Garoui Nassreddine

University of Sfax, Higher Institute of Business Administration,
Road of Mharza Km 1,5- B.P: 1164- 3018 Sfax, Tunisia
e-mail: garoui.nassreddine@yahoo.fr
Doctor in Finance and Accounting Methods, Assoc. Prof. in Finance and Accounting Methods
(ISIGK) Faculty of Economics and Management

Jarboui Anis

University of Sfax, Higher Institute of Business Administration,
Road of Mharza Km 1,5- B.P: 1164- 3018 Sfax, Tunisia
e-mail: anisjarboui@yahoo.fr
Faculty of Economics and Management

COGNITIVE GOVERNANCE.
COGNITIVE MAPPING AND COGNITIVE CONFLICTS.
STRUCTURAL ANALYSIS WITH THE MICMAC METHOD

Abstract. This research aims to achieve a better understanding of the modes of conceptualization and thinking on issues of governance. It is part of a cognitive approach, to our knowledge unprecedented. This research has shown that the mapping concepts of governance can provide the original performance and meaningful. The purpose was to plot the thought of governance actors in the form of a cognitive map and analyze it. The results highlighted the relative importance of the concepts they used, the dimensions from which they structured more or less consciously here own thoughts, the nature and characteristics of the concepts they considered primarily as an explanation or consequences (or both).They allowed characterizing very special or very precise structure and content of the thought of these actors. The construction of collective cognitive maps is to help structure the relationship between governance actors in the sense that it will detect the conflict relations of cognitive order. The cognitive map is by definition a representation of mental models of actors on any topic. Actors of governance have not the same definitions of the concepts of governance that represents for us a sort of cognitive conflict and hence through cognitive mapping can map the concentration of these conflicts and we are still looking for more to show the effectiveness governance mechanisms to resolve these conflicts.
Keywords: cognitive map, governance cognitive, cognitive conflicts.

Introduction. Cognitive theories based on a radically different vision of the process of creating value in that they lead to give a strong focus on building skills and capacity of firms to innovate, to create their investment opportunities and to change their environment. The main problem is not one of balancing interests, but much more than the qualitative coordination, alignment and patterns of cognitive models of anticipation. The cognitive argument used in different ways, either as a means to facilitate coordination and reduce the costs of conflict - which also have a cognitive character - either as a mode of invention of new productive opportunities.

As a corollary, the key to performance in these approaches is more in the ability of management to think, perceive and build new opportunities (Prahalad 1994, Lazonick and O'Sullivan 1998, 2000) and in the restructuring or reconfiguring portfolios activities of firms in response to changes in the environment.

As stated in Hodgson (1998), the firm is not only an organizational response to informational problems; it is mainly a repository of knowledge. Value creation depends on a priority of the identity and competencies of the firm, conceived as a coherent whole (Teece et al, 1994), which would derive its specificity and its ability to create knowledge and thus to be profitable on a sustainable basis. Work on the firm's innovative Lazonik and O'Sullivan (2000) represent one of the best examples of current attempts that seek to jointly consider the conflicting and cognitive aspects.

In a governance perspective cognitive analysis of the cognitive world of an actor is important. Examine the cognitive universe of a subject in relation to an object is of particular interest to the expert, "bearing the reference"of the subject, is better equipped to understand, explain, advise, act and even anticipate (depending on whether the The expert is a researcher and / or consultant, etc.).

Whatever the forces that drive an individual, it tends to anticipate, connecting factors (components, events, beliefs, actors etc...). More broadly cognitive mapping is a methodological tool for collecting data for researchers wishing to access the subject's representations that he met and interviewed. It is our tool, which is to be included in a broader methodology, we seek to legitimize their use.

I-Cognitive mapping and governance.

Cognitive map is a graphic illustration of the mental representation that the researcher is "a set of discursive representations set out a story from his own cognitive representations, about of a particular object. In this sense, it is an image formed of both concepts or constructed, and linkages or causal relationships linking these concepts or built them. It is true that a concept only makes sense in context, that is to say linked to other concepts. This leads to a network, some properties could not be updated otherwise, such as loops, or the centrality of concepts.

If construction of cognitive maps is usually after an interview process (s) with one person (individual card) or more (cards group), other contexts of use are possible and may be based on the exploitation textual data. For now, the results obtained in terms of mapping items are a state of advanced theory of governance. This condition leads to a few remarks about key concepts and relationships that seem to unite them.

Work COSSETTE (2003 and 2008) focused on the development of collective cognitive maps composites from a number of individual cognitive maps using the grid of free exploration. It presents a systematic methodology for decision support based on cognitive mapping to produce a network of concepts (concerns) deemed important by the leader for the future of his organization. We will retain this notion of concept is the basic unit of cognitive mapping in the proposed approach.

Drawing on the biological sciences, Alain Berthoz (2009) proposes the concept of "Simplexity" which expresses the simple nature of rapid and simple appearance of complex phenomena such as biological mechanisms (neural mechanisms that develop rapid responses to analysis of complex situations, for example: a reaction while driving, another example would be the adaptive response of living organisms face the complex changes in the environment encouraging the selection of information, etc.).. Even if an answer or solution may seem simple, it remains deeply complex and multifaceted, but a learning process can shorten the reaction time. Thus, cognitive mapping is an adventure into the maze of thought.

It is a singular discovery (concepts) and the discovery of the overall system (Figure drawn by the ties of influences). It is also a learning process for producing more appropriate solutions and faster (more simplexes).

I-1 Format of thought

According to Fiol and Huff (1992), developing a cognitive map helps clarify a confused idea. Indeed, an effort structuring of thought is required, leading to a clarification of the problem. The construction of the card helps the individual to question, to clarify its own representations (Klein and Cooper 1982, Maheshwari and Boland 1995). According to this function, cognitive mapping, not only models a representation, but acts on this representation structure, and therefore the clarification.

I-2 Aide Decision

The development of a cognitive map allows considering ways of possible actions to find the path that will lead to desired end point (Fiol and Huff 1992). The cognitive map can be considered a model designed to include the path by which an individual will find a solution to a problem. In this case, the cognitive map does not represent a general model of the mind of the individual. It is not a simulation model of decision making (Eden 1989) but can be categorized as tools for decision support. Eden said that sometimes the card allows the decision maker to find solutions that may seem obvious to any person other than the principal party. For that the solution (s) emerges and become "obvious" in the eyes of the maker, the speaker (Eden intervenes often in companies as a consultant) can induce her to alter her view of the problem.

I-3 Communication

The development of a cognitive map facilitates the transmission of ideas between different makers. It may then become a tool for communication and negotiation (Eden and Simpson 1989, Laukkanen 1990, Fiol and Huff 1992). The card can even "explain" (in the sense of identifying and locating) the problems of communication between individuals. The development of a map in a collective group can also raise awareness to certain members of the group that what is obvious to them is not necessarily for others (Eden and Simpson 1989). In this sense, the tool is with the explanation therefore communication.

I-4 Passage of practical consciousness to discursive consciousness

"... The cognitive mapping facilitates the passage of the practical consciousness to discursive consciousness and, therefore, review by a subject of what he takes for granted the" self-evident "that governs a very many of its daily practices. As highlighted in this passage, cognitive mapping can facilitate the articulation of discursive representations on the daily practices of an individual. These practices seem so "obvious" to the subject, they are so integrated that it makes more in the everyday, discursive representations on them. When the speaker asked his thoughts on the subject, after some effort, he managed to articulate those "silent". This process of "externalization" (Nonaka 1994), or "formalization" (Reix 1995), which is to move from tacit to explicit, is interesting in that the subject "may be rooted more in these ideas "sees" the change and debate. Cognitive mapping offers him the opportunity to increase its pool of knowledge by tapping into its discursive practical knowledge that the cognitive map is partially updated.

I-5 Prévision behavior

Eden (1992) notes that researchers in management arise generally assumed (explicitly or implicitly) that the map describes and predicts behavior. Then there is a link between thought that would be represented by the map and the observed behavior, and a link between thought represented by the card and future behavior. Distinguish ourselves through these functions that the instrument is effective in visualizing the problem in our input is cognitive conflicts in corporate governance.

I-6 Strategic planning

Research Chakib ZOUAGHI, Dorothy May 2010 Boccanfuso allowed to test a strategic planning approach using cognitive mapping in a collective context of participatory management strategy ISWM Integrated Solid Waste in a developing country. This method "thinkShop" can quickly lead to a consensus around the strategy produced in a situation of complex decision-making where many actors are involved simultaneously. The testing method provides an operational response in the highly complex and sustainable development would largely meet any complex context of a varied nature (organizational, economic, financial, social, security, etc.).. In future

research, and with the emergence of new economic theories as heterodox theory Coordination (Favereau, 1989), it might well be other cases tested and lead to a real alternative or complement to current methods of strategic planning.

The explanation of the relationship between cognitive mapping cognitive and governance can be summarized in a process that will be more detailed in the empirical part. The approach is organized into several phases described below.

II-Empirical study: results and discussion.

Introduction. Because of its exploratory nature, this research was limited to four cases. Our goal, in fact, is mainly to see the cognitive conflicts in concepts of governance between actors.

Methods of data collection for the construction of cognitive maps.

The methods used to collect and link the concepts of a cognitive map, whether individual or collective, are many and varied. The variety depends to a large extent on the position more or less explicit the researcher or consultant on the epistemological level. See this more closely, beginning with a brief description of the methods most used to date.

Observation method.

This is from a participant observer said that Bougon et al. (1977) have determined the variables considered important by members of the Utrecht Jazz Orchestra. In this classic research, the authors unfortunately do not have many details on how they came to remember 17 variables and not to retain the variables considered too personal to draw the map of this collective group.

Questionnaire method.

This technique has mainly been used until now to make connections that exist between concepts previously determined (eg, following a review of the literature in a particular field). Thus, in research Bougon et al. (1977), Ford and Hegarty (1984) and Swan and Newell (1998), each person was asked to rule, usually from a matrix prepared for this purpose, the existence a direct link uniting influence each of the concepts to each other. When the objective is to make a collective map, a link is listed when a significant number of subjects stated that there is one.

Interview technique.

The depth interview is generally intended to determine from which concepts an individual or group of individuals structure their reality and how they establish links between these concepts. The work of Eden and his collaborators (see, Eden and Ackermann, 1998) are typical of this approach.

Repertory grid technique.

This technique, derived from the theory of Personal Construct Kelly (1955), aims to show the constructs or dimensions (ie, concepts) from which everyone is a reality. It would be a bit long to describe this technique here. Include merely illustrative in that research conducted with senior executives of the banking sector, Reger (1990) were asked to consider various banks presented in groups of three and say how two of them were similar and how they differed from the third. This procedure allowed to determine their cognitive structure constructed, each with two poles (eg, targeting a national market, targeting a local market).

Documentary research method.

Written documents (archives, annual reports, scholarly literature, etc..) Have often been used (see, inter alia, Barr et al. 1992), including determining the important variables to consider in a particular field. For example, the study of Ford and Hegarty (1984) on 8 variables considered crucial in relation to the organizational structure and the Swan and Newell (1998) on the 13 important variables in the field of production in connection with innovation gave rise to interesting collective maps. There are other methods of cognitive mapping, including that of the Self-Q given by Bougon (1983), that of Visual Spell Card developed by Daniels et al. (1995) and that based on the use of a systematic exploration grid developed by Cossette (2001).

The sample.

Because of its exploratory nature, this research was limited to four cases. Our goal, in fact, is mainly to detect the points of divergence between the governance actors in concepts and build cognitive maps that visualize the concentration of each actor's thoughts on concepts considered as significant. In four cases, respondents are: an officer, shareholder and creditor.

Method of data collection.

The technique employed in our research is the questionnaire. We have used this technique to make connections that exist between concepts previously determined (following a review of the literature). Thus, in research Bougon et al. (1977), Ford and Hegarty (1984) and Swan and Newell (1998), each person was asked to rule, usually from a matrix prepared for this purpose, the existence a link to direct influences uniting each of the concepts to each other.

Material and method of structural analysis.

Preview of structural analysis method

The main objective of structural analysis is to identify the most important variables in determining the evolution of the system. Inspired by graph theory, structural analysis is based on the description of a system using a matrix linking all its components.

In weighing these relationships, the method highlights the key variables to changing the system. As a tool, we opted for the software "MICMAC (cross-impact matrices, Multiplication Applied to a Classification) developed by Mr. BUCKET. The first step of the method MICMAC is to identify all the variables characterizing the system under study.

The second step involves the linking of variables by constructing the matrix of direct influence and potential. Indeed, this approach is supported by the fact that in a systemic approach, a variable exists by its network of relationships with other variables. The construction of the matrix by a system of "scoring" was undertaken by assigning the value 1 if a relationship exists and the value 0 in case of absence.

The consolidated matrix was subsequently subjected to the validation of those resources listed above whose aim was to assess the vraisemblabilité of weightings. It is from this matrix what has identified the key variables. Indeed, we obtain the direct ranking by the sum of row and column. If the total online links shows the importance of the influence of one variable on the whole system (direct motor level), total column shows the dependence of a variable (level of direct dependence). (Weight of each construct $W = W' + W''$ with W': sum of lines and W'': total columns). Ranking indirect cons can detect hidden variables through a matrix multiplication program applied to indirect classification. "This program allows us to study the distribution of impacts by paths and feedback loops, and therefore to prioritize the variables in order of influence."

Input data.

Presentation variables.

List of variables

1. Strategy (str)
2. Earnings (ear)
3. Control (cont)
4. Decision (dec)
5. Objective (obj)
6. Investment (inv)
7. Performance (per)
8. Asymmetry (asy)
9. Value (val)
10. Sharing (shar)
11. Power (po)
12. Ownership Structure (os)
13. Behavior (beh)
14. Interest (int)
15. Risk (ris)
16. Return (ret)

The input matrices.

The third step was to compile a matrix of direct influence between these variables in a scoring session. Matrix Direct Influences (MID) which describes the relations of direct influences

between the variables defining the system and the Matrix of Direct Influences Potential MIDP represents the influences and dependencies between current and potential variables.

Matrix of Direct Influences (MID)

Matrix Direct Influences (MID) describes the direct influences relationships between the variables defining the system.

Table 1

Matrix of Direct Influences (MID)

	str	ear	cont	dec	obj	inv	per	asy	val	shar	po	os	beh	int	ris	ret
str	0	0	0	0	0	1	0	2	0	0	0	1	1	1	0	1
ear	0	0	1	0	3	2	1	1	1	0	3	2	0	0	0	0
cont	0	0	0	0	1	1	0	1	0	0	0	3	0	2	0	0
dec	0	1	2	0	1	0	3	0	1	0	2	0	1	0	0	0
obj	1	0	2	0	0	0	3	0	0	3	0	1	0	0	0	0
inv	2	0	0	1	0	0	2	0	0	0	0	0	1	0	1	0
per	1	0	1	0	0	0	0	0	0	0	2	2	1	3	0	0
asy	0	0	3	0	0	0	1	0	2	0	0	0	0	0	0	0
val	1	0	0	3	0	0	1	0	0	0	0	2	0	0	0	0
shar	3	0	3	0	0	0	3	0	2	0	0	3	0	1	0	0
po	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
os	0	0	0	3	0	3	0	0	3	0	1	0	2	0	0	0
beh	1	2	3	2	1	0	0	0	0	1	0	0	0	0	0	0
int	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
ris	0	0	3	2	0	1	0	3	0	1	0	0	0	0	0	0
ret	1	0	0	0	2	1	0	1	0	0	1	3	1	0	0	0

The influences are scored from 0 to 3, with the ability to report potential influences:
0: No influence
1: Low
2: Average
3: Strong
P: Potential

Matrix of Direct Influences Potential (MIDP).

The Matrix of Direct Influences Potential MIDP represents the influences and current and potential dependencies between variables. It complements the matrix MID also taking into account possible relationships in the future.

Table 2

Matrix of Direct Influences Potential (MIDP)

	str	ear	cont	dec	obj	inv	per	asy	val	shar	po	os	beh	int	ris	ret
str	0	0	0	0	0	1	0	2	0	0	0	0	1	1	1	0	1
ear	0	0	1	0	3	2	1	1	1	0	3	2	0	0	0	0
cont	0	0	0	0	1	1	0	1	0	0	0	3	0	2	0	0
dec	0	1	2	0	1	0	3	0	1	0	2	0	1	0	0	0
obj	1	0	2	0	0	0	3	0	0	3	0	1	0	0	0	0
inv	2	0	0	1	0	0	2	0	0	0	0	0	1	0	1	0
per	1	0	1	0	0	0	0	0	0	0	2	2	1	3	0	0
asy	0	0	3	0	0	0	1	0	2	0	0	0	0	0	0	0
val	1	0	0	3	0	0	1	0	0	0	0	2	0	0	0	0
shar	3	0	3	0	0	0	3	0	2	0	0	3	0	1	0	0

po	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
os	0	0	0	3	0	3	0	0	3	0	1	0	2	0	0	0
beh	1	2	3	2	1	0	0	0	0	1	0	0	0	0	0	0
int	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
ris	0	0	3	2	0	1	0	3	0	1	0	0	0	0	0	0
ret	1	0	0	0	2	1	0	1	0	0	1	3	1	0	0	0

The results of the study.
Direct influences
Features MID

This table shows the number of 0, 1, 2, 3, 4 matrix displays and filling ratio calculated as the ratio between the number of different MID values of 0 and the total number of elements of the matrix.

Table 3

Direct influences

INDICATOR	VALUE
Matrix size	16
Number of iterations	2
Number of zeros	175
Number of one	41
Number of two	20
Number of three	20
Number of P	0
Total	81
Fill Rate	**31,64063%**

Sommes rows and columns of MID

This table is used to learn about are the row and column of the matrix MID

Table 4

**Sommes rows and columns of MID**

N°	VARIABLE	TOTAL OF LINES	TOTAL OF COLUMNS
1	strategy	7	11
2	earnings	14	3
3	control	8	18
4	decision	11	11
5	objective	11	8
6	investment	7	9
7	performance	10	14
8	asymmetry	6	8
9	value	7	9
10	sharing	15	7
11	power	0	9
12	Ownership structure	12	17
13	behavior	10	7
14	interest	3	7
15	risq	10	1
16	return	10	2
	Totals	**141**	**141**

Weight of each concept $W = W' + W''$ with W': sum of lines and W'': Column totals

W1 = 7 +11= 18, W2 = 14 +3 = 17, W3 = 8+18 = 26, W4 = 11 +11 = 22, W5 = 11 +8 = 19, W6 = 7 +9 = 16, W7 = 10 +14 = 24, W8 = 6 +8 = 14, W9 = 7 +9= 16, W10=15+7=22, W11=0+9=9, W12=12+17=29, W13=10+7=17, W14=3+7=10, W15=10+1=11, W16=10+2=12
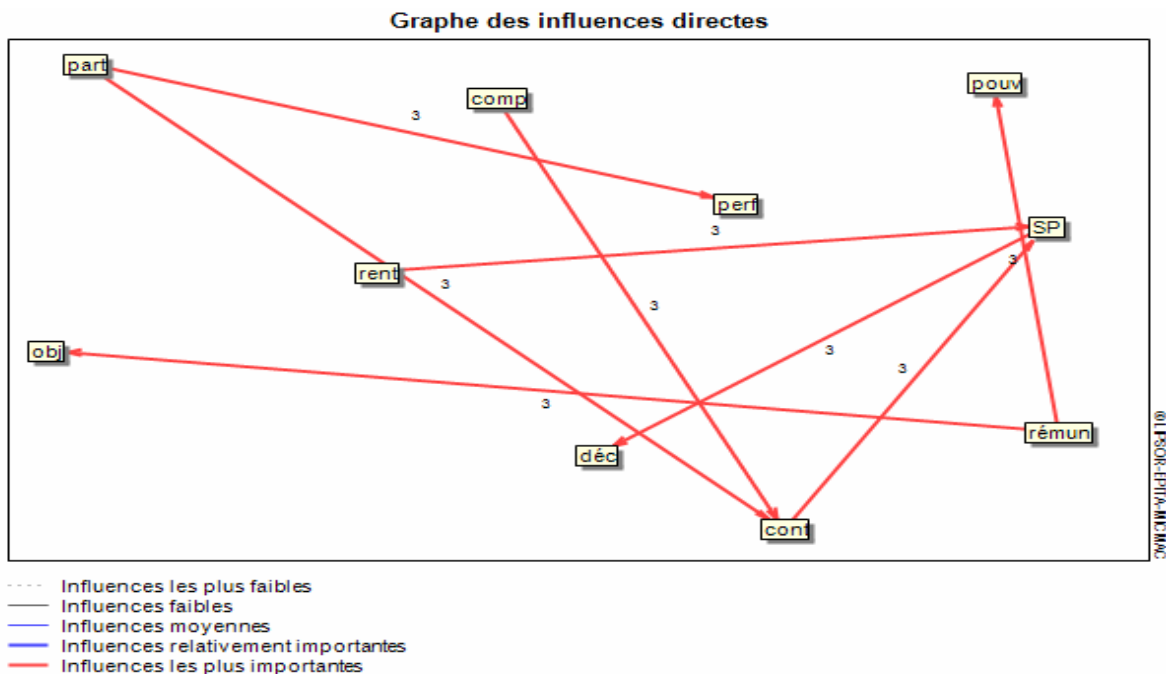
Plan influences / direct dependencies
This plan is determined from the matrix of direct influences MID.
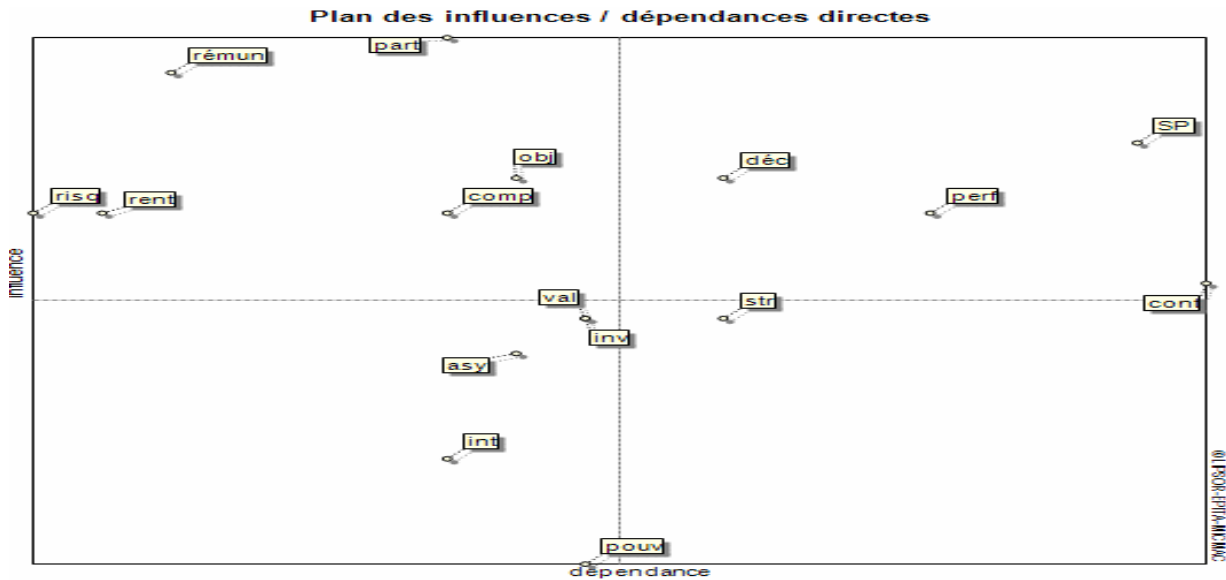
Plan des influences / dépendances directes

Graph of direct influences
This graph is determined from the matrix of direct influences MID.

Graphe des influences directes

- - - - Influences les plus faibles
——— Influences faibles
——— Influences moyennes
——— Influences relativement importantes
——— Influences les plus importantes

Potential direct influences.
Features of MIDP
This table shows the number of 0, 1, 2, 3, 4 matrix displays MIDP and the filling ratio calculated as the ratio between the number of different MID values of 0 and the total number of elements of the matrix.

Table 5

Potential direct influences

INDICATOR	VALUE
Matrix size	16
Number of iterations	2
Number of zeros	175
Number of one	41
Number of two	20
Number of three	20
Number of P	0
Total	81
Fill Rate	**31,64063%**

This table is used to learn about are the row and column of the matrix MIDP

Table 6

Row and column of the matrix MIDP

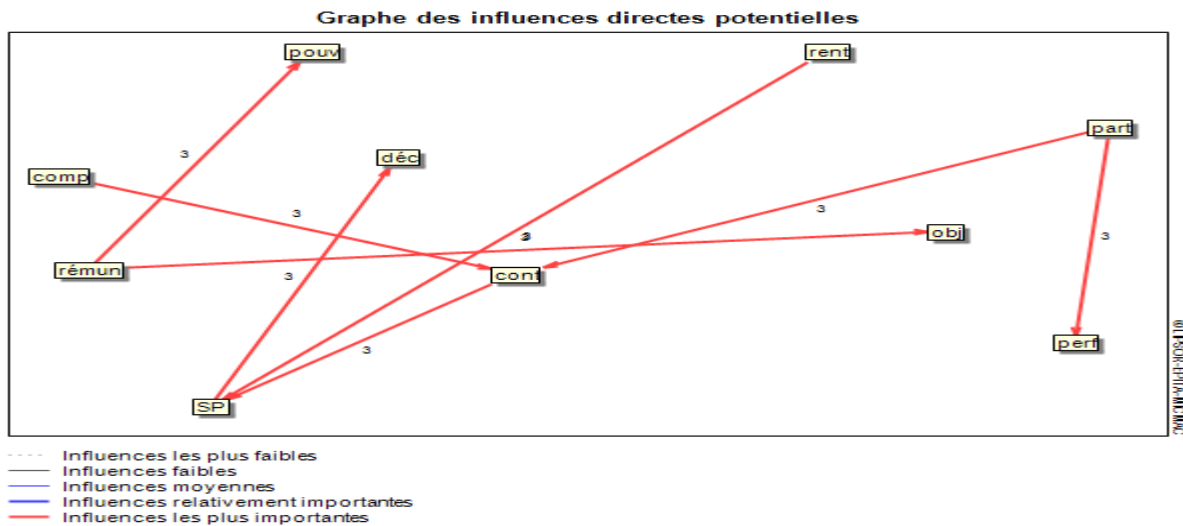| N°	VARIABLE	TOTAL OF LINES	TOTAL OF COLUMNS
1	strategy	7	11
2	earnings	14	3
3	control	8	18
4	decision	11	11
5	objective	11	8
6	investment	7	9
7	performance	10	14
8	asymmetry	6	8
9	value	7	9
10	sharing	15	7
11	power	0	9
12	Ownership structure	12	17
13	behavior	10	7
14	interest	3	7
15	risq	10	1
16	rturn	10	2
	Totals	**141**	**141**

Plan influences / potential direct dependencies.
This plan is determined from the matrix of potential direct influences MIDP.

Plan des influences / dépendances directes potentielles
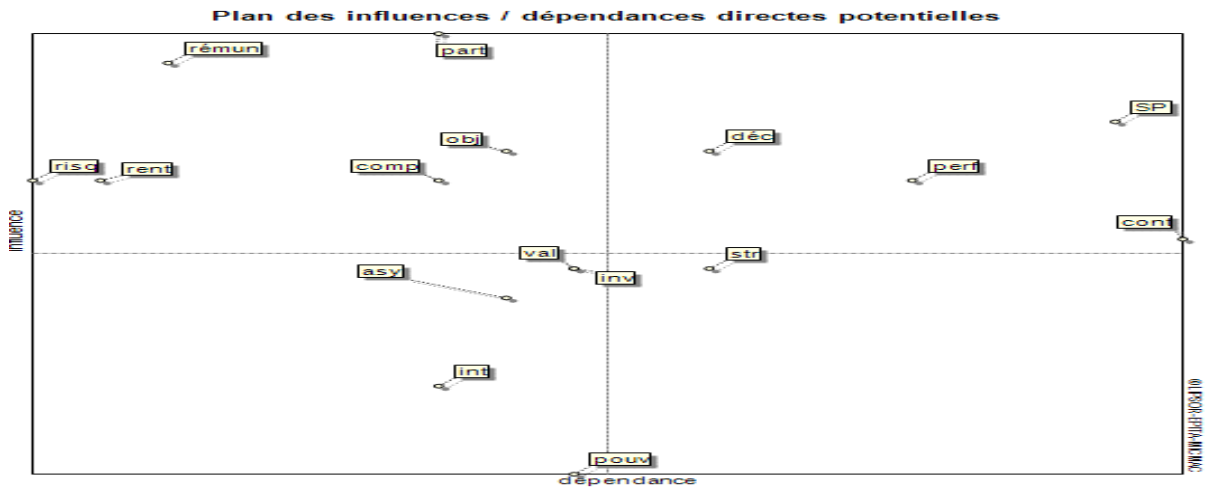
Graph of the potential direct influences

This graph is determined from the matrix of potential direct influences MIDP.

Graphe des influences directes potentielles

- .... Influences les plus faibles
- ———— Influences faibles
- ———— Influences moyennes
- ———— Influences relativement importantes
- ———— Influences les plus importantes

General synthesis.

Our research concerns the demonstration and display of the most central concepts that represent a source of conflict in the understanding of these concepts for the company stakeholders.

Discussion. Cognitive mapping has been shown the existence of a cognitive conflict in concepts of governance. Through the central loops of different cognitive maps, concepts central to the governance actors are different which explains well the differences in terms of understanding the same concepts of governance.The cognitive approach to which we subscribed, and the use of cognitive mapping we have tried especially helpful in that they allowed us to capture and present graphically the ideas of the respondents. They also allowed us to shed light on the details: the key concepts of conflict sources, it was probably difficult to be tackled with a different approach.So far there is no application of cognitive maps in the area of governance, but they have already demonstrated their performance in other areas. The field of governance can benefit from the use of cognitive maps to represent the key concepts of conflict sources and facilitate the resolution of these conflicts.

Conclusion. This research has shown that the mapping mechanisms and concepts of governance can provide the original performances and meaningful. The purpose of this research was to plot the thought of governance actors in the form of a cognitive map and analyze it using software Decision Explorer. The results highlighted the relative importance of the concepts they used, the dimensions from which they structured more or less consciously his own thoughts, the nature and characteristics of the concepts they considered primarily as an explanation or

consequences (or both). They allowed characterizing very special or very precise structure and content of the thought of these actors.

This research has shown that cognitive mapping is a tool that can help to analyze the sources of conflict cognitive concepts in theories of corporate governance. Of course, these concepts are better suited to the development and analysis of a cognitive map when they convey the ideas are clearly expressed as "explanations" or "consequences" of other concepts and in this respect must recognize that cognitive map does not make full justice to what someone in that only the link of influence is represented. However, most often, theorists (whether practitioners or not) seem to have spontaneously tend to think in terms of explanations and consequences, in the study of organizations, as noted by Weick and Bougon (1986), this trend seems self-evident, perhaps because the concept of organization suggests transforming inputs into outputs.

Cognitive mapping is a technique for modeling began to portray ideas, beliefs, values and attitudes of an individual as well as links that connect them in a format conducive to analysis (Eden, C. et al. 1983). It is a method allowing the researcher to approach the subject's representations that he questioned. The generic idea is to work on the cognitive universe of an individual and to plot a part of this universe in the form of a map showing the concepts discussed and their connection. Cognitive mapping allows us to study both the structure and content of graphic representations made. It can thus be interpreted as a form of content analysis but differs from the more common methods that quantitatively analyze fragments of texts by the fact that these are also the relations between cognitive elements that are studied (Huff AS, Fletch KE, 1990). Representations or beliefs of an individual by nature and are generally inaccessible directly approached by the speech of the individual. This echoes the first major structural bias of the tool. The speech of an individual may not be very coherent with his value system as the leaves suggest the phenomenon of cognitive dissonance. For this reason, certain precautions are necessary during the interviews.

As we conceive, a cognitive map is usually defined as a graphical model of a person's beliefs about a particular field. The content focuses on the cognitive map of beliefs and can approach the systems of beliefs. It focuses on beliefs and values and their causal relational structure (Axelrod R., 1976). Once a graphical model of cognition is attempted, we can speak of cognitive map. One of several comprehensive definitions describes it as "a graphical representation of the mental researcher is a set of discursive representations set out a story from his own cognitive representations, about a particular object. One of the fundamental aspects of cognitive approaches is to assert that individuals differ in their knowledge, this even if they have similar tasks or working same area. The goal of a cognitive map is "to describe a conscious perception of reality with enough detail to capture the idiosyncratic perceptions of the world that an individual" (Langfield-Smith KM, 1992, p. 350).

Limitations of the cognitive mapping technique. The graphic representation as a cognitive map has many benefits ... but it is not without difficulties and it raises many questions, which may reveal new avenues of research. Thus, assessing the relative importance of each concept from the number of links uniting more or less directly to other concepts is legitimate, but the exclusive use of a quantitative criterion for this purpose is not fully satisfactory. For example, a concept might be considered more "important" because it performs, depending on the subject, an influence on a factor considered crucial, or because his influence over another is seen as stronger or critical than that of another factor (Cossette and Audet, 1992).

REFERENCES
1. Axelrod R. *Structure of Decision: the Cognitive Maps of Political Elites*, Princeton University Press, 1976.
2. Barr, P. S., Stimpert J. L., Huff A. S. Cognitive Change, Strategic Action, and Organizational Renewal, Strategic *Management Journal*, 1992, Vol. 13 (Summer Special Issue), pp. 15-36.
3. Bougon, M. G. *Uncovering Cognitive Maps: The Self-Q Technique*, in G. Morgan (dir.), Beyond Method: Strategies for Social Research, Beverly Hills, CA: Sage, 1983, pp. 173-188.
4. Bougon, M. G., Weick K. E., Binkhorst D. Cognition in Organizations: An Analysis of the Utrecht Jazz Orchestra, *Administrative Science Quarterly*, 1977, Vol. 22 (4), pp. 606-639.

5. Cossette, P. A Systematic Method to Articulate Strategic Vision: An Illustration with a Small Business Owner Manager, *Journal of Enterprising Culture*, 2001, Vol. 9(2), pp. 173-199.
6. Cossette P., Audet M. Mapping of an idiosyncratic schema. *Journal of Management Studies*, 1992, Vol. 29(3), pp. 325-347.
7. Eden C., Jones S., Sims D. *Messing about in problems*, Oxford, Pergamon, 1983.
8. Eden, C., Ackermann F. Making Strategy: The Journey of Strategic Management, London, Sage, 1998.
9. Fiol C.M., Huff A.S. Maps for managers: Where are we? Where do we go from here?", *Journal of Management Studies*, 1992, Vol. 29, No. 3, pp. 267-285.
10. Ford J. D., Hegarty W. H. Decision Makers' Beliefs about the Causes and Effects of Structure: An Exploratory Study, *Academy of Management Journal*, 1984, Vol. 27(2), pp. 271-291.
11. Huff, A.S., V. Narapareddy, Fletcher K.E. Coding the causal association of concepts, 1990, p. 311-325.
12. Langfield-Smith K. Exploring the need for a shared cognitive map, *Journal of Management Studies*, 1992, Vol. 29, No. 3, may, pp. 349-368.
13. Langlois Richard N., Foss Nicolai J. Capabilities and Governance: The Rebirth of Production in the Theory of Economic Organization, *Kyklos*, Blackwell Publishing, 1999, Vol. 52(2), pp. 201-18.
14. Lazonick W., O'sullivan M. *Perspectives on Corporate Governance, Innovation and Economic Performance*, CGEP, Insead, 2000, June.
15. Nonaka I. Dynamic Theory of Organizational Knowledge Creation. *Organizational Science*, Vol. 5, No. 1, février 1994, pp. 14-37, pp. 606-639.
16. Reger, R. K. Managerial Thought Structures and Competitive Positioning, in A. S. Huff (dir.), *Mapping Strategic Thought*, Chichester: Wiley, 1990, pp. 89-108.
17. Swan, J. A., Newell S. Making Sense of Technological Innovation: The Political and Social Dynamics of Cognition, in C. Eden et J. C. Spender (dir.), *Managerial and Organizational Cognition*, London, Sage, 1998, pp. 108-129.
18. Teece, D. J., Pisano G. The dynamic capabilities of firms: An introduction, *Industrial and Corporate Change*, 1994, Vol. 3(3), pp. 537-556.