Or he can work on the project but very slowly. So the indicator of presence is not that accurate to measure effort. It is just based on behaviour, when what we want to know is mindset¹¹.

Finding out at the end of the project that work has not been correctly done is bad for both camps: the employee might be dismissed and the manager has to reschedule everything because of the missing output of the project. And in many cases, it means a huge amount of losses. Something similar happened in January 2008 for the French banking group Société Générale, as they discovered a 5 billion Euros loss due to the operations of their employee Mr. Kerviel. We see here how pernicious information asymmetry can be!

The Principal-Agent theory models the relation between the Principal (for instance the CEO) and the Agent (the employee or manager) in an environment of incomplete information, where both individuals are interdependent. It means that both individuals of the model do not dispose of the same information set (the Agent “knows” more than the Principal. That is why we talk of information asymmetry) and each one plays a specific role that influences the outcome of the other one.

The model of Rotemberg and Saloner¹² is in the vein of the structure mentioned above: we consider two individuals, the CEO and the manager. Each individual has a specific action:

- The manager works on a potentially profit-enhancing project. It means for him a lot of time and effort in developing an idea and a proposal (first period).

¹¹ See section 1.5 for the difference between mindset and behaviour.

¹² Julio J. ROTEMBERG and Garth SALONER, *Leadership Style and Incentives*, Management Science, Vol. 39, No. 1, November 1993, pp.1299-1318. See section 2.2 for the results and the limits.

- The CEO decides whether to implement the proposal or not (second period).
- In the third period, gains are revealed.

The information asymmetry is here the following: the CEO cannot ensure that the manager works on viable proposals.

This model emphasizes the impact of management style on profits. Before we analyze it more closely in section 2.2, we will introduce further considerations on management and individuals.

1.3. Management styles

Managing a production line and a research laboratory involves different styles of management. How many management styles can we identify? Which style of management is it better to use? These are the issues tackled in this section.

1.3.1. Continuum of leadership behaviour

Tannenbaum and Schmidt developed in 1958 a scale to sort the management styles¹³. They use two interdependent criteria, namely the *use of authority by the manager* and the *area of freedom for subordinates*. They emphasize seven management styles, from the most authoritarian one to the most collaborative one. The seven styles are summarised in the figure 3. They correspond to the possible “range of behaviour” of the manager towards its subordinates.

The most authoritarian management profile is when the manager identifies a problem and makes a decision by himself. He then imposes it to the employees as the only solution. He may consider or not what he believes his subordinates may think about the decision. He may implement his decision with coercion.

In the second situation, the manager “sells” his decision. That is, he argues before its subordinates why the decision is effective, in order to make them accept with little resistance.

In the third situation, the manager comes to his decision alone, but he then spends more time presenting it and explaining it to his subordinates. They may ask

¹³ Robert TANNENBAUM and Warren H. SCHMIDT, *How to Choose a Leadership Pattern*, Harvard Business Review, May-June 1973; this is a second edition of the paper published in the HBR in 1958.

questions.

In the fourth situation, the manager identifies and thinks the problem through. Then, he presents a tentative decision to his subordinates. The subordinates clearly may contribute and advance a view that may affect the final decision. However, the manager solely makes the final decision.

Up to the fourth situation, the manager comes to the decision alone: there is no common brainstorming with the employees. The management style is directive.

In the fifth situation, the main role of the manager is to identify the problem. Then, the manager and his subordinates think the problem through and come with solutions. The different alternatives are listed. Then, the manager solely selects what he thinks to be the best solution to the problem. In that situation, the solution is based on the knowledge and the experience of the team.

In the sixth situation, the manager still identifies the problem alone and brings it before the subordinates. After defining the limits (e.g. maximal threshold for the costs), the employees make a decision.

In the seventh situation, the manager only makes clear the limits together with his employees. The whole team may define the problems to tackle and find solutions. The manager is considered as an additional player of the team.

From the first to the last situation, the employees gain in autonomy and the manager uses less and less authority to manage his team. However, using less authority to manage does not mean that the manager has less power or authority. A rough intuition suggests that the more he gives autonomy to his employees, the more authority is transformed into trust. It is part of Rupert's model of the organisation¹⁴.

Tannenbaum and Schmidt define three *forces or factors* that the manager has to consider in order to know how to manage (the idea is to find the *practical* and *desirable* management style):

- Forces in the manager;
- Forces in the subordinates;
- Forces in the situation.

¹⁴ See section 2 for the complete presentation of Rupert's model of the organisation.

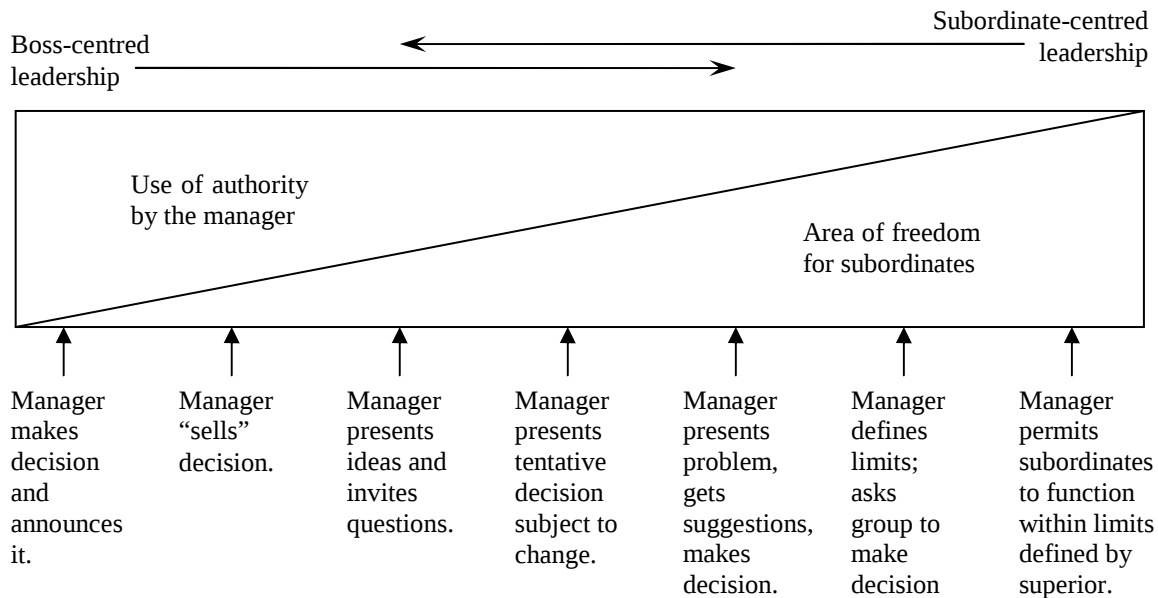


Figure 3 – Continuum of leadership behaviour

The forces in the manager include his value system, his confidence in his subordinates, his own leadership inclinations, his feelings of security in an uncertain situation¹⁵.

The forces in the subordinates include factors about the subordinates that the manager should care. Amid them, the manager must **see or find out**:

- What the needs in independence of his employees are;
- If they are ready to assume responsibility for decision making;
- Their tolerance for ambiguity (clear-cut directives versus wide area of freedom);
- Their interest for the problem and if they feel concerned;
- If they understand and identify the goals of the organisation;
- If they have the knowledge and experience to deal with the problem;

¹⁵ These terms stand in the paper (see footnote 14), pp. 174-175. The following enumerations are partly present in the paper as well, pp.175-179.

- If they have learnt to expect to share in decision making.

The forces in the situation include the characteristics of the environment that have an impact on the manager's managing style. They are the following:

- *Type of organisation*: this criterion encompasses traditions and values of the organisation. They influence the manager's style to manage, in so far as the hierarchy conveys a range of commonly accepted behaviour.
- *Group effectiveness*: it corresponds on a certain extent to the "learning by doing" of the team. Once they have learnt and experienced how to work together, they develop the right behaviour for team working.
- *The problem itself*: the nature of the problem can be the determinant factor. The manager adapts his management style to the problem.
- *The pressure of time*: if an issue has to be rapidly resolved, it is quicker for the manager to think and make the decision on his own.

Finally, Tannenbaum and Schmidt remark that a high subordinate-centred leadership has a positive impact on the level of employee motivation, on the readiness of subordinates to accept change, on the quality of the decisions, on teamwork and morale and on the individual development of employees.

The model of Tannenbaum and Schmidt is interesting, since it clearly describes the different styles of management that may exist. However, the model does not give an effective method to make out which management style is appropriate. Of course, it does display a list of criteria that will influence the choice of the best management style – we enumerate all these points above. Anyway, it is very tough for the manager to come to an answer. He would have to think of all these criteria and make a kind of mean in order to know how to manage.

Moreover, the theory of relativity applies in organisations. For example, Manager A will find that the subordinates have high needs in autonomy whereas Manager B will feel the opposite. That is why the terms "see or find out" are written in bold in the text above: the manager *perceives* what his employees need. It does not mean that they really do need what the manager perceives. According to this principle, we cannot base the choice of the *best* management style solely on the

perceptions of the manager. This is the object of the section 1.3.2.

1.3.2. The Accenture matrix

The consulting firm Accenture developed a “decision matrix” in 1999¹⁶. It makes easier the choice of the best management style for an organisation, based on the type of work process (see figure 4). Two questions are to be answered:

- Does the process require individual work or teamwork?
- Is the process routine or does it continuously involve new information to treat?

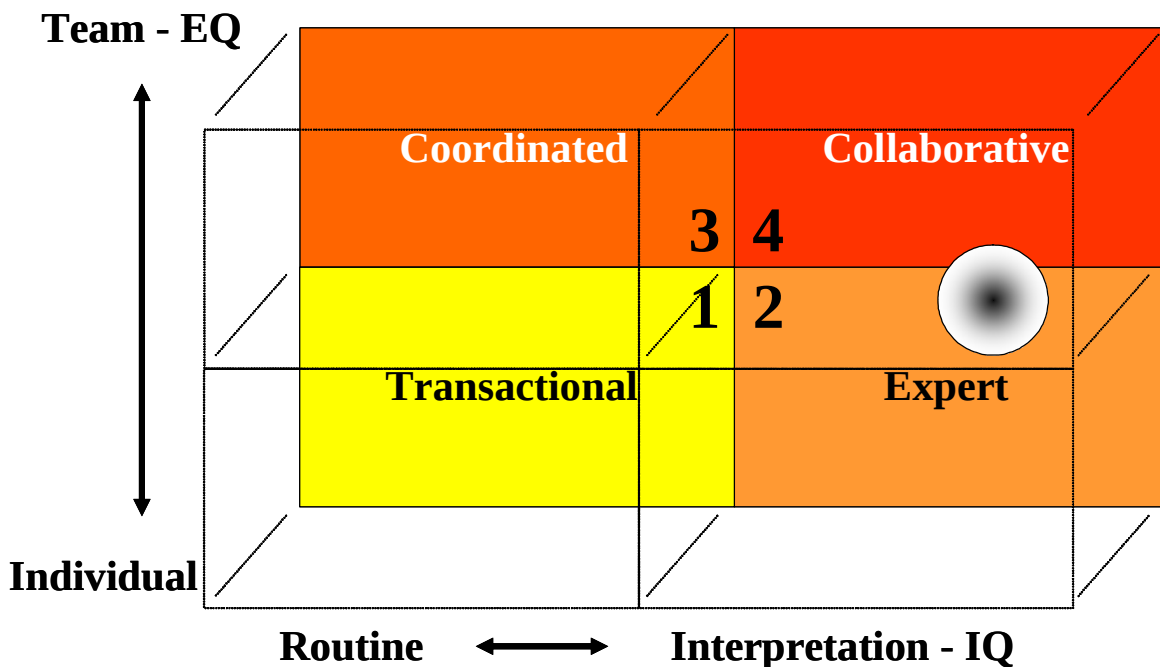


Figure 4 – The Accenture matrix (adapted)

There are four main cases out of the answers to the questions above:

- The work process is routine and individual. In that case, a transactional work process is appropriate. It corresponds to a directive management style or to the situations 1-4 in the model of Tannenbaum and Schmidt. The fourth

¹⁶ Leigh P. DONOGHUE, Jeanne G. HARRIS and Bruce A. WEITZMAN, *Knowledge management strategies that create value*, Outlook Journal, Number 1, 1999.

situation for example would be appropriate to a less routine work process.

- The work process calls upon interpretation and remains individual. In that case, an expert work process is appropriate. It corresponds to a consultative management style or to the situations 4-5 in the model of Tannenbaum and Schmidt.
- The work process is routine and requires teamwork. A coordinated work process is here appropriate. It corresponds to a participative management style or to the situations 5-6 in the model of Tannenbaum and Schmidt.
- The work process calls upon interpretation and requires teamwork. A collaborative work process is appropriate. It corresponds to a collaborative management style as described in the situation 7 in the model of Tannenbaum and Schmidt.

For example, consider the grey circle on figure 4 as being the identified work process of an organisation. We would conclude here that the work process is usually individual but requires sometimes people to collaborate. Moreover, each problem must be considered as a new problem, involving new information to be treated. Decisions are sometimes made alone and sometimes in team. Such a work process would be the case of a hospital doctor, who must consider the diagnosis of each patient separately to come to his decision and at the same time, who must be able to make a decision together with doctors from other services or with doctors that examined the patient before.

More examples of work processes are given on figure 5.

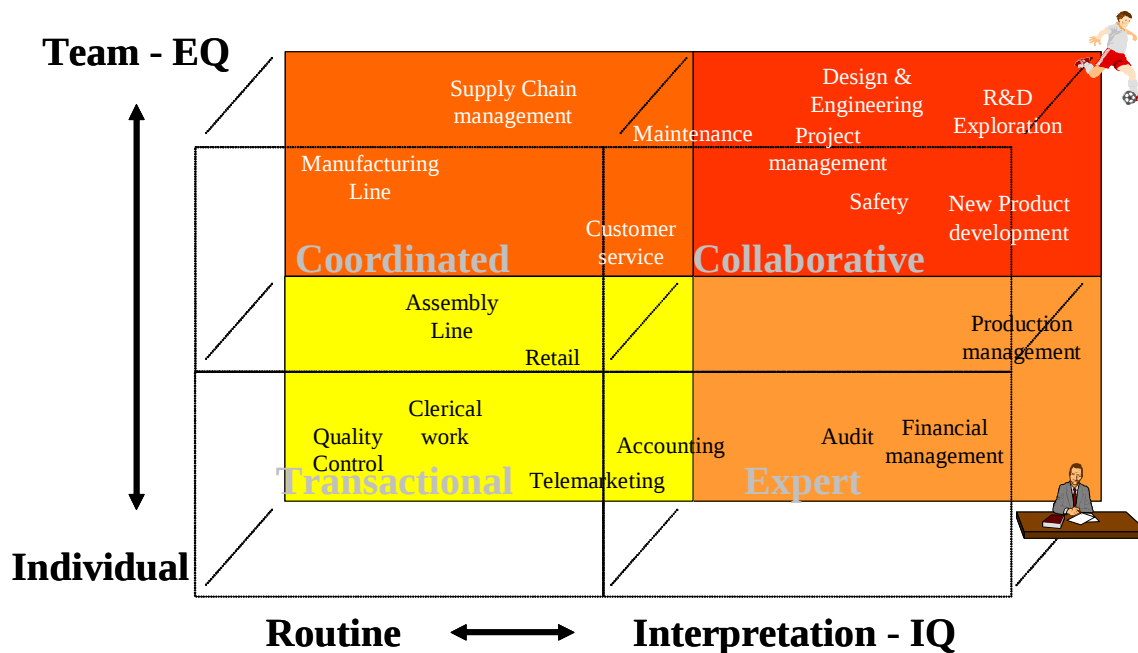


Figure 5 – Examples of work processes

1.3.3. Complexity of the work process and interface

The approach of Rupert¹⁷ is based on the complexity of the work process. His starting point is the analysis of Accenture and the classification of the work processes. But, instead of looking at the characteristics of the work process mentioned above in section 1.3.2, he defines his own criterion: the *interface*. The definition of an interface is the following: it is the number of occurrences when knowledge sharing transactions take place between players. All interfaces together represent social capital¹⁸.

For instance, an employee working on a production line gets the instructions from the production line manager. The instructions can in a certain extent be

¹⁷ Rene Rupert is a consultant and speaker specializing in executive team development and organizational health. He is lecturer at the HES-SO in Lausanne and the ZHAW in Zurich (Switzerland).

¹⁸ See section 1.4 for a definition of social capital.

considered as a knowledge sharing transaction. Thus, an employee on a production line has one single knowledge sharing transaction, hence one single interface.

A marketing manager actively works with the product managers, the finance manager, the sales manager, his superior and some clients. Therefore, he has many knowledge sharing transactions, hence many interfaces.

Empirically, the following law can be stressed: the more interfaces the manager deals with, the more the management style must be subordinate-centred; otherwise he will not be able to deal with the complexity of the work process anymore.

A process with one single interface corresponds to a transactional work process, hence to a directive management style.

A process with few interfaces corresponds to an expert work process, hence to a consultative management style.

A process with multiple interfaces corresponds to a coordinated work process, hence to a participative management style.

A process with innumerable interfaces corresponds to a collaborative work process, hence to a collaborative management style.

Therefore, it is possible to put on one single dimension the different work processes in respect to their number of interfaces (figure 6).

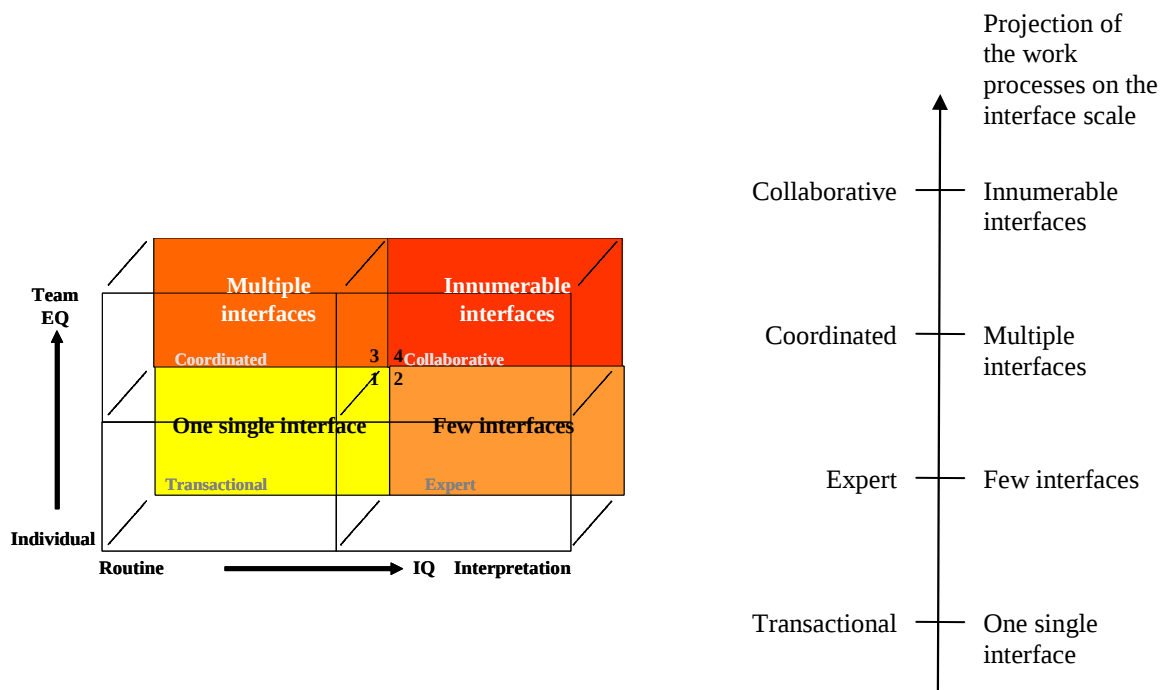


Figure 6 – Interfaces and work process

Thus, the best *practical* management style depends on the work process of an organisation. Now the question that remains is: how to make it desirable? That is, how to make sure that the management style corresponds to the expectations of the employees. This issue will be treated in chapter 2. Before addressing this issue, we will focus on some characteristics related to the individual.

1.4. Human Capital and Social Capital

Human capital is a widely spread concept in organisations. It is a source for employees' productivity. On the other side, social capital is getting more and more popular. We'll respectively examine both concepts in this section.

1.4.1. Human capital

The concept of human capital has been developed by Gary Becker (Nobel Prize 1992 for his works on human capital) and Milton Friedman (Nobel Prize 1976) from the University of Chicago¹⁹. Human Capital corresponds to all qualifications, talents, academic background and experience accumulated by an individual.

In the Human Capital theory, education is considered an investment. On the one hand, people invest in their education in order to get a higher salary (return on investment). The many econometric studies on human capital tend to confirm this: the longer the studies, the higher the salary. On the other hand, governments are pushed to bestir their citizens in getting high qualifications: they happen to be a first step to higher productivity.

From the organisation's point of view, there is an asymmetry of information in the process of hiring new employees. At first sight, Human Resource recruiters have no idea about the education level and the skills of the applicants. In order to find out, it is common to ask applicants for a resume and a cover letter, followed by job interviews. It displays the human capital of an individual (academic background, trainings achieved, languages spoken, communication skills, etc.). This information

¹⁹ See the paper by Gary S. BECKER, *Investment in Human Capital: A Theoretical Analysis*, The Journal of Political Economy, Vol.70, No.5, Part 2: Investment in Human Beings, October 1962, pp.9-49.

is essential for the company so that they hire the right people, which are those that will best fit the culture of the company.

Human capital contributes to the process of creating value. It constitutes a reserve of knowledge and know-how. However, it is not sufficient for the organisation to be successful. Knowledge sharing is a necessary supplementary condition for success.

1.4.2. Social capital

The term “social capital” has been used for many meanings. James Farr from the University of Minnesota wrote an article retracing the conceptual history of this term²⁰.

In his article, he sums up Robert Putnam’s²¹ definition of social capital as follows: “*social capital is complexly conceptualized as the network of associations, activities, or relations that bind people together as a community via certain norms and psychological capacities, notably trust, which are essential for civil society and productive of future collective action or goods, in the manner of other forms of capital.*” This definition points out that social capital is essential and contributes to any production processes. Trust is a key factor in organisations and a component of social capital. Without trust among employees, among managers and between employees and managers, there is no communication and therefore no knowledge sharing. To a certain extent, the organisation becomes real through the relations between individuals. Without any relation, the organisation is annihilated. Therefore, social capital must be taken into account in the “equation of the organisation”.

²⁰ James FARR, *Social Capital: A Conceptual History*, Political Theory, Vol.32, No. 1, February 2004, pp.6-33

²¹ Professor at Harvard University

We saw in section 1.1 that creation of value is the fruit of allocative efficiency and X-efficiency. Let us develop the idea in the light of these last paragraphs. Under the term “X-efficiency”, Leibenstein understands every mean that improves the use of the input. Human and social capital both can help improve the use of inputs, and create value. Therefore, the figure 2 of section 1.1 can be improved as on figure 7.

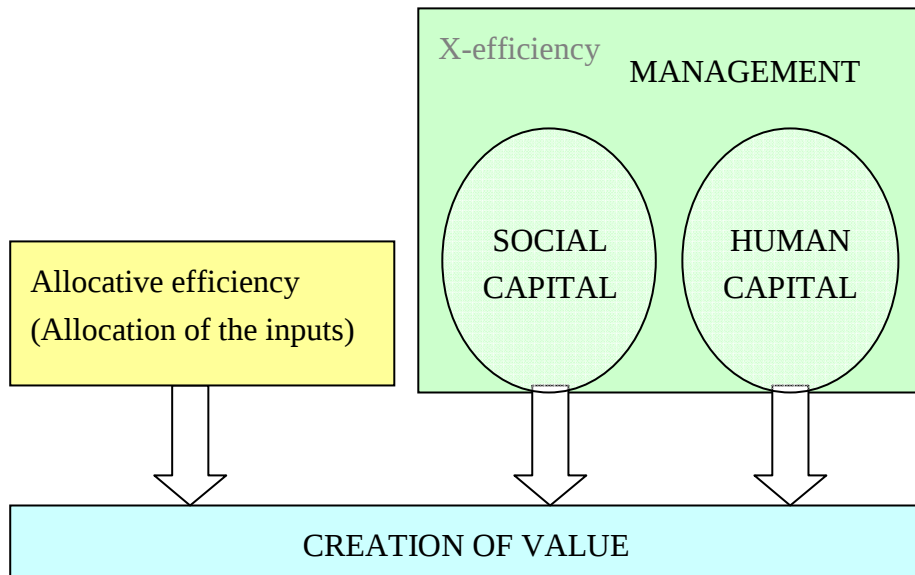


Figure 7 – the scheme of creation of value

1.5. Assumptions on individuals

Economic theory makes many assumptions on the behaviour of individuals. Individuals are then considered as economic agent. Most of the time, the assumptions are obviously simplified. That is why it is interesting to look in the domain of psychological and sociological sciences to find better formulations of the behaviour of individuals. In the first section, we develop Maslow’s pyramid of needs. In the second section, we define the concept of mindset.

1.5.1. The pyramid of needs (Maslow)

Maslow defines a hierarchy of human needs in his book Motivation and

Personality²². According to him, there exist five categories of needs for human beings, from the most basic to the most complex, that enlighten the origins of human motivation.

In Maslow's theory, the most basic needs must be satisfied before more complex needs can be reached. This hierarchy of needs is displayed in a pyramid (figure 8). Hence, according to his theory, people need to first satisfy their physiological needs (thirst, hunger, etc.) in order to be able to feel their safety needs (security, protection).

If we take for instance the average citizen in Western Europe, his physiological and safety needs are relatively easily fulfilled. Indeed, there is enough food in Europe so that everyone can eat, and criminality is low enough so that the major part of the population can feel safe. Then, the average European is at least at level 3: social needs.

It is important to remark that the level of needs of an individual is influenced by its country or region of origin. This statement will be used in chapter 4.

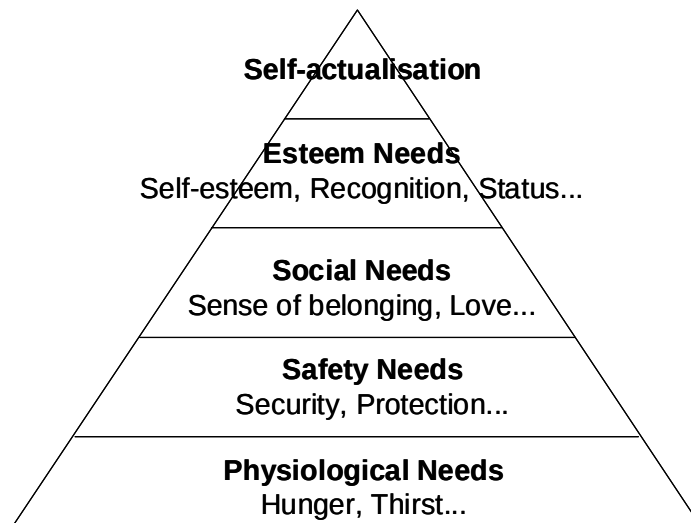


Figure 8 – Maslow's pyramid of needs

²² Abraham MASLOW, *Motivation and personality*, New York: Harper, 1954

1.5.2. Mindset

People often talk of mindset. For example my saxophone teacher always uses that expression (in German, “innere Einstellung”, mindset, in French “état d’esprit”) when talking about the state of mind we have to be in so that we play the notes with particular attention or style.

As soon as we enter the domain of the management of people, the term “behaviour” is preferred and often the notions of behaviour and mindset are confused. Indeed, behaviour is the consequence of a specific mindset as symptoms are the manifestation of a disease. In that sense, behaviour is visible and can be observed, whereas mindset has to be revealed and is the origin of behaviour.

Let us give another example: consider you are a bystander sitting on a bench in front of the doors of Stephansdom, the cathedral of Vienna. You may see many people entering the cathedral. Consider that behaviour of entering the cathedral. The only observation would make you conclude that these people are catholic and enter the cathedral in order to pray and attend church. Then, imagine that you approach these people and ask them why they enter the church. Some of them will definitely tell you that they go to pray or attend church. However, there are many other reasons to enter a church and many people will tell you that they want to visit the church, take pictures of the interior and see the organ, etc. In the end, everybody acts the same, but their aspirations are totally different.

This example illustrates the difference that exists between mindset and behaviour. It highlights the fact that many different mindsets can lead to similar behaviour. Indeed, the relationship between mindset and behaviour is a surjective function from the set of mindsets to the set of behaviour.

In order to reveal mindset, Rupert adapts the pyramid of needs of Maslow into a *scale of autonomy*, according to the principle of Pareto: many variables give information about an individual’s mindset. However, concerning the organisation, the most important variable for mindset is autonomy. Autonomy is defined here by the degree of liberty of the employee.

2. Modelling the Organisation

This part is dedicated to modelling the organisation and the impact of the employees' mindset on the creation of value.

We first look at the international economic environment and see through a story the importance of the human factor in our economy. In section 2, we see the results of Rotemberg and Saloner given by their model on leadership styles. In section 3, we will develop the experimental approach of Rupert using the results of Accenture and the theory of Maslow. We will explore the different sources of creation of value in the organisation.

2.1. International economic environment

The world in which we live has thousands of dogmas and principles. Liberalism, free-trade and globalization are part of the economy like a wall is part of a house. Though any wall seems to bear the load of the house, only load-bearing walls do it. Sticking to the idea that globalization, liberalism and free-trade are good for the world economy is nothing else than a pure illusion. Everyday, new examples show that sticking to these principles brings new issues and threatens the standard of living of millions of people. In Ethiopia, the willingness of the IMF to liberalize the financial markets is the practical outcome of that dominating doctrine. In the US, the financial crisis shows that the system in which we live remains misunderstood and uncontrolled. One of the roles of economic science nowadays is to draw new ways of thinking and to come with ideas to avoid the stumbling of our capitalistic system and to help where it has failed.

Economics need humanity, at the macroeconomic level as well as at the microeconomic level, since it is in both cases about organizations of people. The “all financial” times have shown their limitations at enabling sustainable policies. A new time has come.

Pat Lencioni²³ tells this small story about the Subprime Crisis, which affects the world economy these days: *“The biggest cause of this and other crises is that most*

²³ Patrick LENCIONI, CEO of the Table Group, Inc., California. He is a consultant and keynote speaker and wrote several books and fables related to human resource management.

leaders operate under the assumption that they should never have to engage in discussions that are awkward, confrontational or career-limiting. As a result, they rarely have the kind of uncomfortable discussions that prevent people from doing stupid and harmful things. Instead, they are polite and guarded and collegial with one another, even when what is called for is passionate disagreement or even outrage.

This is a surprise to people who don't have a view into corporate America. They are usually shocked when I tell them that I rarely see people passionately argue with one another or take a strong, moral stand. What they don't realize is that the real world is nothing like what we see in movies where executives routinely pound their fists on the table and announce, "this is just plain wrong and I won't stand for it!"

Consider the current situation at various banks, some of which no longer exist. Plenty of intelligent and well-intentioned board members and executives must have known that something was wrong with granting a CEO a \$20 million bonus in the event that he were fired. And even the least sophisticated executive had to have seen the potential problem with approving home loans to people who would not be able to afford them if and when interest rates changed. So why didn't they do something?

Because they looked around and saw other intelligent and well-intentioned people who weren't standing up on their chairs and objecting. And they figured that perhaps what was going on wasn't so bad after all, especially if so many other executives and banks and boards of directors were doing it. "Who am I to rain on this parade?"

To be fair, some of them probably made a quiet comment during a meeting, or more likely, mentioned something to another board member over lunch. But they weren't laying down on the railroad tracks and risking their compensation or their friendships or their reputation if no one else would. Of course, plenty of them will come out now and say they saw the problem all along, and they might even be able to convince enough people that they should be considered whistle blowers."

Through these words, we see that people most of the time do not act rationally, but according to a given situation. In organisations, the management style matters and if its members are accustomed to being told what to do, they will not take any initiative to make things turn out well. The Subprime crisis has several causes.

Probably all are linked to the fact that we do not have control over mindset in organisations. The financial structure is known by the actors. They have a knowledge that they do not use or share for some reasons.

My wish in this master thesis is to take part to the new era, in which economics should focus in the future: taking into account the human factor in the analysis of the organisation. That is why I have chosen to present an empirical model of the organisation, called the Management Compass. It develops a new economic indicator focused on the performance of the organisation. However, this indicator stands out from the other ones, since it focuses on motivation of the organisation's members to make it efficient.

2.2. The model of Rotemberg and Saloner

The model of Rotemberg and Saloner is a successful trial to show that the management of people impacts the performance of the organisation. Their aim is to illustrate how the process of finding new ideas can be influenced by the management style. This section does not go through the mathematical results of their paper; it shows the conclusions and the limits of the model.

The model of Rotemberg and Saloner is a three-step-model with two agents, namely the CEO and the manager. The manager works on project proposals. The CEO decides whether or not to implement the project, according to its profitability. The results depend on whether there are complete contracts or incomplete contracts, and the impact of the CEO's style of management on the gains of the firm²⁴.

The behaviour of the manager is defined as follow:

- The manager refuses to work under a certain minimum wage.
- There is a further income according to the implementation of his works.
- He is risk-neutral.
- Working generates disutility.

²⁴ See also section 1.2. for a quick presentation of the model.

The behaviour of the CEO is defined as follow:

- His personality (selfish/empathic) influences his style of management (autocratic/participatory).
- The autocratic style illustrates the profit-maximising CEO: in that case, the CEO does not care for his manager and all he wants is to maximise profits. The empathic CEO cares for his manager's utility. He is more disposed to delegate decision-making to his manager.
- He decides to implement the projects. His personality plays a role in the decision.

The main result of the model is that most of the time, a participatory style of management affects the profits positively. Following cases are analysed:

- The case of complete contracts (theoretical)
- The case of incomplete contracts, in which managers provide new proposals only if they make an effort (in that case, there is always a disutility).
- The case of incomplete contracts, in which managers provide new proposals with or without efforts: hence, there are proposals of higher and lower quality.

The case of complete contracts clearly points up the autocratic management style. In that case, there are no contractual or informational issues, and the CEO knows which projects are profitable. He coaches the manager about the projects he has to investigate and knows that the manager makes efforts to work on them.

The case of incomplete information raises more interest. The result will depend on the environment of the firm: if the environment is rich in profitable opportunities, then a participatory style of management will give better results than an autocratic one and vice-versa.

There are two extreme cases. The 100%-autocratic CEO focuses on profit-maximisation. Hence, he will not implement projects with negative gains or projects with cost of implementation higher than the gains. At the end, only projects with positive gains and low cost of implementation are implemented. The 100%-participatory CEO will implement all the projects, even if gains are negative, as long as they bring more wellbeing to the manager. Hence, all profitable projects

with high implementation costs are implemented and contribute to generating profits. That is why the participatory style is better in a rich environment in profitable opportunities.

We can see limits in the model of Rotemberg and Saloner in the way that they consider working on a project for the manager as an effort generating disutility. This assumption of disutility at working is present in many economic models, although it happens (and it is hopefully mostly the case) that people enjoy working and get a higher utility from their job. Dropping this hypothesis would break the system of further income integrated in the model.

The model remains theoretical and cannot find a practical use for better governance. Many assumptions or variables used cannot be put into practice, since they cannot be measured or do not stick to reality.

The model is based on a two agents' relation, which is not applicable in that case. Researching new ideas, working on tough projects necessitates team work, or at least consultation. In that sense, we should model the interactions between team members as well, what might change the results consequently.

Additionally, the scale of management styles is incomplete or too vague. We have seen in the first chapter that there are at least four different management styles. More than this, the personality of the manager does not obligatory have an impact on his management style.

The next model we present copes with these limits. It does not make assumptions of the behaviour of the economic agents. Behaviour is endogenous in this model, depending on the mindset of the individual. The notion of "economic agent" is put aside for the benefit of a new approach with the human factor.

2.3. The model of Rupert: the Management Compass

Konosuke Matsushita²⁵ said in a speech to US Managers in 1988: *"We will win and you will lose. You cannot do anything about it because your failure is an internal disease. Your companies are based on Taylor's principles. Worse, your*

²⁵ Japanese industrialist, founder of the Matsushita Electric (1894 – 1989)

heads are taylorized too. You firmly believe that sound management means executives on one side and workers on the other, on one side men who think and on the other side men who can only work. For you, management is the art of smoothly transferring the executives' ideas to the workers' hands."

This critique of the occidental way of thinking could have put into gear discussions and changes, but it did no. This section develops the analysis of the organisation in order to understand the message of Matsushita.

Rupert combines the ideas on human needs of Maslow to the classification of management styles of Tannenbaum and Schmidt, both seen in Chapter 1. It is assumed that the technology of production is optimal. No better conditions can be expected on this side. However, we do not know how the employees are inclined to fit the process and if the management style is adapted to the process and to the employees. We define in the first subsection the exact dimensions of the model. Then, we build the geometric model in the second subsection. The third subsection shows how to map mindset. The fourth section presents the concept of aversion. The fifth section briefly presents the idea of the dissipation table. The sixth section introduces the different methods and tools to recover value. Finally, the seventh section integrates the model of the Management Compass in the process of creation of value.

2.3.1. Definitions, dimensions and scales of the model

The model of Rupert is composed of three homogenous dimensions:

- the perception of autonomy authorized at work by the style of management
- the aspiration for autonomy
- the complexity of the work process relating to the autonomy that is useful.

The perception of the management style consists in the perception that the employee has of the management style of the organization. It is assumed that perception of the employee is relative and not absolute. In order to determine perception, we then cannot ask a question like "is your manager directive?" and give modalities of a Likert scale to answer: what means "very directive" or "not enough directive" in that case? The choice of the modality depends on the idea that

the respondent has of “being directive”. Hence, perceptions of employees must be established on situations, which play the role of a referential. Once we have a referential, we have a reference and partly eliminate the relativity of perception.

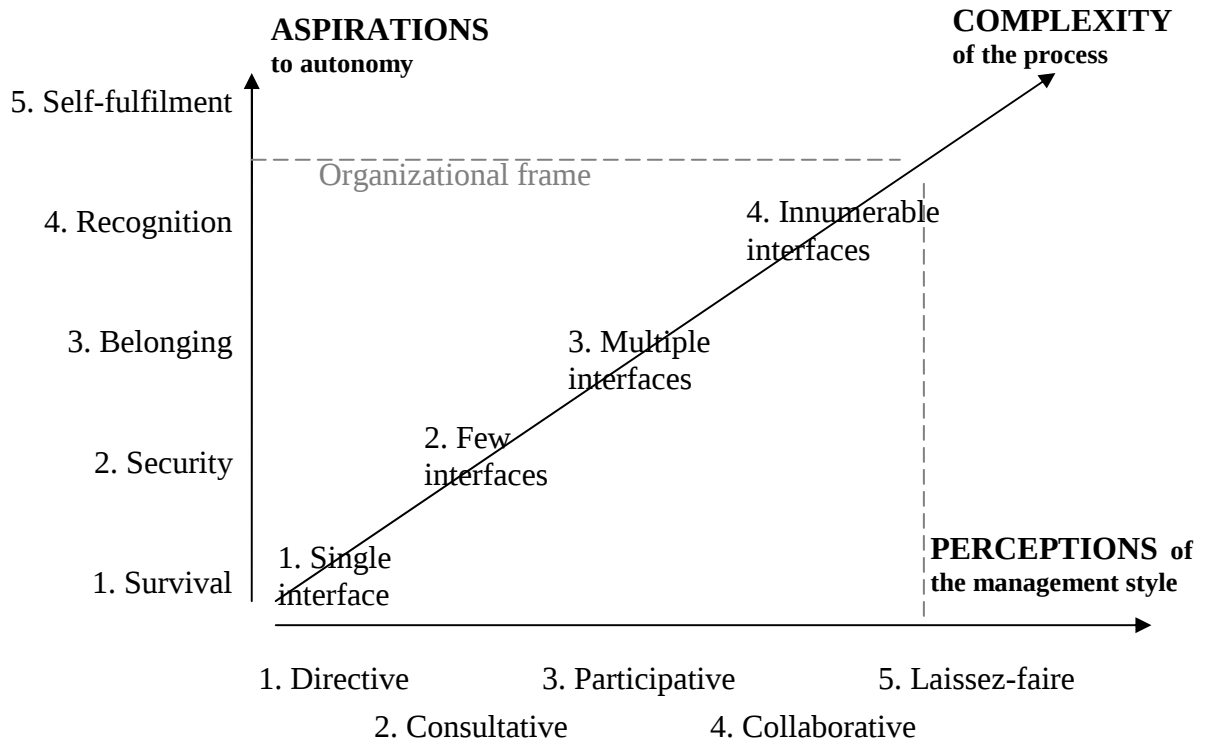


Figure 9 – Scales of perceptions, aspirations and complexity

The perception scale in the model of Rupert is based on the analysis of Schmidt and Tannenbaum²⁶ (1958) and Likert (1967)²⁷. The scale has got five levels (Figure 9).

The aspiration to autonomy consists in the autonomy or degree of liberty at work that the employee desires. The aspiration scale in the model of Rupert is based on the analysis of Maslow (1954). The scale has got five levels (Figure 9). Aspirations are revealed through a questionnaire using situations.

²⁶ See section 1.3.1

²⁷ The works of R. Likert on management style are in his book *The Human Organization*, McGraw Hill, 1967.

The managed complexity of the process is the actual complexity of the process in a given organisation/department and in a given period. It is linked to both perceptions and aspirations of the employees. The optimal complexity is the complexity for which the process would optimally work. It can be determined by a questionnaire to the director of a department, the purpose of which is to locate the process on the Accenture matrix. The complexity scale is as defined in section 1.3.3, relatively to the amount of interfaces.

Level 5 from the perception and aspiration scales do not correspond to attitudes that go in harmony with the frame of the organisation. It can happen that people perceive laissez-faire from their manager. In that case, the manager does not manage anything anymore and the situation can become dangerous for the integrity of the organisation. Similarly, employees can desire self-fulfilment. This aspiration is also dangerous for the company, since the drivers for the accomplishment of the employee are not obligatory the same as the drivers for the success of the organisation.

Hence, level 5 must be taken into consideration in practice. In the following sections of chapter 2, we will set it aside.

2.3.2. Geometric model

The advantage of the Management Compass is its easy geometric visualization and a lot of information can be read out of it. The model is built as follows: the perceptions are on the x-axis, the aspirations are on the y-axis. Complexity constitutes a third dimension on the plane and is placed on the bisecting line. Hence, we have three dimensions on two: this is a hyperplane. (Figure 10)

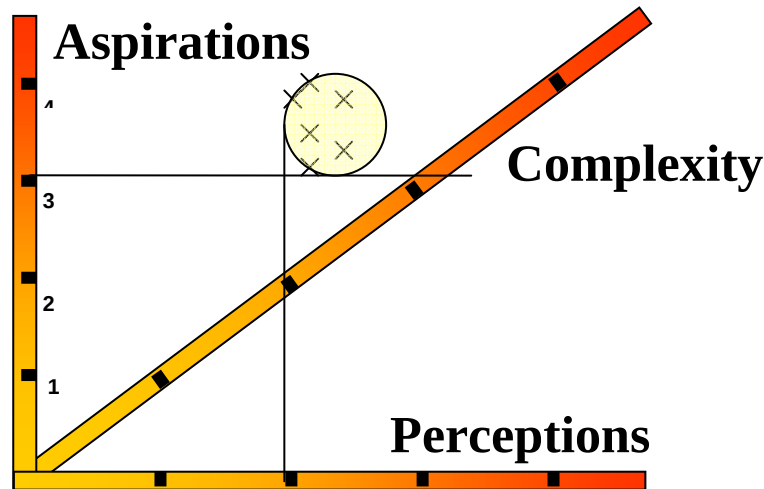


Figure 10 – The geometric model of the Management Compass

2.3.2.1. Locating perceptions and aspirations

Answering a questionnaire²⁸ makes it possible positioning people on the chart. Each employee of the N number of employees corresponds to a dot, the coordinate of which is $I_i(\text{Perception}_i; \text{Aspiration}_i)$ for $i = 1$ to n . Assuming that a population of 6 individuals answered the questionnaire, we get the following results displayed on figure 8. We see a cloud with coordinates between (2; 3) and (2,5; 4). That is, the management perceived in the organisation is mostly consultative ($P=2$), when people would prefer a participative ($A=3$) or collaborative management ($A=4$).

2.3.2.2. Positioning the managed complexity

The managed complexity depends both on perceptions and aspirations. Two principles must be stated here.

First principle

If aspirations are higher than perceptions ($A > P$), the managed complexity will be restricted by the perceptions (our case below). Indeed, on the long run, no one

²⁸ see section 3

will behave with more autonomy than what he thinks to be allowed to.

Second principle

Respectively, if perceptions are higher than aspirations ($A < P$), the managed complexity will be restricted by the aspirations. No one behave with more autonomy than what is desired.

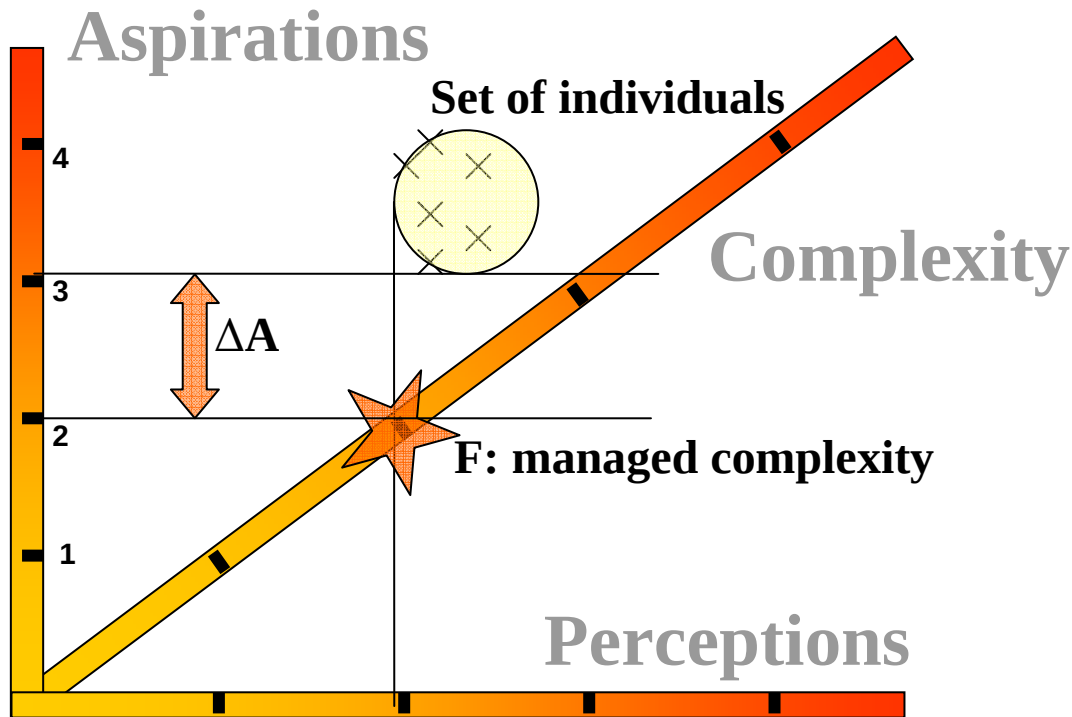


Figure 11 – Managed complexity for a given population

Hence, we can write the following: The managed complexity (F) corresponds to the minimal value of perceptions and aspirations set together. In our example, $F = 2$ (Figure 11). We then see the aspiration gap ΔA , which corresponds to the desired autonomy of the employee minus the perceived autonomy of the employees given by the management.

2.3.2.3. Complexity to the optimal work process

The *optimal* complexity is defined as being the complexity to the optimal work process. Optimal complexity is determined together with the director of a given

department through a small questionnaire²⁹. The aim of the questions is to determine the type of the process on the routine-interpretation axis and the individual-team work axis³⁰. It is important to interview each director of department and keep the results separated in respect to the different processes or departments.

For instance, if the process of one business unit necessitates team work and is

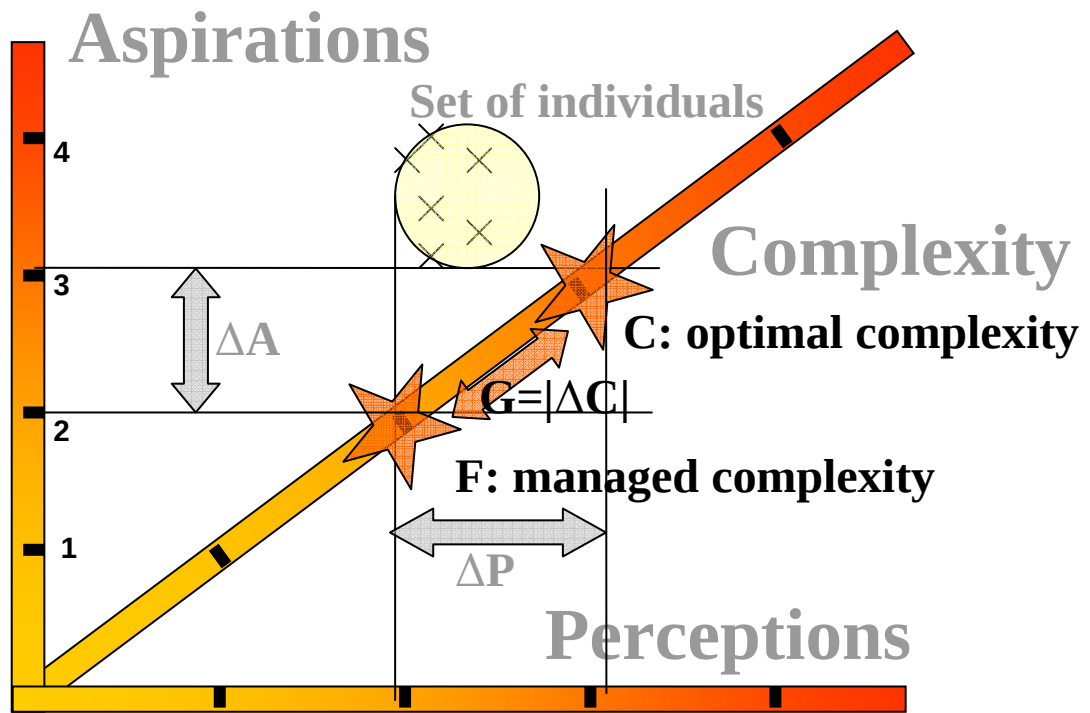


Figure 12 – Managed complexity vs. Optimal complexity: representing the cost of a bad organisation.

mainly a routine, optimal complexity is $C = 3$ ³¹. In that case, we see on figure 12 the gap between managed and optimal complexity ($|\Delta C|$). This gap reflects a cost. The reason for this cost is mainly the inappropriate management style.

We note f the managed complexity and c the optimal complexity of a process ρ .

²⁹ See annex 1

³⁰ See section 1.3.2.

³¹ $C = 3$ refers in the Accenture matrix to a process with both routine and team work. See section 1.3.2 for more details.

If the process is run at a complexity $f_p < c_p$, there is dissipation of energy: the tasks could be undertaken more quickly. In many situations, the under-management of complexity can lead to the paralysis of the process. If the process is run at a complexity $f_p > c_p$, there is also dissipation of energy: people dispose of a degree of liberty that the process does not require. Such situations lead to producing overquality or to an uncontrolled development. The only way to the best performance (economic maximisation problem) is to tend to the equality $f_p' = c_p$.

2.3.3. Mapping mindset

Mindset forms as perceptions (P) get compared to aspirations (A). Individuals live an on going process that captures information (perceptions) and checks how well they match with pre set aspirations that form essentially from culture³².

Assumption

Satisfaction and motivation are positively correlated. The more the employees satisfied, the more the employees motivated.

The geometric model does not solely show a relationship between management style, aspirations and complexity. Each part of the plane corresponds to a specific state of mind of the employee (Figure 13).

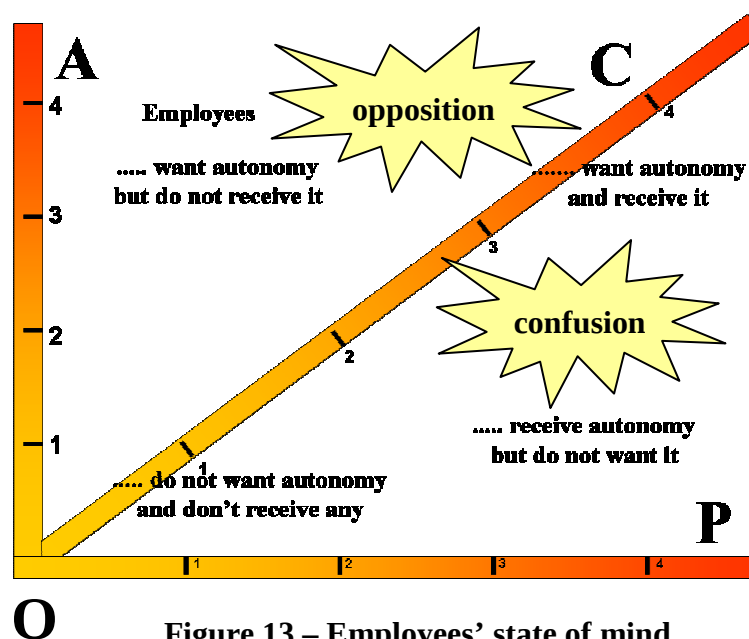


Figure 13 – Employees' state of mind

³² See section 1.5.1

If the employee i 's coordinates are located above the straight line (OC), he will have $A_i > P_i$. Hence, he wants more autonomy but perceive a too directive management. The outcome of this unbalance is opposition.

If the employee i 's coordinates are located below the straight line (OC), he will have $A_i < P_i$. Hence, he receives autonomy from the management but do not want it. The outcome of this unbalance is confusion.

If the employee i 's coordinates are located on the straight line (OC), he will have $A_i = P_i$. Hence, he receives the autonomy that he desires from the management. He is satisfied. In that case, with the assumption that autonomy is the major dimension playing a role here, **motivation** is at its best.

Therefore, the level of aspirations matches the level of perceptions only when employees are satisfied. All the other disequilibria constitute cases of dissatisfaction at the workplace. The more the dots are far from (OC), the more dissatisfied are people. A deeper analysis of the different combinations leads to the following "mindset map": it is possible to see what the mindset of employees is in respect to their coordinates on the plane (Figure 14).

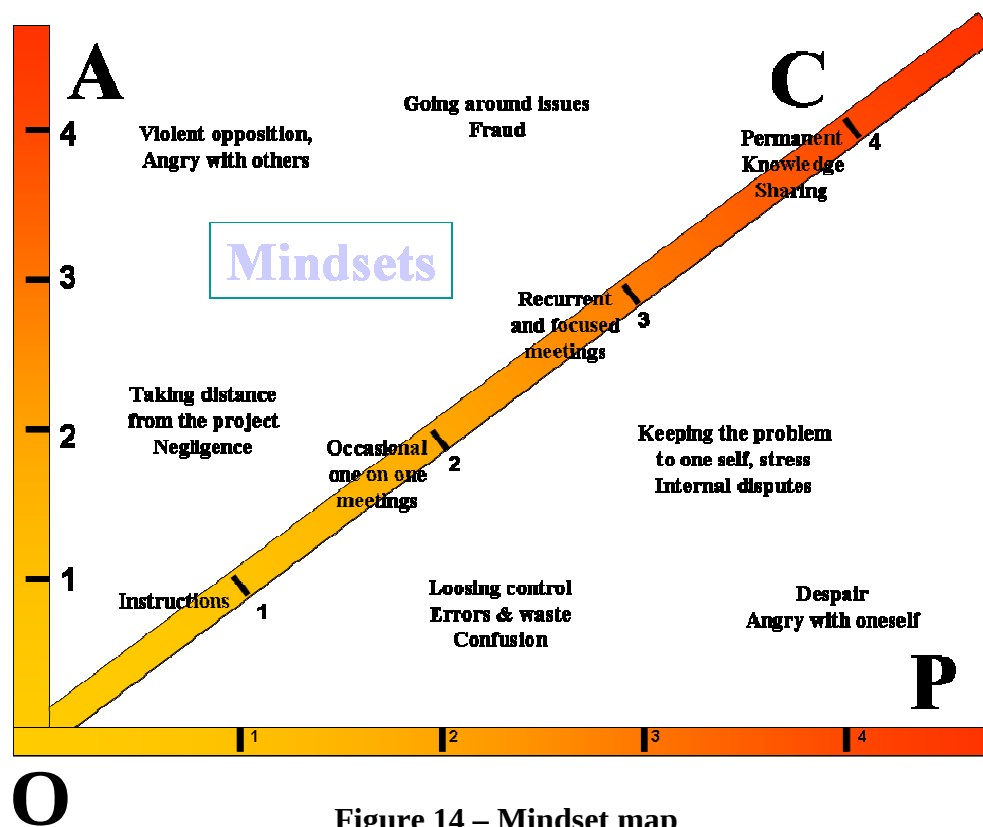


Figure 14 – Mindset map

This model is dynamic. For instance, in the case of opposition to a too directive management, there are two main types of employee. The first type is strongly

oppositional to the management and finely decides to resign and leaves the organisation. The second type is weakly oppositional to the management and bit by bit adapts to the management style. In that case, the dynamics of the model make employees' aspirations go down.

The mechanism behind it is the following, starting at a managed complexity $F = 4$, where regular meetings are necessary and decisions taken by the group, the manager will start telling he has the last word in the meetings. Finally meetings will not appear to be that necessary from both parts, regarding decision making, since employees will not feel the need to share their knowledge anymore. They will separately discuss with the manager and do what the manager wants him to do. No matter here if regular meetings were necessary for the good run of the process: the process can work with fewer meetings as well, it is just much less efficient.

2.3.4. Aspiration and aversion

As well as we defined the aspirations to autonomy as the autonomy or degree of liberty at work that the employee desires³³, we define the aversions as the autonomy or degree of liberty at work that the employee is averse to. This additional dimension of the model makes possible to display the dislikes of the employees and to know if the actual situation at work revealed through the perceptions matches with the dislikes.

³³ See section 2.3.1

Then, it is interesting to represent aversions on the geometric model just

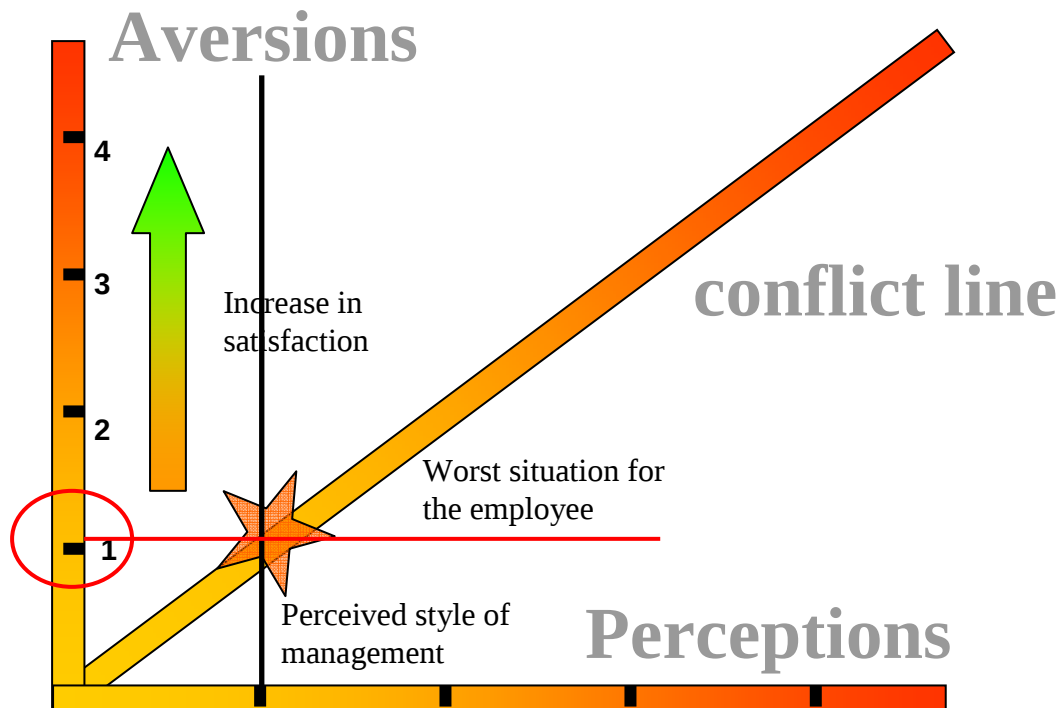


Figure 15 – Aversions and map of dissatisfaction

replacing the aspirations (A) on the y-axis by the aversions (X). (Figure 15)

On that model, the bisecting line corresponds to the conflict line, that is to say, when the perceptions of the employee correspond to the aversions which he never would like to experience.

Assuming perceptions are set on $P = 1$ (directive style of management). If the aversions of the employee are $X = 1$, we are located on the conflict line. Therefore, we know that the given employee is suffering under the situation in the organization.

The geometric model with aversions is like a “mirror” of the model with aspirations. Looking simultaneously on both models, we are then able to say how the employee feels, if he is motivated in his work, what the issue in the organisation is, its cost³⁴ and how it is possible to resolve it³⁵. That is why the model is called the Management Compass.

³⁴ See next section.

³⁵ See section 2.3.6.

2.3.5. The dissipation table

The equilibrium between aspirations and perceptions provides for the best motivation of employees. However, it still does not mean that the best performance is reached. The second equilibrium needed is between managed and optimal complexity.

Result of the model

Assuming that the equilibrium $A = P$ is reached, if $f_p = c_p$, then the organisation works at its best performance. Employees are best motivated and it happens to be at the useful level.

All other cases generate a cost of poor performance, which can be estimated by the following dissipation table. The cost is based on the gap $G = |\Delta C| = |c-f|$. (Figure 16)

Process ➔	C = 1	C = 2	C = 3	C = 4
↓ Gap G				
$0,5 < G < 1,5$	1-3	1-5	2-7	5-11
$1,5 < G < 2,5$	2-6	4-10	6-15	10-20
$G > 2,5$	> 6	> 10	> 15	dies out

The figures shown in the table correspond to the percentage of the added value of a process.

Figure 16 – The dissipation table

Assuming that the added value of a process is 10 Million Euro, the example on Figure 12 where $C = 3$ and $G = 1$ shows the following outcome: between 2% and 7% of the added value is dissipated, namely 200 to 700 k€.

2.3.6. Recovering dissipated value

A lot of change management tools have been developed these last decades in

order to impact the management in organisations. Usually, consulting groups apply these methods and workshops blindly. Indeed, they do not exactly know what the impact of the tool will be on the management or on the people. Their approach is “trial and errors”.

Using the Management Compass enables better intervention. The various management tools have been classified according to their impact on the management style or on the aspirations to autonomy. Moreover, depending on the need, the focus can be set on the individual, on the group or on the whole organization. A partial classification of different tools can be found in annex.

Each management tool can be considered as a vector in the plane OPA. Some of the tools improve the style of management. This generates a move on the x-axis from the initial point (actual management style) to the terminal point (optimal management style) of the vector. Some other tools improve the aspirations to autonomy. This generates a move on the y-axis. At last, several tools may have an impact on both aspirations to autonomy and perceptions.

For instance, the technique of management by walking around (MBWA) impacts the aspirations to autonomy of a group. Employees can see every day that the managers care for their work. They know they can talk to them, ask questions. It encourages them to use their capabilities in the best way. This is not a team building process though, hence, the highest this MWBA takes people is on A=2. The generated move is to be seen up on the y-axis, from the initial point “survival” or A=1 to the terminal point “security” or A=2.

All the management tools tend to increase either the perceptions or the aspirations of the employees. Depending on the situations, change management has to be carried out among the employees or among the managers or among both groups. No management tool tends to reduce the perceptions or the aspirations of an individual, simply because reducing perceptions and aspirations is the work of a tyrant! Therefore, if someone appears to have too high expectations for a given process, there is a problem in the organisation that basic change management cannot resolve. Using the Management Compass makes it possible to locate the problem and to work on logical solutions.

2.3.7. How to create value?

In the first chapter, we have seen that creation of value has several sources. Leibenstein makes the difference between allocative efficiency and X-efficiency. Allocative efficiency corresponds to the Classical theory of production. X-efficiency corresponds to the management style, to social and human capital and to intrinsic conditions that generate motivation of the employees and as a consequence higher productivity.

The Management Compass is in the midst of the process of creating value and enables new developments. Rupert defines more accurately the different components that play a role in the process of the creation of value (Figure 17).

A and B correspond to the allocative efficiency: it is the resources and the structure of the production process (blue square). C and D correspond to human capital: competencies and style preferences of the employee, which are revealed through the employee's application process (green square).

These four components A, B, C and D are necessary to create value, but not sufficient. If there is no interaction between people and no knowledge sharing, the whole process of creation of value is shut down, since in that case the technique and the competencies are present, indeed, but unused.

The new measured component is E: it corresponds to the increase of value generated by the interactions of the people. The more efficient the interactions, the more income generated, the smaller the gap between managed and optimal complexity.

The management compass is shown on figure 17 with its two interactions.

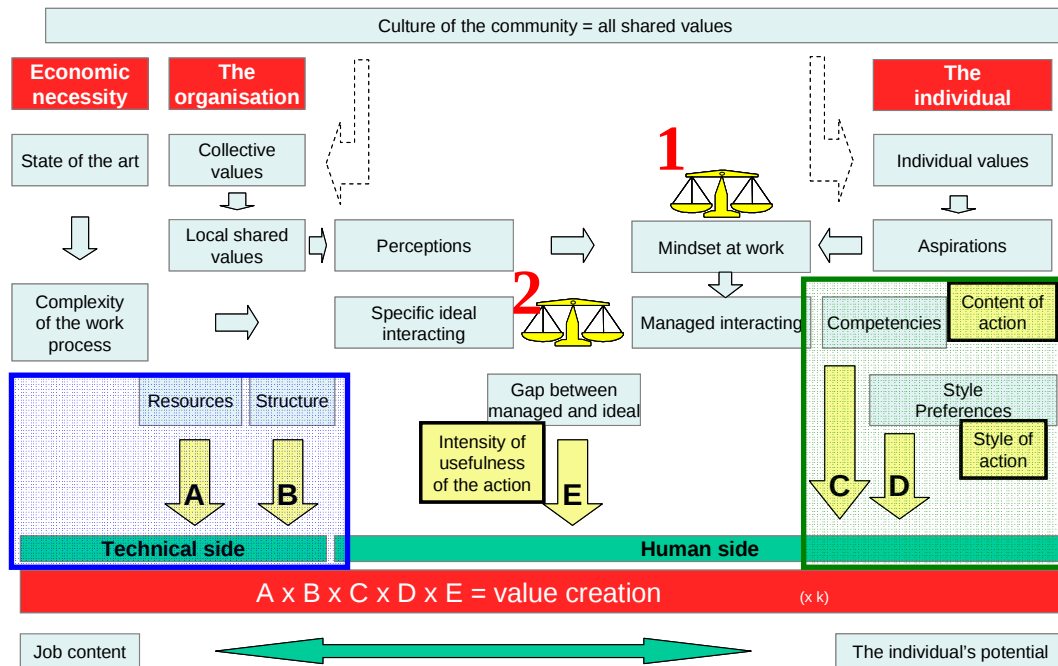


Figure 17 – The process of creation of value

The first interaction is between the perceptions and the aspirations³⁶. Perceptions are resulting from the values of the organisation. Aspirations are resulting from individual values.

The second interaction is between the resulting managed complexity of the first interaction and the optimal complexity³⁷, which is linked to economic necessity.

The organisation's values and the individual's values depend on the culture of the community. Therefore, the process of creation of value might have different outcomes at same configuration (A, B, C, D) according to the location where it takes place. Thus, the differences empirically established through the works of Leibenstein and al.³⁸ are explained by component E.

³⁶ See section 2.3.3

³⁷ See section 2.3.2.3

³⁸ See section 1.1

To conclude, the words of Matsushita criticize the way we manage people in Europe and in the US. Taylorism is a very directive management style ($P = 1$). We keep managing people like this while optimal complexity of the processes is $C = 3$ or $C = 4$ and necessitates a more collaborative management style.

Many examples show that companies still manage their employees like cattle, twenty years after Matsushita's speech. In 2007, few employees of the French car manufacturers Renault and Peugeot committed suicide because of their situation at work: too much pressure came from the management and there was no other escape.

Thus, creating value does not only mean more productivity. It is a more balanced notion. Human resource management plays a much more significant role in creating value than what most managers would admit.

3. Practical implementation of the Management Compass

The third chapter is a practical case. It covers various domains: computing and IT solutions, survey preparation, consulting activities, statistics and information analysis. I worked together with the company “Rupert Consulting”, which was looking for someone to develop practical tools and to provide support in their activities. In the first section, I describe the computing tools and solutions used to achieve the project. In the second section, I go through the steps of the intervention in an international banking group. The third section is the interpretation of the intervention results.

3.1. IT Solutions

The purpose of developing IT solutions for the consulting project is to facilitate the treatment of the data and to support the analysis. The important points were to automate the distribution of the survey and to support the creation of graphics and tables for the analysis.

3.1.1. Open source solution: LimeSurvey

The software supply for internet surveys is very large. I chose Limesurvey, because it is an open source program, free of use, and it has a great number of features.

3.1.1.1. Installation of LimeSurvey

The first step is the installation of the software. A MySQL Database with specific PHP features is required to run the program. The “Website-XS” package from Lycos France includes a database and the required PHP libraries. I subscribed to it.

LimeSurvey is very easy to install. Once I downloaded the files of the last stable version from the LimeSurvey website³⁹, I changed the connection settings in the file “config.php”. In that file, the database name, URL, owner and password are to be

³⁹ <http://www.limesurvey.org>. Version used: 1.71.

entered, as well as the prefix assigned for the tables created by the software. Then, the files are ready to be uploaded. The best way to upload them to the FTP (File Transfer Protocol) server is to use a FTP Client like Filezilla⁴⁰. Once the files were uploaded, I went to LimeSurvey's install page in my browser and installed the software. This action creates tables in the database.

Before accessing the administrator board of the program, the installation folder and files must be renamed or deleted, for security reasons.

3.1.1.2. The administrator dashboard

The administrator dashboard is accessible in the admin folder of the LimeSurvey folder. For instance, the address can be

<http://www.WEBSITE.com/limesurvey/admin>

or

<http://limesurvey.WEBSITE.com/admin> if a subdomain has been created for the LimeSurvey folder.

The user name and password (given in the config.sys file) must be entered, after which the administrator dashboard appears.

The dashboard has many functions accessible by clicking on the respective icons. I used mainly three functions (Figure 18):

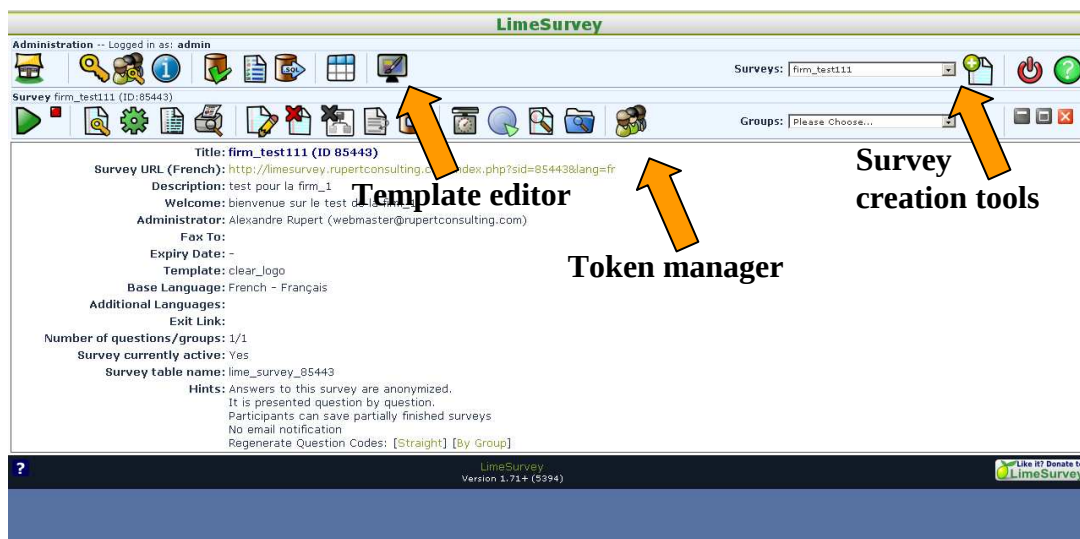


Figure 18 – Screenshot of the administrator board of LimeSurvey

⁴⁰ Open Source FTP client from Mozilla: <http://filezilla-project.org>

- The survey creation tools. The structure of LimeSurvey's questionnaires is the following: each question belongs to a group. Each group belongs to a questionnaire. Hence, to create a question, the first thing to do is to create a group.
- The template editor. It can be used to enhance and personalize the design of the questionnaire as it will appear on the screen of the respondent.
- The token manager. This option enables the management of each respondent. A list of respondents can be created. Then, the token manager automatically sends an invitation message containing an individual address to connect to the survey. It makes it possible to know when all the respondents have completed the survey and to contact them again, if they are late.

3.1.1.3. Building the survey

The survey is composed of several situations lived at work, like meetings, setting of goals, celebrating a good news, contacting clients, etc⁴¹. Most of the time, it encompasses 10 situations. The situations are used twice: once to determine perceptions and once to determine aspirations of the respondent.

There are three parts in the survey. The first part corresponds to the evaluation of the respondent's perceptions of the management style, hence the x-axis coordinate of the model. The second part corresponds to the evaluation of the respondent's aspirations of autonomy, hence the y-axis coordinate of the model. The third and last part gives more information about the respondent.

Let us compare the way the situation is turned in the perceptions and the aspirations parts.

Part 1 – Perceptions:

*How **do** you know what is expected from you?*

⁴¹ The survey is confidential. The example is given here to understand how the question and answers are built.

1. **There is** a job description, and **I get** clear instructions every time there is a change.
2. At start, my manager **drew** my mission in broad lines. **We touch base** ever since once in a while, and discuss what goes best and what is not that easy.
3. In a meeting, **our boss stresses** the challenge our team is facing, listens to our comments and specifies the major points each one of us should focus on.
4. In our team, **we closely work together**. Hence I always know what I have to do, that best serves the team's mission.
5. **I always have** a clear vision of what my priorities are because I decide for myself.

Part 2 – Aspirations:

How **should** you know what is expected from you?

1. **I should have** a detailed job description.
2. **I would like** my manager to draw the mission in broad lines. **We should** then touch base once in a while, when there is a point worth discussing.
3. **I would like** our boss to stress the challenge our team is facing with all of us, listen to our comments and specify the major points each one of us should be focusing on.
4. **I would like** we closely collaborate, with lots of interactions. Hence **I would** always know what I have to do, that best serves the team's mission.
5. **I would like** to decide for myself. This way, **I would** always have a clear vision of what my priorities **should be**.

The situation in “Part 1” is turned to describe the reality. One of the five modalities should approximately or exactly correspond to the situation that the respondent has been living in his organisation. The situation in “Part 2” is turned to match the wish or the desire of the respondent. It does not correspond to the reality, or at least to the perception of reality of the respondent, but to his aspiration, what

he would like to become true.

The five modalities in each situation correspond to the five levels of the scales. The scale of management style has the following five levels: *directive* – *consultative* – *participative* – *collaborative* – *Laissez-faire*. The scale of autonomy has the following five levels: *survival* – *security* – *belonging* – *recognition* – *self-fulfilment*.

The question type to use in LimeSurvey is a list of radio buttons (Figure 19). The question has to be typed in the text field named “Question”. The text field “Help” gives the possibility to add further explanations or a hint.

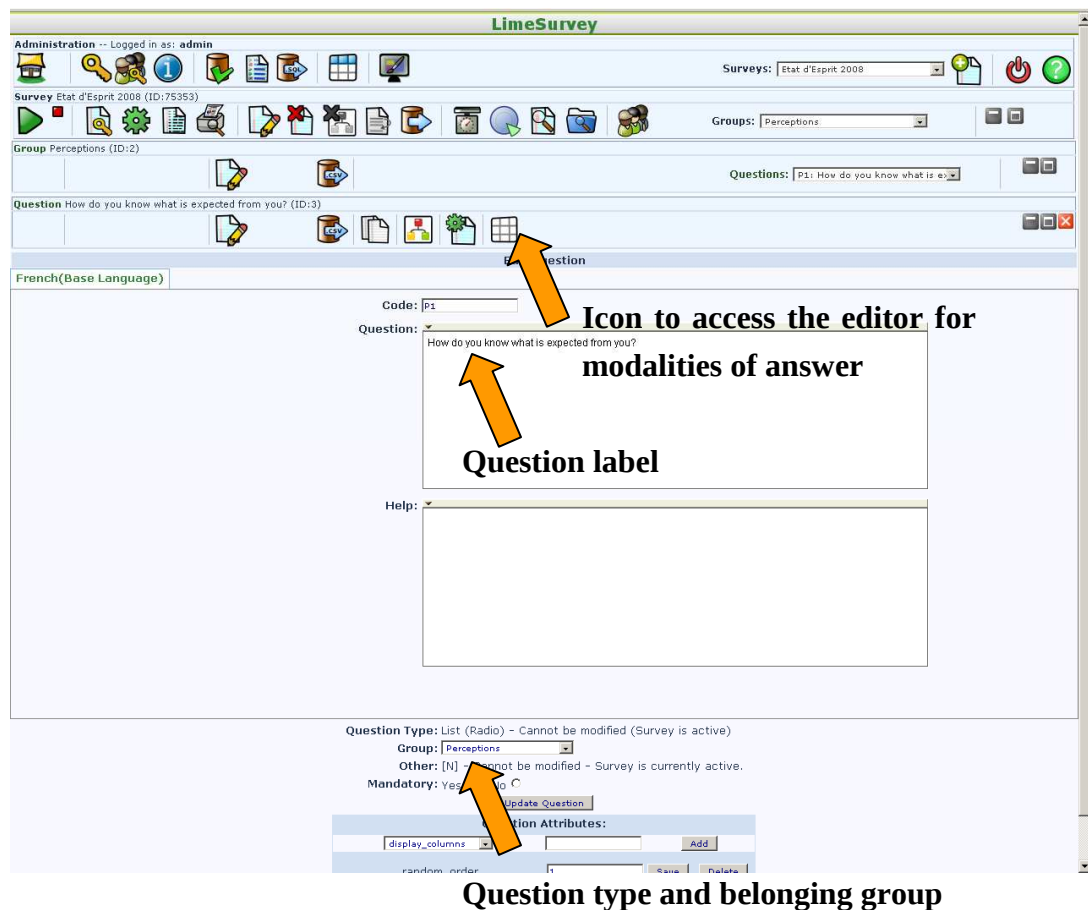


Figure 19 – Creating a new question in LimeSurvey

After creating the question, the modalities must be typed in. Figure 20 shows the respective screen. On the left side, a code for each answer has to be entered, followed in the middle by the label of the answer. I entered in the code field the level of the answer on the respective scale (numbers from 1 to 5). Hence, the resulting database is easy to read. A “3” for question P1 means that the individual answered “3” (participative) to the first question of part 1 – perceptions.

The screenshot shows the LimeSurvey administration interface. At the top, it says 'Administration -- Connecté en tant que : admin'. Below that, there are tabs for 'Questionnaire Mindset 2008 (ID:76912)', 'Groupe Perceptions (ID:7)', and 'Question : How has your team been created? (ID:18)'. The main section is titled 'Éditer les réponses' and 'Anglais (Langue de base)'. It contains a table with the following data:

Code :	Réponse	Action	Trier
1	I don't know, I have been told I will work here.	Supprimer Défaut	Bas
2	I have been interviewed and the manager asked me whether I wanted to	Supprimer Défaut	Haut Bas
3	We have been invited to a meeting. After the explanations were given, o	Supprimer Défaut	Haut Bas
4	We were working in the same place. We realized we could organize ourse	Supprimer Défaut	Haut Bas
5	In the beginning, when I started working here, there was no team. I cam	Supprimer Défaut	Haut

Below the table, there is a 'Nouvelle réponse:' field and a 'Ajouter une nouvelle réponse' button. Orange arrows point to the 'Code' column (labeled 'Codes') and the 'Réponse' column (labeled 'Modalities of answer').

Figure 20 – Creating modalities of answer in LimeSurvey

Finally, the question appears as on figure 21 on the screen of the respondent.

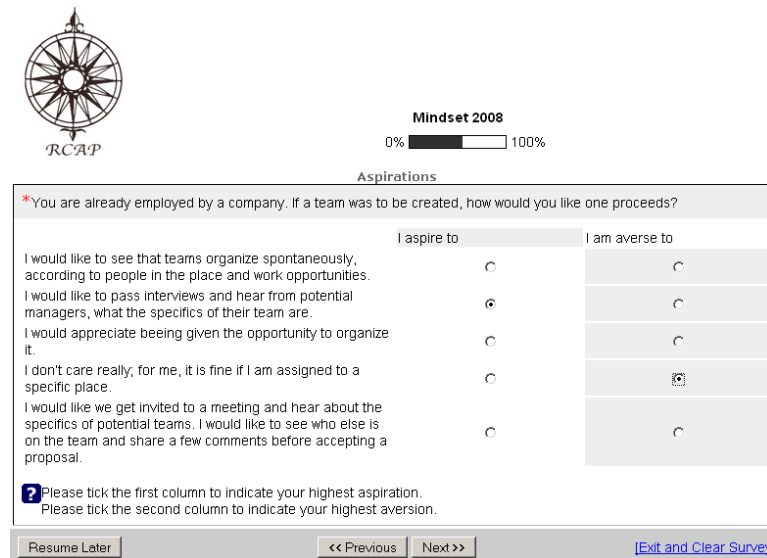
The screenshot shows the LimeSurvey respondent interface. At the top left, there is a compass logo labeled 'RCAP'. At the top right, there is a progress bar labeled 'Etat d'Esprit 2008' with a scale from 0% to 100%. The question is 'How do you know what is expected from you?'. Below the question, there are five radio button options:

- ☐ I always have a clear vision of what my priorities are because I battle for myself.
- ☐ At start, my manager drew my mission in broad lines. We touch base ever since once in a while, and discuss what goes best and what is not that easy.
- ☐ There is a job description, and I get clear instructions every time there is a change.
- ☐ In our team, we closely work together. Hence I always know what I have to do, that best serves the team's mission.
- ☐ In a meeting, our boss stresses the challenge our team is facing, listens to our comments and specifies the major points each one of us should focus on.

Orange arrows point to the compass logo (labeled 'Logo of the company') and the progress bar (labeled 'Percentage completion bar').

Figure 21 – Aspect of the question on perceptions for the respondent

The question in part 2 – aspirations requires to be answered twice: the preferred modality for the aspirations and the most disliked modality for the aversions. Therefore, a two-column-table with radio buttons, including labels, has to be created in LimeSurvey, so that the respondent can answer aspirations and aversions simultaneously (Figure 22).



Mindset 2008
0% 100%

Aspirations

*You are already employed by a company. If a team was to be created, how would you like one proceeds?

	I aspire to	I am averse to
I would like to see that teams organize spontaneously, according to people in the place and work opportunities.	☐	☐
I would like to pass interviews and hear from potential managers, what the specifics of their team are.	☒	☐
I would appreciate being given the opportunity to organize it.	☐	☐
I don't care really, for me, it is fine if I am assigned to a specific place.	☐	☒
I would like we get invited to a meeting and hear about the specifics of potential teams. I would like to see who else is on the team and share a few comments before accepting a proposal.	☐	☐

? Please tick the first column to indicate your highest aspiration.
Please tick the second column to indicate your highest aversion.

[Resume Later](#) [<< Previous](#) [Next >>](#) [Exit and Clear Survey](#)

Figure 22 – Aspect of the question on aspirations and aversions

3.1.2. Macros with Visual Basic in Excel

In order to support the creation of graphics and tables, I developed some macros in Excel using Visual Basic. I once worked once before with this programming language during an internship in a French credit institute, where I learnt the basics of the language. Moreover, I had classes where I learned to use Java in the past years at the university, which is another programming language. It taught me the programming structures present in every programming language.

The first macro automatically transforms the database and performs a few automatic calculations in order to obtain for each individual his average perception, aspiration and aversion on the ten situations.

The second macro mechanically creates charts. It automatically locates the perception and aspiration coordinates and the size of the range to be used for the chart. Then, the chart is created and personalized.

The second macro adapts the perception and aspiration coordinates of the chart. The obvious issue linked to the coordinates is that the points with the same coordinates are stacked up one above the other. Hence, we do not see how many points lay on the chart at some intersections. In order to tackle the issue, two solutions are open: the first solution is to count how many points are invisible and write next to it the total number of points. The second solution is to add a random ε to the coordinates in order to generate a small space between the points. Hence, all points become visible. The second solution was preferred. I developed a small algorithm that generates the ε and added it to the first macro. This representation renders density and therefore it is easier to get to know where the population mainly lays on the graph.

Later on, I developed a third macro to automatically export the charts of all subpopulations to a PowerPoint presentation. The output is an overview presentation with all the charts of the study. Hence, it is easier to select noteworthy charts and to insert them in the presentations.

3.2. Practical intervention

The intervention took place over the summer 2008 in the Business Consulting department of an international banking group. In this department, forty consultants work on business process reengineering. Their role is to help other departments of the Wealth Management section of the bank working with the right processes. They all have a professional background in the company, since this position can be solely reached by intern employees and for a period of three to four years. They all are between 30 and 60 years old. Five managers lead the team.

3.2.1. Token manager

LimeSurvey is built with a token manager, which makes possible to administrate and partly automate the relation to the respondents (Figure 23). Several tools are available:

- Sending e-mail invitations
- Sending reminder e-mails
- Actual completion statistics of the test
- Automatic confirmation e-mail
- Importing and exporting tokens from a CSV file
- Creating tokens online
- Resetting tokens' status
- Etc.

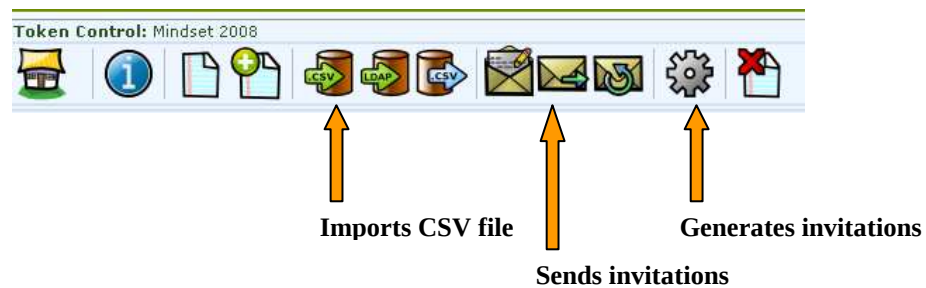


Figure 23 - The different options of the token manager

3.2.2. Sending the invitations

Sending the invitations succeeds in a few steps.

The first step consists in loading the mailing list with information on the respondents in the token manager. This step succeeds creating a CSV file (Comma Separated Values) including the information that requires LimeSurvey to work properly. The format recognized by the program is “first name, last name, e-mail address”, each element separated by commas. New entries must be on a new line. Microsoft Excel or simply the notepad can be used to create the file. Then, the file can be easily uploaded.

The second step consists in editing the invitation template in order to adapt it to the wishes. The message sent to the respondents looks like this:

Dear {FIRSTNAME},
You have been invited to participate in a survey.

The survey is titled:
"{SURVEYNAME}"
(...)
To participate, please click on the link below.
{SURVEYURL}

Sincerely,
{ADMINNAME}
{ADMINEMAIL}

The words between braces constitute variables.

The third step consists in generating the invitations for the list of individuals by clicking on the icon “generate tokens”. In this step, individual URLs are created, that is to say that a unique automatically generated address is assigned to each respondent of the survey.

The fourth and last step consists in sending the invitations. Here as well an icon in the menu bar makes it possible. Invitations will be sent to all the respondents who haven’t got any invitation yet. Reminders can be sent separately.

3.2.3. Downloading the results

The answers to the survey can be seen anytime either online or downloaded in Excel or SPSS format. LimeSurvey’s export manager displays a few alternatives to create the table. Question headers or question codes, full answers or answer codes only (Figure 24), can be displayed. I always favoured using the codes, since it makes the treatment of the data in excel easier (actually using macros).

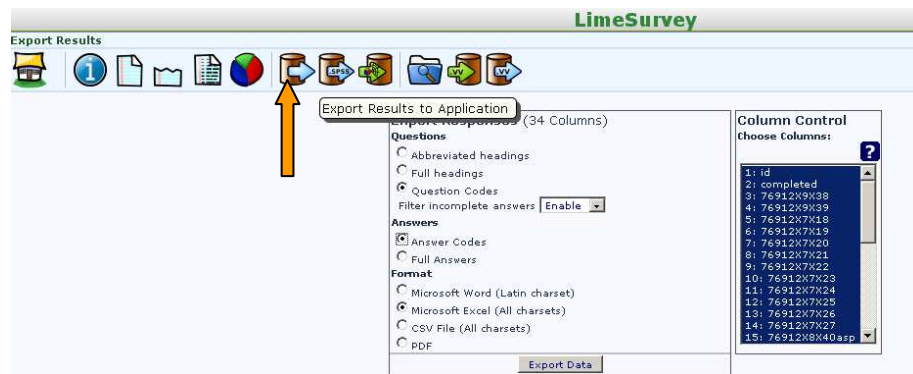


Figure 24 – Exporting the results to an application

3.2.4. Assessing optimal complexity

In order to assess the optimal complexity of the process, a two-page survey must be submitted to the managers of the department⁴². The questions of that survey consist in locating the process on the Accenture matrix⁴³. Firstly, yes/no questions like the following are posed:

Is work fully described by instructions?

Is work repetitive?

The answer to these questions provides information on the routine aspect of the process. If work is fully described by instructions, it means that no interpretation skills are necessary. If work is repetitive, it can be seen as routine.

Does the process require simultaneous action of several employees?

Is a good work atmosphere a must for a proper process roll out?

The answer to these questions provides information whether the process is based on individual work or on team work. Simultaneous action requires team work

⁴² The template is partially available in annex.

⁴³ See section 1.3.2

for a good coordination. Work atmosphere becomes very important if employees work together.

Then, a set of sentences describes different kinds of processes. The manager must allocate a total of 100 points to the sentences, allocating more points to the one which describes best the process.

Finally, two questions ask for the degree of coordination and the degree of judgement needed for the process. Answers are given on a scale from 0 to 100 percent.

The answers of the business consulting managers gave the following result: the process is routine and needs work team. Moreover, in some cases, the process requires interpretation from the employees. Hence, the optimal complexity of the process C is estimated to be on the segment [3 ; 3,5]. 3,5 corresponds here to an artificial and average value. Indeed, complexity does not grow continuously, but in steps.

We now know the optimal complexity. The last step is to analyse the answers of the 40 employees to the survey and to empirically compare managed complexity and optimal complexity. What are the employees' perceptions of the management style? What are the aspirations to autonomy of the employees? Are both dimensions optimal for the best performance of the department? Answers to these questions are given in the section 3.3.

3.3. Information analysis

In this section, we analyse the results of the survey conducted in the summer 2008 in the business consulting department of an international banking group⁴⁴. The analysis is conducted in four steps. First, the global analysis displays charts including all situations. This analysis is based on the perceptions and the aspirations only. It corresponds to 50% of the analysis, since it provides basic information on the managed complexity and the gap G. The second step of the study consists in

⁴⁴ See introduction of the section 3.2 for detailed information on the surveyed department.

grouping various situations together, which are more significant in the process, or to analyse some situations separately. The third step consists in looking at each situation for aversions and in detecting high dissatisfaction cases. The fourth step consists in choosing the best management tools to improve both satisfaction and performance of the organisation.

3.3.1. Global analysis

The following chart (figure 25) is the resulting map out of the answers of the survey. The result is interesting in the sense that the cloud of individuals is quite

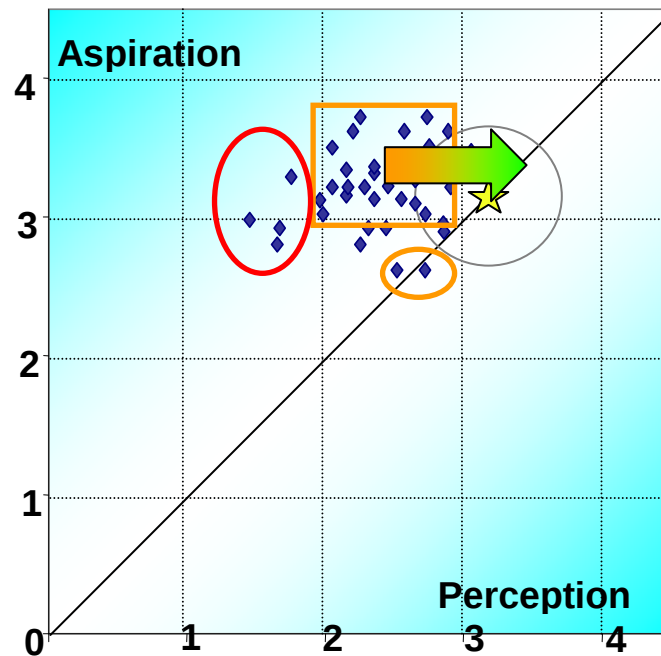


Figure 25 – Global map of the business consulting department

compact (orange square) and near the target complexity (yellow star). The employees are mostly in the interval of perception $I_p = [2 ; 3]$ and the interval of aspirations $I_A = [3 ; 3,8]$. Theoretically, managed complexity is roughly located at the point (2, 2).

Additionally, four people (red ellipse) might lead to conflicts, since they perceive a much more directive management style than most employees; on the contrary two people (orange ellipse) are satisfied and unlikely to trigger off any

conflict, although their aspirations are quite different than the majority of the employees.

All in all, the mindset map displays a quite consistent department. This outcome was to expect, since only intern employees have access to positions in that department. Thus, the culture of the company is stronger. Nevertheless, a good number of employees are located in the orange square to the left of the optimal complexity area. Therefore, using a group management activity to move perceptions to the right may be useful and may improve both satisfaction and performance of the department. Moreover, an additional individual management activity for the employees situated in the red ellipse might help calming down some tensions; another individual management activity would be desirable in order to increase the aspirations to autonomy of the two individuals in the orange ellipse.

3.3.2. Analysis of specific situations

Let us look at the situation 4 of the survey.

How are my ideas, remark and suggestions taken into account?

1. *I have the impression that nobody cares. I tell my boss but never hear about it again.*
2. *My boss listens to me and may ask a few clarifying questions, as I describe what I suggest, regarding a business issue.*
3. *When I raise a point, my boss calls up a meeting. I describe the idea in front of the team. A group discussion takes place, upon which my boss decides what to do.*
4. *We are in touch permanently. Hence ideas, remark and suggestions are shared all the time. We discuss them and decide what to do.*

How should one take my ideas, remark and suggestions into account?

1. *I am happy if I can drop a note in a suggestion box.*
2. *I would like my boss to listen to me, so he is remembers about my capabilities.*
3. *I would like to be able to present my ideas in front of the team, in order to strengthen the bonds with the team.*

4. *At work, we should be in touch permanently. Hence ideas, remarks and suggestions would be shared as soon as they are raised.*

Answers to this question are the following.

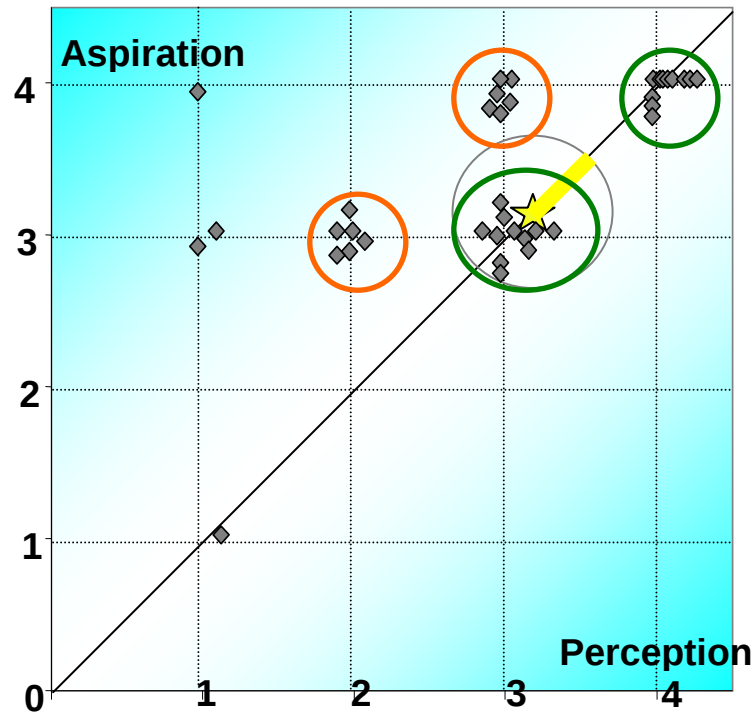


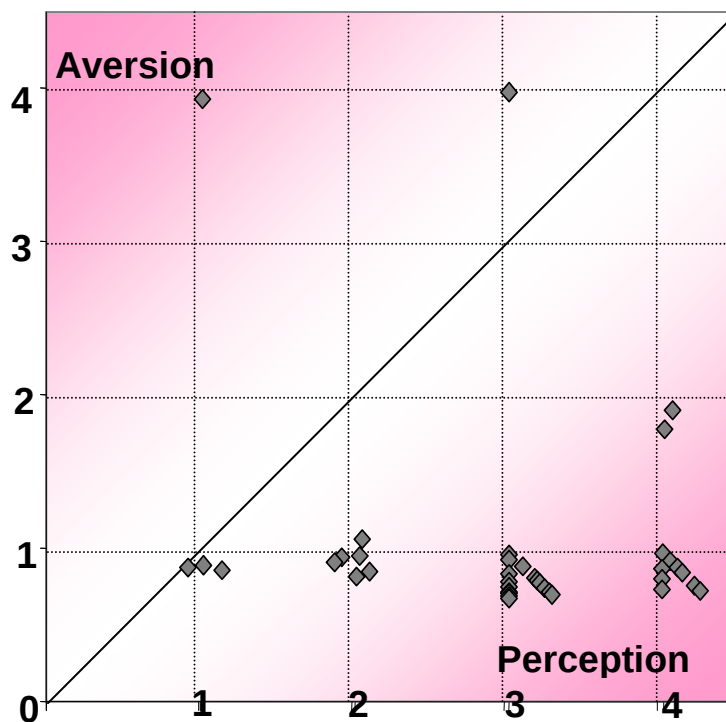
Figure 26 – Situation 4: ideas and suggestions (perceptions)

We see on Figure 26 that most of the time, the employees feel satisfied and the performance of the department is optimal. The management style of the five managers is mainly perceived in $P = 3$ and $P = 4$. However a small group perceives $P = 2$. The differences here can be assigned to the different managers. Probably the management style differs among them.

There are very few outliers. The Business Consulting department is relatively united on the way ideas and suggestions should be taken into account.

3.3.3. Analysis of the aversions

We present here the aversion chart for the situation 4 presented in the last paragraph (Figure 27).



move perceptions to the right would be useful.

Rupert classified many management tools according to their effects on perceptions and aspirations. In our case, activities that displace the group from $P = 2$ to $P = 3$ have to be selected.

For example, the following activity would be interesting in our case:

Directed exploration

Management forms a quality circle, mixing on purpose all expertises and selects the topic.

Roll out: a two hours meeting with maximum four participants.

Presentation to managers

Managers must comment, i.e. say what they want to do with the results.

Benefit: grows interpersonal relationship and global business group commitment. It leads to new ideas. It displays confidence.

Directed exploration would here have the advantage to unify the management style of the managers. It would help in situations in which the management style of some managers is perceived with $P = 2$.

A list of activities is available in the annex.

4. Practical application to a non-profit organisation and extrapolation to governments

It is interesting to have a look at the applications of the Management Compass to other kinds of organisations, in which maximizing profits is not the first incentive.

4.1. Management issues in a hospital

A friend of mine, Stefan, has been working for almost two years as a medical doctor in a hospital in Baden-Württemberg. He is radiologist trainee (Roentgen). He is about resigning, because management is far too directive for him. In section 4.1.1, the interview I had with him is reproduced in German. Non German speakers find a summary of the interview in section 4.1.2. Section 4.1.3 displays mindset on a diagram, using the knowledge on the Management compass.

4.1.1. Interview of Stefan (in German)

1. Was ist deine Stelle im Spital?

Arzt in Weiterbildung = Assistenzarzt

2. Was ist deine tägliche Arbeit? Gebraucht sie Zusammenarbeit in Team (zum Entscheiden) und viel Interpretation (im Gegenteil zur Routine)?

Röntgenbilder interpretieren und Untersuchungen durchführen.
Kaum Teamarbeit (höchstens, daß man mal wen fragt)

3. Wie geht der Oberarzt mit dir und deinen Kollegen um?

Er kontrolliert die ganze Zeit was man tut und ob man was tut, wieviele Bilder noch da sind. Er zeigt einem manchmal auch was, aber meistens geht es um organisatorische Dinge.

4. Wie müßte die Beziehung zwischen dem Vorgesetzten und dir sein? Wie müßte das Spital geführt werden, damit es deiner Meinung nach gut läuft? (Wo ist mehr Autonomie gebraucht?)

Vorgesetzte sollten dem Untergebenen in fachlichen Dingen beistehen und sie ausbilden. Entscheidungen sollten schon gemeinsam diskutiert werden. Sobald jemand jedoch eine Aufgabe alleine lösen kann, sollte man sie auch alleine und autonom durchführen. Damit alles gut läuft müßte halt jeder einen kleinen Bereich unter sich haben, für den er auch die Verantwortung über hat. Die Menge der Arbeit sollte auch angemessen sein.

5. Wie reagieren deine Kollegen auf dem Führungsstil vom Vorgesetzten?

Mit Kündigung, andere mit Opportunismus, wieder andere setzen sich ab und arbeiten fast nichts mehr.

6. Woran sieht man, dass das Spital herunterkommt? Was ist vernachlässigt? Wie fleißig arbeiten deine Kollegen bzw. arbeitest du?

An den Geräten. Gewisse Dinge werden nicht geputzt. Viele Angestellten melden sich krank. Arbeit wird an andere weitergeschoben. Ich wundere mich aber fast noch, wie gut es funktioniert.

7. Entsteht ein Risiko für die Patienten?

Ja durch nicht funktionierende Geräte, durch Befunde die zu schnell und zu schlampig gemacht wurden.

4.1.2. Summary of the interview

The interview gives important information relative to the dimensions used for the Management Compass.

Question 2 is about the complexity of the work process. Stefan says that the work process requires interpretation and hardly requires team work. It means that the work process is at the bottom right side of the Accenture matrix, or $C = 2$.

Question 3 is about the perceptions of the management style. It clearly appears that the superior is too autocratic. He is always controlling what the trainees are doing. He does not trust them at all, even for very basic tasks. Hence, $P = 1$.

Questions 4 and 5 are about the aspirations for autonomy. In the hospital, trainees have two distinct types of reaction.

The first type (type 1) of trainees is opposed to the management (some of the trainees have already left the hospital): it means that $A > P$.

The second type (type 2) of trainees has adjusted to the conditions at work. Trainees have given up their aspirations. They wait for instructions. They hardly seem to work. In that case, $A = P = 1$.

Question 6 gives examples of mindset that can occur when A and P are not matching. Absenteeism is high: people report themselves sick. Work is not executed properly: some instruments or machines are not cleaned.

It is known that nosocomial infections can come from neglecting such things. It results a risk for patients, which is pointed out question 7. An additional source of risk for the patients comes from a too quick analysis of their results.

4.1.3. Mapping mindset and the gap

Figure 28 displays the issue in the radiology service of the hospital. Perceptions

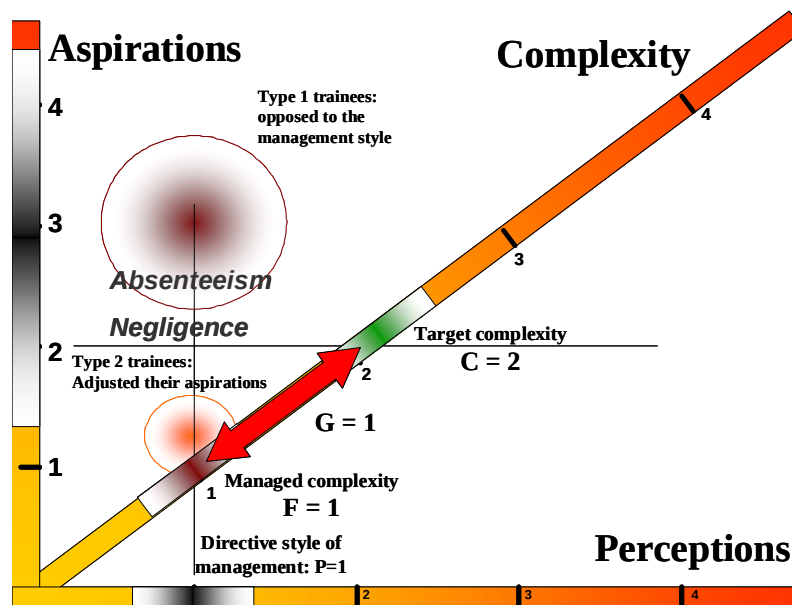


Figure 28 – mindset map relative to the trainees' issue

are set to $P = 1$ (directive style of management). Aspirations are divided in two groups: type 1 trainees are opposed to the management. They are represented in a deep red circle. Type 2 trainees lowered their aspirations to the management style level. They are represented in an orange circle. Target complexity is $C = 2$ (expert process). Managed complexity is $F = 1$, which creates a gap $G = 1$.

We can notice here that the gap indicates an issue and thus a cost or a loss of opportunity that would not be made visible otherwise. Therefore, it is worth looking at mindset in non-profit organisations: the aim is not to get the best performance out of human resources, but it is to detect such issues in order to avoid annoying, sometimes tragic, consequences.

Estimate of the dissipation by the table in figure 16: dissipation should be close to 5% ($C=2$ and $0.5 < G < 1.5$) of the work process value.

4.2. Government forms and country leadership

The organisation is a universal entity. Whatever the organisation is, interactions between its members matter. An administration is an organisation. To a certain extent, a country can be considered being like an organisation as well, of which the members are the citizens and the leaders are the persons at the head of it. The following chapter will analyse the German situation.

4.2.1. Perceptions of autonomy and forms of government

The scale of perceptions can be adapted to the forms of government. To a certain extent, the government can be considered as the management team of the population. Therefore, the population's perception of autonomy authorized is linked to the form of government.

Despotism is a very directive form of government. It corresponds to the directive style of management, where $P = 1$.

Enlightened despotism can be considered as a less directive style, but would still correspond to perceptions where $1 \leq P < 2$.

Democracy implies consultation of the population, that is at least a consultative management style, where $P = 2$.

Some countries like Switzerland are “very” democratic, in a sense that the population is strongly involved into the political life. In that case, perceptions can be set as follow: $2 \leq P \leq 3$.

Higher levels of authorized autonomy are not encountered in the world. Thomas More in his book “Utopia” and Karl Marx thought of ideal societies, in which several aspects provide more autonomy to the population.

4.2.2. The case of Germany

It is interesting to analyze the main differences between citizens in Europe. Basically, we can split the Europeans in two subpopulations.

In Western Europe, countries are in similar situations: stable democratic systems have been established for more than 50 years. The standard of living is similar, social and health care are provided. Therefore, most people have high needs according to the scale of Maslow. It corresponds to $2 \leq A \leq 3$.

In Eastern Europe, most countries emerge out of a half-century of despotism. This economic and political system left many traces. Totalitarian political systems drop the needs of the citizens. It corresponds to $1 \leq A \leq 2$.

The length of dictatorship plays a significant role in the level of aspirations. Indeed, two years of dictatorship do not have the same effect on the population as

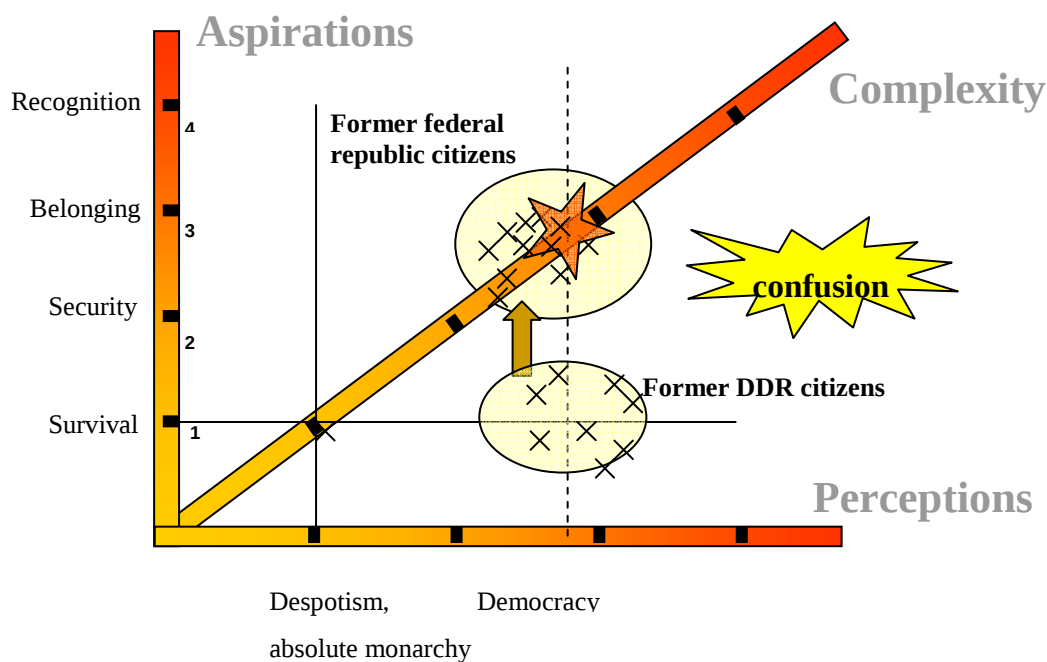


Figure 29 – the German case

fifty years. Fifty years approximately correspond to two generation. It is the time during which a population can forget the meaning of ancient values like autonomy or freedom.

Analyzing the German case is quite interesting, since both subpopulations live under the same form of government (figure 29).

The figure suggests that the former GDR citizens in Germany are likely to live in confusion and do not act with autonomy at work.

What was the situation before the fall of the communist system?

In the GDR, individuals had aspirations $A = 1$ and perceptions $P = 1$, which means that the managed complexity was $F = 1$. A low managed complexity also means low productivity, since most of the industrial work processes require $C = F = 3$.

In the FRG, individuals had aspirations $A = 3$ and perceptions close to $P = 3$. It is the good match.

After the fall of the communist system, the Westerners moved over their plants, machines, work processes and managers. However, the Easterners' aspirations did not move up from $A = 1$ to $A = 3$ within a few years after 50 years of despotism. This situation led to confusion, as shown on figure 29, and is characterized by the rather low development in the former GDR in the last two decades.

Conclusion

We have shown the importance of the management of people to enhance the performance of the organisation. The mindset component plays a determinant role, which is underscored by the model of the Management Compass.

Assuming that the factors of production are optimally allocated, the prosperity of the organisation is ensured if two conditions on satisfaction and performance of the organisation members are met.

Our present economic models are not optimal: the many economic or financial crises are the proof that some factors remain uncontrolled or unobserved. The model of the Management Compass opens new ways of thinking the economy: thinking it with the human factor. It constitutes an important indicator for satisfaction, motivation and performance that can help organisation leaders to make better and wiser policy.

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Annexes

Complexity Assessment – C

The questionnaire below is only partially shown. It is confidential.

C = complexity of current work process in its ideal lay out

The work process must be described by

- Its name from the quality handbook
- Its average economic value added
- Its people
- Its duration
- Its inputs
- Its outputs
- Its stability in time
- Occurrence in the company + any other characteristics

Description of the process	Yes or no	Impacts
Is work performed independently by individuals?		1. Y
Does the process require simultaneous action of several employees?		2. Y
Is a good work atmosphere a must for a proper process roll out?		3. Y
Is a global view of the work process a must to be able to perform?		4. X
Is preparation work fully described by instructions?		5. X
Is work repetitive?		6. X
Is it thinkable for the individual to modify his approach by himself?		7. X
Is it better to have everyone aboard when work begins in the morning?		8. Y
Are judgment and interpretation required?		9. X
Does quality of work rely on precise rules to be followed accurately?		10. X

P23 activities

A partial list of the P23 activities is given below.

P23 consists in giving employees the perception of belonging (P=3) rather than simply the perception of being respected for their knowledge and expertise (P=2).

In order to establish perceptions at level “3” (P=3), belonging, one must first review current practices across all management activities in the department and in the company, in order to detect those which hinder such perception and drives them down (to P=2 or even P=1). Once this is done, the strategy for managers consists in adopting a participative management style in daily situations.

The Maslow scale

- 1 = survival**
- 2 = security**
- 3 = belonging**
- 4 = recognition**
- 5 = self realization**

In short, it means to take a participative approach to all issues – when it makes sense.

Hierarchy

At C=3, the perception of differences due to hierarchical status must be minimal. Do not maintain such differences like separate cafeteria, lift, parking, entrance, higher and lower floors, office sizes, company cars, office decoration. At C=4, there definitely may not be any difference perceptible, unless justified by the requirements of the function.

Communication

- Make sure top-down information meetings are kept short and happen seldom.
- Avoid long speeches by top managers
- Pay attention to the taxonomy when speaking about top managers and managers: “royal” related words introduce the sense of “dependence of a person” and destroy that of “belonging to a community”.
- Do not post a photograph of the owner or of the boss. It develops the sense of being invited by the person rather than coming “home” to work. Neither at the wall nor in brochures.

Sharing home work

Roll out: a one hour meeting, once a week or when necessary

Maximum four participants with the appropriate background

Steps:

- Presentation of one single current project by one of the participants
- Discussion of the points on which participants may have creative or practical suggestions.

- Rotate presenter

Benefits: learn to listen to colleagues and respect their non-expert opinion, get to know colleagues better, grows interpersonal relationship, hence global business group commitment. Learn to see own work from different angles. Leads to new ideas

Finding causes to current issues

Roll out: a two hours meeting, once a week or when necessary

Maximum four participants with the appropriate background

Steps:

- Brainstorming causes and comparing results: participants have to listen to their colleagues, ask clarifying questions, listen to answers
- Priority ranking: participants have to agree on the prioritisation method: define key factors, agree on their evaluation, on indicators
- Presentation to the boss

Benefits: learn to listen to colleagues, get to know colleagues better, grows interpersonal relationship, hence global business group commitment.

Directed exploration

Management forms a quality circle, mixing on purpose all expertises and selects the topic.

Roll out: a two hours meeting with maximum four participants.

Presentation to managers

Managers must comment, i.e. say what they want to do with the results.

Benefit: grows interpersonal relationship and global business group commitment. It leads to new ideas. It displays confidence.

Contests in various forms

They may include family members.

Benefit: get to know one another better

Project role playing

Comes after « Home work sharing »

Roll out: a 2-4 hours meeting, when appropriate

Maximum six participants with the appropriate background

Steps

- The presentation of the case is done by the owner of the project. All other participants had the chance to read the case, an actual business case.
- Participants take the roles that exist in real life. The owner of the project must keep his own role. The task must be to run a meeting, address questions and objections that the various players will rise.
- Rotate the project owner

Benefits: learn to listen to colleagues and respect their non-expert opinion, grows interpersonal relationship and global business group commitment. It should help anticipating the real thing at the client.

Howell's posters

Directors inform their people regularly about the content of the important meetings they will have in the coming month(s).

An artist attends these meetings and illustrates with drawings what directors are

saying. The drawing is loaded on the company intranet and is available to all employees immediately at the end of the directors' meeting.

Benefit: the outcome of important meetings is known by everyone within minutes, no rumours. Keeping employees up dated in real time (like TV does) reinforces the sense of belonging.

Brainstorming

It helps people getting together, working together, and interacting.

Brainstorming is a creative problem solving technique that promotes plentiful ideas in an atmosphere free from criticism with enthusiastic participation.

It can be included in a few of the descriptions above.

It may apply mind mapping tools and other techniques.

Never to be done if participants are under time pressure: the requirements of such work is then perceived to be too far from a direct value adding activity and may be perceived as being in the way of one's own performance. "Belonging" would all of a sudden be perceived negatively.

Office decoration - 1

Express the intention to make the office look beautiful.

Make this topic become the subject of a quality circle: "how to go about it?"

Benefits: create a discussion on a topic that anyone can share. If C=3 is the target, the boss decides what needs to be done with conclusions. If C=4 is the target, the team decides what to do. People who care for their work environment care for their work itself.

Office decoration - 2

Make the office look beautiful is a different option from above. The money has been spent; the decoration style is in line across the company.

Benefits: people who like their work environment care for their work itself. The perception of the work environment comes first. What the work really is comes later.

Open offices

Easy access, easy overview: maximum height of sight obstacles: 1.7 m.

Personalization possible, no size limitation

Everyone gets what he needs; no luxury furniture for the boss, no unnecessary distinction.

Acoustic protection for comfort and convenience is a must (ceilings / walls)

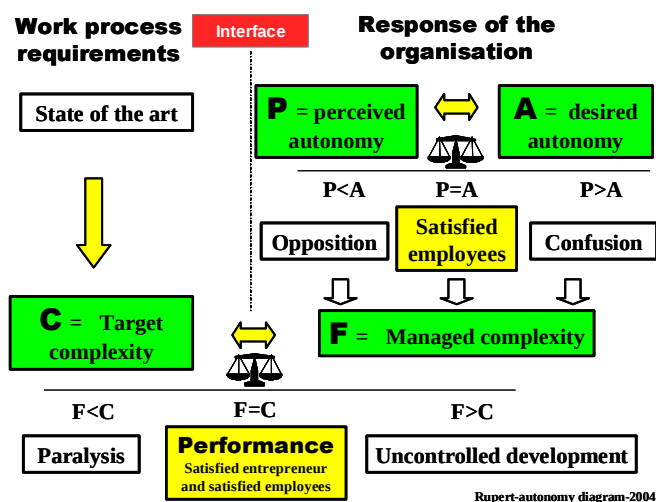
Small offices for special work (confidentiality or concentration) must remain available.

Benefits: learn to accept intrusion; learn to respect a working attitude, eases contacts. Large room open offices enable easy & informal communication across all team members, including the boss.

Summary in German

Konosuke Matsushita⁴⁵ sagte 1988 bei einem Vortrag vor amerikanischen Manager: „We will win and you will lose. You cannot do anything about it because your failure is an internal disease. Your companies are based on Taylor's principles. Worse, your heads are taylorized too. You firmly believe that sound management means executives on one side and workers on the other, on one side men who think and on the other side men who can only work. For you, management is the art of smoothly transferring the executives' ideas to the workers' hands.“

Diese vernichtende Kritik der westlichen Denkweise hätte zu Erörterungen bzw. Änderungen führen können. Aber das ist nicht der Fall gewesen. Zwanzig Jahre nach diesem Spruch arbeiten die Manager gleich wie zuvor und unser Kapitalismus wird immer unfairer. Warum? Wahrscheinlich, weil die Ursache unserer Probleme immer noch unklar ist.



Das Ziel von dieser Diplomarbeit ist es, den Einfluss des Human Resource Managements (bestehend aus „human capital“ und „social capital“) auf die Leistung der Organisationen besser verständlich zu machen.

Daher stellen wir ein neues empirisches Modell vor, „The Management Compass“. In diesem Modell geht es darum, den Humanfaktor in die Wertschöpfungskette zu integrieren: aus psychologischen Dimensionen kommt man auf das Ökonomische.

Im Modell bilden Leistung der Organisation und Zufriedenheit der Organisationsmitglieder kein paradoxes Paar. Das beste Ergebnis erreicht man, wenn die verwaltete Komplexität der optimalen Komplexität des Arbeitsprozesses entspricht (1).

Die optimale Komplexität hängt von den Voraussetzungen des Prozesses ab. Die verwaltete Komplexität entsteht aus dem Gleichgewicht zwischen angestrebte

⁴⁵ Japanischer Industrieller, Gründer von Matsushita Electric Company (1894 – 1989)

Autonomie und der Wahrnehmung vom Management zugestander Autonomie. Wenn die Anstreben mit den Wahrnehmungen ubereinstimmen, sind die Organisationsmitglieder am zufriedensten (2).

Wenn beide Bedingungen (1) und (2) zutreffen, sind die drei Dimensionen angepasst (siehe Abbildung).

Die Diplomarbeit befasst sich mit dem Konzept des *Management Compass* und untersucht einen konkreten Fall.

Das wichtige Ergebnis der Analyse ist die bedeutende Rolle der inneren Einstellung der Organisationsmitglieder, eines Ursprungs des Humanfaktors, im Wertschöpfungsverfahren.■

Summary in English

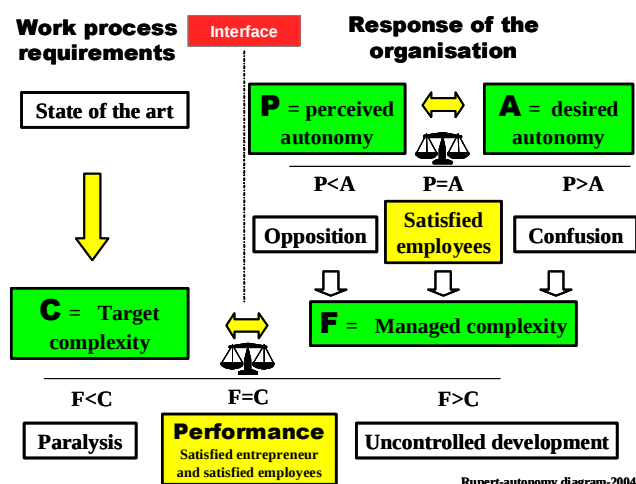
Konosuke Matsushita⁴⁶ said in a speech to US Managers in 1988: “We will win and you will lose. You cannot do anything about it because your failure is an internal disease. Your companies are based on Taylor’s principles. Worse, your heads are taylorized too. You firmly believe that sound management means executives on one side and workers on the other, on one side men who think and on the other side men who can only work. For you, management is the art of smoothly transferring the executives’ ideas to the workers’ hands.”

This critique of the occidental way of thinking could have put into gear discussions and changes, but it did not. Twenty years after these words, managers make the same mistakes and capitalism has become even more unfair. Why? Probably because the source of the problem is still not clear.

The aim of this master thesis is to better understand how the Human Resource Management (including both human capital and social capital) impacts the performance of the organisation. In order to find out, we present a new empirical model called “The Management Compass”. This model deals with psychological dimensions and builds a bridge between psychology and economy, which make it possible to integrate human factor in the equation of creation of value. It tells us that coupling performance of the organisation and satisfaction of its members is not a paradox.

Best performance is reached when managed complexity and optimal complexity are equal (1).

Optimal complexity relates to work process requirements. Managed complexity is the outcome of the balance between aspirations for autonomy and perceptions of granted autonomy. If both, perceptions and aspirations are matching, people are best satisfied (2).



When both conditions (1) and (2) are met, the three dimensions match.

⁴⁶ Japanese industrialist, founder of the Matsushita Electric (1894 – 1989)

The thesis goes through the theoretical concept of the Management Compass and then deals with a concrete case.

The major outcome of the analysis is the significant role that plays mindset, one of the origins to human factor, in the process of creating value.■

CV

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09/2006 - present	University of Vienna. Preparation of a Master degree in Economics. (VWL)
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09/2002 - 06/2004	Undergraduate studies in Economics at the University of Lyon 2
06/2002	French Baccalauréat (A Level equivalent) in Mathematics, Physics and Economics

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09/2006 – present	Contract of service with Eli Lilly, Marketing Dpt., Vienna
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IT SKILLS

Microsoft Office Package (Word, Excel, PowerPoint)

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French: mother tongue

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