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## Strategizing a journal with PRP.

### How individual work becomes collective judgement.

Régine Teulier

PREG - CRG, Ecole polytechnique, 1 rue Descartes, 75005 Paris. [http://crg.polytechnique.fr/  
teulier@shs.polytechnique.fr](http://crg.polytechnique.fr/teulier@shs.polytechnique.fr)

#### Abstract

The paper focuses on micro-practices in use that permit simultaneously two strategizing processes. First that individual work becomes a collective and institutional position through processes participating to RIO in the PRP. Second that doing strategy day after day and making the core process evolve through the evolving set of micro-practices involve in the RIO. To argue about these two transformations, we study the micro-practices, processes and routines underlying the Peer Review Process and its practices over time while the issues are built, following general strategic aims. We adopt a practice-oriented perspective, which allows us to understand how routines are acted in social and individual activities. We use descriptive method but also knowledge engineering methods. These last ones are useful to describe knowledge processes; it focuses on task, a notion that may be compared to that one of routine. An empirical study allows us to light on day to day strategizing practices in the PRP, through a longitudinal study of an academic journal.

**Key words:** Strategizing, routines, micro- practices, peer review process, Knowledge engineering.

## Introduction

Strategy is something people do (Jarzabkowski, 2004). To observe and analyse strategizing is quite difficult, one promising way is to have interest for routines (Feldman, 2000) and micro-practices (Rouleau, 2005), (Jarzabkowski, 2003).

The « micro level » (Feldman, 2004) shows interest for processes which are not concerned by the whole organization, but that can be observed about a small part of its activity and some of the actors, in their day-to-day activity. This approach allows a synthesis view between « organizing » perspectives and « practice-based » ones. It uses the notions of routine and procedure that became well known in management science, for example, linked to the core competencies of the firm (Hamel et Prahalad, 1994). They are consistent with some theoretical foundations in economy through the evolutionary theory of economic change (Nelson et Winter, 1982).

We propose to use Feldman definitions (2000): « *Routines are temporal structures that are often used as a way of accomplishing organizational work.* » or more precisely « repeated patterns of behaviour that are bound by rules and customs and that do not change very much from one iteration to another » or (Feldman, 1995, p 6) « *repeated actions carried out by two or more interdependent actors* ». Thus, routines are defined as repeated procedures among the procedures that are the « *standard operating procedures* » allowing doing a task in the meaning of Cyert and March (1963).

The distinction between routines and procedures is then essentially due for Feldman to this feature of repeated action. Routines are that particular procedure: those, which are, repeated ones. That implies several consequences: there are the procedures which are applied without thinking to it, those which are call into question only border line and when problems occur, those which concretise the « path dependency » of the firm (Nelson et Winter, 1982). Evolutions and adaptations are nevertheless frequent as Feldman shows it, we shall discuss that point.

Routines can also be considered as the way the actors translate the procedure into activity, they put into acts what is organizationally planned to do. Procedures are explicit, often encoded and written, well known of the hierarchy. Thus, routines should be instantiations of procedures, they should be more « variables » than the procedures that may differ progressively from routines and

micro- practices. However that distinction seems not stabilised among these different works and we have to notice that the two concepts are indifferently used.

More clearly, micro-practices are referring directly to the notions of routines and procedures in the frame of activity of the actors. For some authors, as Feldman they seems equivalent to routines and if the term of practice is used, even at a « micro » level, the particular qualification of micro-practices is not used.

For other authors (Rouleau, 2005), the term of micro-practices is used in a particular meaning. Rouleau (2005) situates the micro-practices at the individual level: « *All individuals put micro-practices of translation into action every day...* », routines at the organizational level and conversations at the social level (Rouleau, 2005, p. 1425). The routines that are an organizational feature are lived every day by people in a personal way, and that produce micro-practices. [(22), p. 1431: « *It appears that middle managers, through their tacit knowledge, strategize by enacting a set of micro-practices that are produced in each routine and conversation surrounding the change.* » or by the same author (Rouleau, 2005, p. 1432): « *all the routines and conversations examined combined synergistically the four micro-practices into arrangements of verbal and symbolic signs*». This author refers particularly to Giddens (Giddens, 1984): « *In other words, these micro-practices were produced through routines and conversations as the result of mundane human competence in action* »

Jarzabkowski (2003) use also the concept of micro- practices. This author defines practices referring to activity theory (Vygotski, 1997) and the concrete activity context as an activity system (Engestrom, 1993). This view is consistent with that one that proposes to consider the organization as a set of activity systems (Blackler, 1993). In that perspective, this author considers that practices are mainly a link between actors, according the social and historic dimension of Vygotski. In that view, micro- practices are the way the actors « habit » organizational routines and made them evolve.

The greatest interest of considering routines is to allow linking practices and strategizing. The point is to enlighten precisely how the firm orientations are putting in day-to-day acts and « how people are invested in the doing the real world», as Cook and Brown (1999) invited us to observe.

Doing so, the analyst focuses on an organizational processes granularity level, which include day-to-day actors' practices (Charlet et al, 2000). The routines granularity can be high: so that they include the description of several actors' activity during several months. But they can also be con-

stituted of actors' activity during some minutes. Thus, the routines granularity is highly variable. Routines including routines, «*Within each of these routines there are multiples routines, and there is some variance in what is included in each of routines depending on who is describing them.*» (Feldman, 2000), several granularity levels can be implied in the same case.

Knowledge engineering methods are useful to describe tasks and knowledge intensive processes. Knowledge engineering does not focus on routines, but the notion of task may be compared to that one of routine. Knowledge engineering aims are to build concepts, tools and methods to model knowledge and develop software using knowledge and supporting user' work (Charlet et al, 2000). Most of the time, the starting point is a synthetic activity description that is preliminary step for modelling.

KADS methodology concentrates a lot of works and debates in knowledge engineering in Europe during the ninety. This methodology is based on problem solving methods (Newell et Simon, 1972). It argues that it is built and not existing before modelling, and that models have to be constructed to be guidelines to the knowledge acquisition process. It argues that problem solving methods are various but not infinite and that we can recognize in very various using fields some generic problem solving methods that can be modelled and re-used in these different fields. Therefore, the aim of methodology is to build library of models.

The description of practice by a discourse organised with concepts may be compared to the Kads models of organization, of the task, of the agent, of knowledge and of organization.

The task model is composed in several views. Schreiber et al define it as following (Schreiber et al, 2000, p 45): «*the notion of task, although important, has different connotations. As a common-sense concept, it is a human activity to achieve some purpose. In the above organizational study it has been viewed in the (not incompatible) sense of a well-defined subpart of a business process. The notion of task has also emerged as a crucial one in the theory and methodology of knowledge systems and of knowledge sharing and reuse.*» Schreiber et al define the task so that it may make sense in the two fields (Fig. 2), in the one of modelling actors and in the one of practitioners. To do that, they define the task as a subpart of a business model presenting the following characteristics: it represents a goal-oriented activity adding value to the organization, it handles inputs and delivers desired outputs in a structured and controlled way, it consumes resources it requires and provides knowledge and competences, it is carried out according to given quality and performance criteria, it is performed by responsible and accountable agents.

## Observation of routines

To pay attention to practices, to identify and to give a title to the tasks or to the routines is an important starting point? It needs to distinguish among different actors' practices and among different knowledge. It's a first step which « distinguishes » an activity frame from a complicated organizational background, full of activity, alternate exchanges that implies several set of actors which are not all concerned with the studied routine. It constitutes for itself a step of analysis and design, which need observations, methods and interpretation. This step is common to an identification of routines and to the modelling of problem solving methods as it is done in knowledge engineering. We call that step characterisation.

## Methods

Describing routines in the practice of management of a students residence halls: budgeting for maintenance, hiring, training the student staff, moving students at the beginning of the year and closing the residence halls, Feldman use for identifying routines the formulation proposed by the concerned actors. (Feldman, 2000, p. 614) « *Organizational members identified five routines for me* ». That way of routines identification is close to the actors sense making, it is consistent with the ethnomethodologic approach which found this author method (among four meta-theories) (Feldman 1995, p.4) « *Ethnomethodologists look for processes by which people make sense of their interactions and the institutions through which they live* ». We will not discuss that theoretical point in this paper.

Routines description is done through a short story about actors' activity and some characteristics as incomes, outcomes, and used resources. By the routine process, actors transform incomes in outcomes. Among different resources for the routine: actors, activities, knowledge, knowing and others routines. We propose here, to extend this approach by discussing the qualification of knowledge. In fact, knowledge seems to us a main resource that can be extended by artefacts, that can permit to determine routines types, and that permit to link routines and competencies.

## Data gathering

We have observed the editorial board during three years, about thirteen day meetings, and forty individuals interviews of two hours. The meetings and interview were recorded with audio or video.

## Organizational setting

This scientific journal is a french language journal, it is publishing papers of a various and distributed scientific community, and animate that community. The main processes that we have distinguished in the editing board practices and that we suggest, as routines are the following: selecting scientific papers by peers review process, management of a texts set, issue composition. Each of these three main activities is made of a set of plus or less coordinated and well-arranged processes.

These three processes are massively overlapped and interacting together. The main process is the Peer review process” as, described by Rowland (2002) according a lot of authors “...*the four main functions of the scholarly literature are dissemination of current knowledge, archiving of the canonical knowledge base, quality control of published information and assignment of priority and credit for authors.*”

## Description of routines

We shall describe the global routine of PRP, then focus on a sub-routine “assignment of reviewers to a paper”, and analyse in details how the individual work is transformed in collective work in the process “first reviews back”.

### The global schema of peer review process.

In the peer review process, we can distinguish the following routines in the editing board practices that we have observed:

- Assign a reporter (a redactor who is specifically in charge of a paper review process)
- Assign three reviewers

- Received review notes, evaluate them, synthesize them, prepare the collective decision by a synthesized reporter note
- Made an editing board decision about the paper
- Change notifications to author
- Evaluate the  $V_{n+1} / V_n$  evolution and the remarks integration or not, in a short loop managed by the reporter or in a long loop with back review by one or two reviewers.

To characterize rapidly this process with few words, we can say that it is an activity of selecting papers for publishing. The process goes on several steps: a reporter manage the individual paper curs us, several reviewers are selected among a population and an assignment paper/reviewers is done. Reviewer's notifications are collectively validated and legitimated by the editing board. The peer review process is a core activity in scientific activity. Beyond the notion of selection, it's a complex way to influence scientific production and partly a co-construction of results, because the notifications addressed to the authors largely contribute to the direct elaboration of the paper.

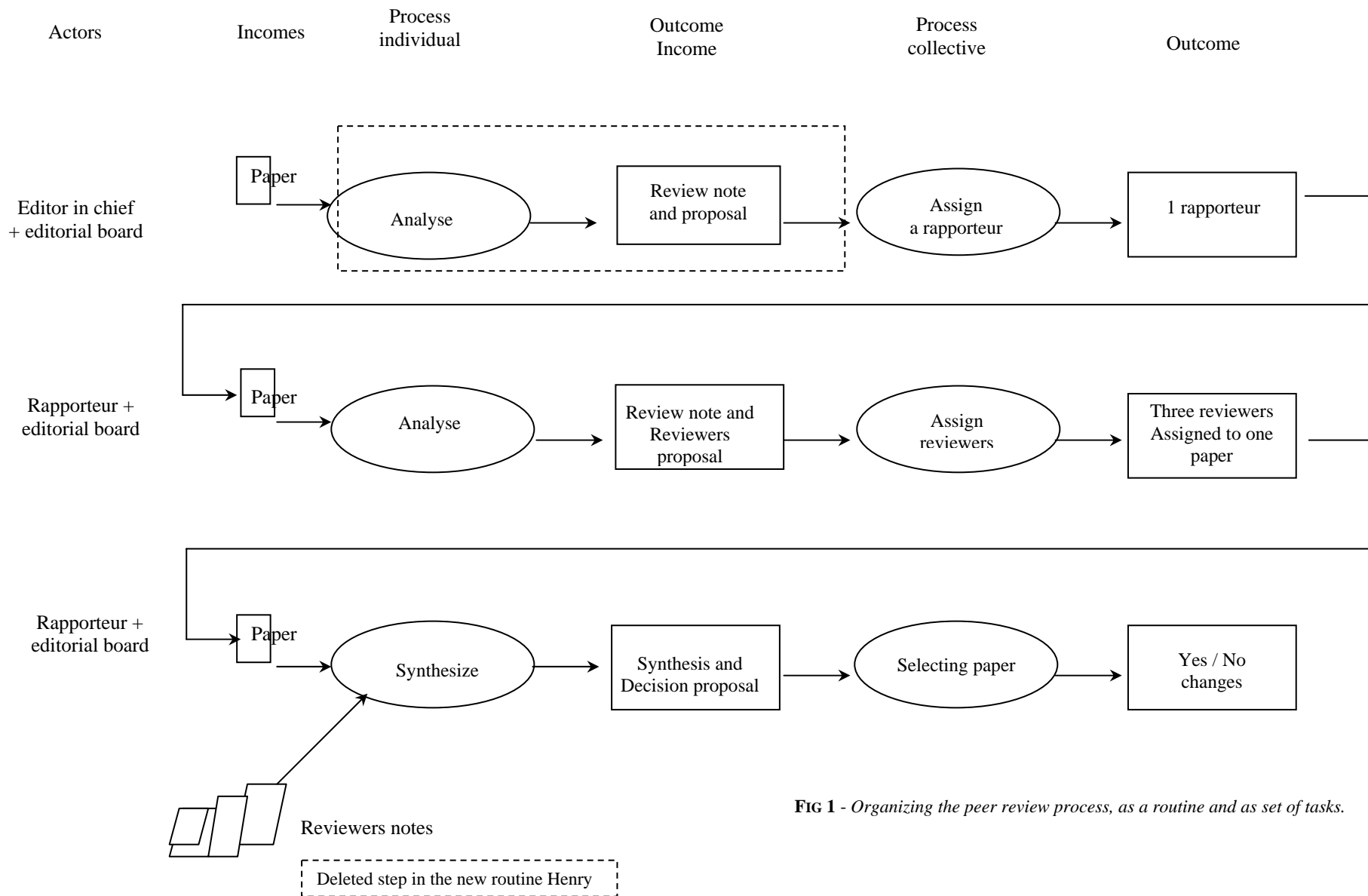


FIG 1 - Organizing the peer review process, as a routine and as set of tasks.

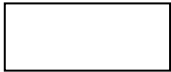
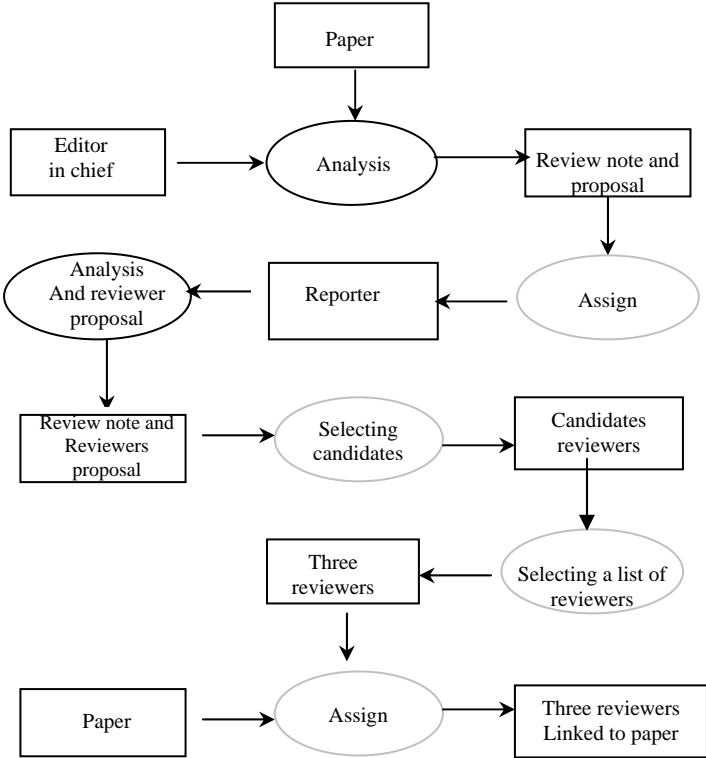


**RIO is the foundation of PRP: Focus on a detail the practice « reviewer's assignment to a paper ».**

As we have seen in fig. 1, individual and collective phases are interrelated. We shall analyse a part of the PRP: the reviewer's assignment to a paper, to enlighten more concretely how this interrelation between individual and collective work occurs. Among a population of reviewers, a sub-set is determined that can be assigned to the paper. It is affected to the paper. Then a resource constituted of a sub-set of three reviewers is selected and allocated to this paper. In order to produce a synthetic representation, at the same time in terms of task and in terms of routine, we propose the following schema. That schema represents incomes, outcomes and processes, at a higher granularity than in a task model.

We shall represent the process of reviewer's assignment in terms of tasks. At the beginning of this process, the assignment of a reporter. The process of reviewer's assignment to a paper is the task of assignment in the Kads library. It consists in pairing two objects belonging at two different sets. The goal of the task is to create the relation between a paper and three reviewers. Two main notions of that model are the notion of resource and the notion of assignment. The resource of the task is a set of reviewers, they are a resource from the editing board. The assignment process allocates three reviewers to a paper. Inputs are the set of papers presented by the editor in chief, the set of possible reviewers as known by the editing board, the sub-set of reviewers proposed by the reporter. Outputs are the set of pairs reviewers / paper. The figure 3 is quoted from the generic schema proposed by Schreiber and al for the task of assignment (2000, p 158).

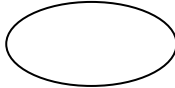
FIG 3. – Modelling the reviewer’s assignment to a paper.



Income or outcome  
Entities, Objects,  
Actions, Decisions



collective process



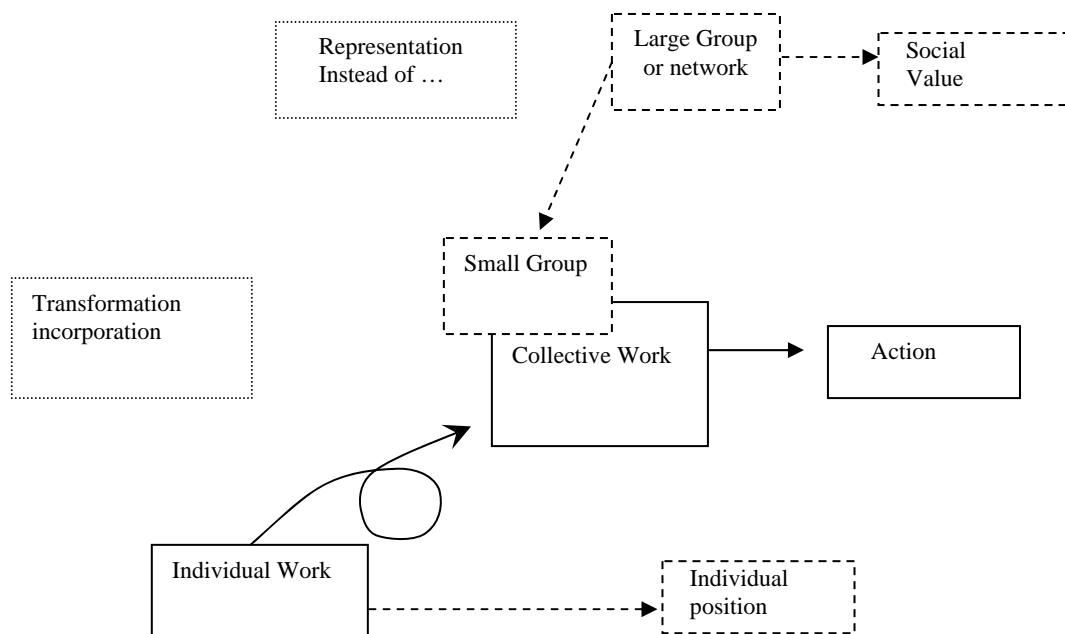
individual process

## Transforming individual work in a collective position.

### The frame of this transformation.

The transformation of individual work in a collective result in an editing board in academic journals is not a simple validation; it needs a real collective work of elaboration, so that we can really talk of transformation. The machinery transforming individual work requires several processes implying a mutation in the kind of judgement. This transformation is not a mechanic one: the result is not easy to foresee. To perform and to act this transformation, a representative collective group is required: in our case the editing board.

The individual position requires becoming a collective position to take a recognized value in the social world. Through this transformation, it's become the judgement of a journal and through this organization; it becomes the judgement of a scientific community. So, as the schema 2 illustrates it, a small collective group, which represents more than itself, formulates the judgement: a largest human group or network as a scientific community. So, the small collective group (here an editing board) stands instead of the largest group, it is representing it, and that is making sense. This relation of representation may be institutional one (in the case of a court for example) or a trust, reputation, and cultural relation (in the case of an academic journal) we shall not discuss that point here. The small collective group acts and works where the largest collective group couldn't, doing so, it is an essential wheel of the transformation of individual work in collective work that gives social value to individual work result.



**FIG. 2 – *The collective work of a common position is an elaborative process.***

The process of change from an individual position to a collective position in an editing board is a fascinating process. The reporter is the only one present person who had read the paper; the three reviewers are not present. One or two of the chief editor had read the paper at the previous step (one or two months before), but it was very often a quick reading. Among this kind of processes, we had chosen to analyse the process of the V1 evaluation or first reviews back.

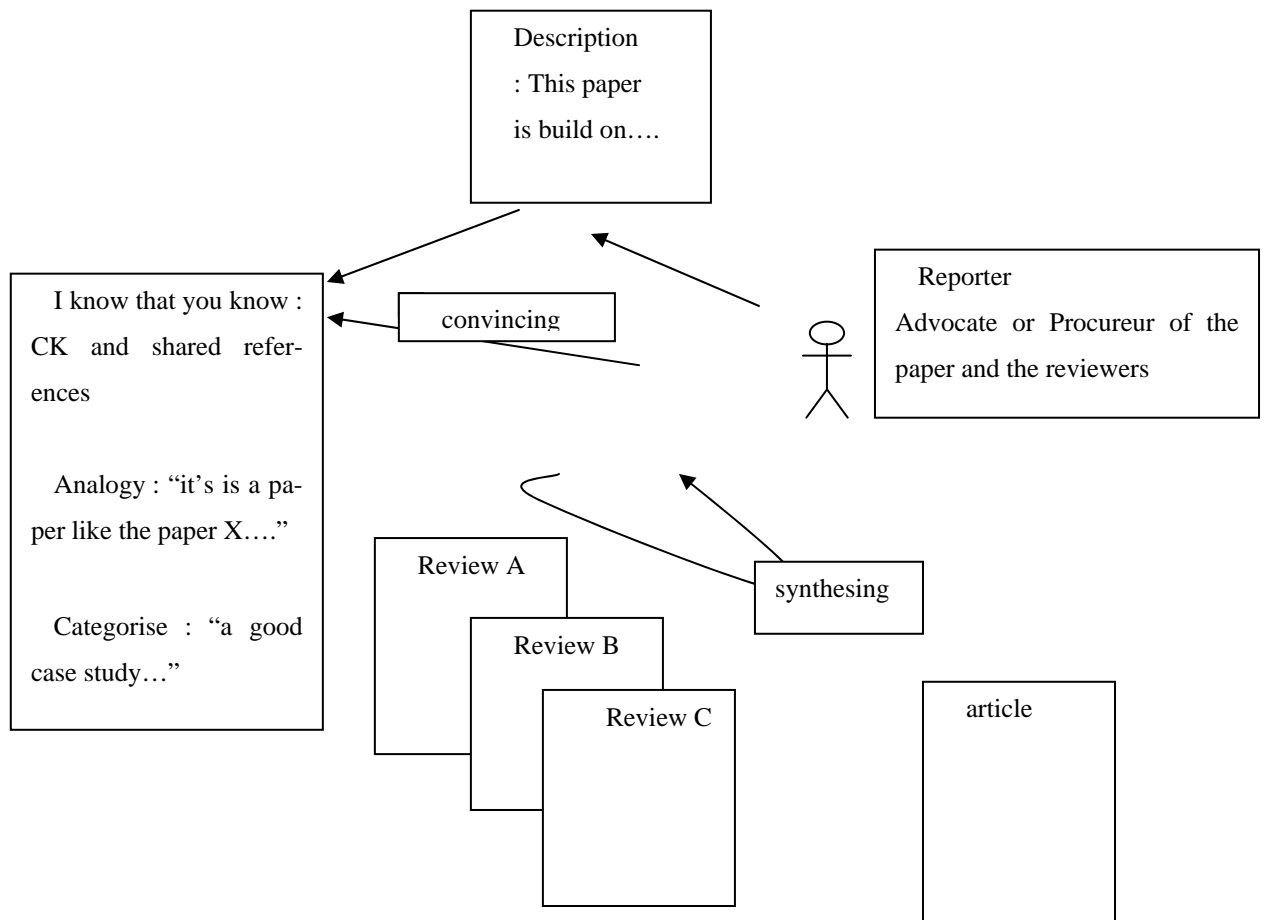
**A collective position elaboration process : the first reviews back.**

We shall describe in detail this collective elaboration process. We can distinguish three sub-processes (cf. fig. 5), which are, first of all the deliverable of the individual work of the reporter, which is to say an arguments set made of evaluation and proposal, then a debate among all the redactors, and finally the stabilisation by consensus on a collective position.

**Presentation, argumentation of the reporter**

In the initial step of PRP (cf. fig. 1), the redactors in chief had read and presented quickly the paper, then in the following step the redactor had made a preliminary report to propose reviewers. So the redactors eared about the paper for the third time on a few months time, but they never read it. Now the editing board begin the deep analyse of the paper.

The redactor had analysed the paper, analysed the reviews. In the meeting of editing board, the reporter describes the paper, but he essentially presents the reviews and enlightens them of his own appreciation, or read some specific parts of the paper if necessary. Then, he presents his own synthesis. He has to present, to argue and to convince (cf. fig. 4.), but essentially he has to inform his peers so that each of them could construct his own opinion.



**FIG 4 – Modelling the reviewer's advertising to the board**

The analysis of our audio data shows that the reporters' discourses are always very structured, the arguments are those, in use in the profession and they rely on the support of the connivance with the redactors. Some expressions that we can noted are the following: The paper focuses on that kind of problem in that kind of situation, the author tries to demonstrate that ...To that, he uses such and such well-known results ...its originality consists in ... The demonstration lacks rigour in that point and that point ... the paper is well written, easy to read ... The paper does not add any progress from the work of X or Y (or it completes)... That kind of ritual language in the presentation routine offers guarantee that the other redactors could take over the advanced elements to make their own opinions. Analogies, shared references, categorisations are used, they reinforce the tacit connivance between peers. To conclude the basic well known points of such a

presentation are: coherence verification, Common references, Key point verification, Arguments robustness verification.

Through this report, the reporter part is to orchestrate a global and equilibrated and collective vision about the paper by using reviews. It is not easy, as write Agarwal and al (2006) “an inevitable consequence of the review process is the emergence of differences among the philosophies, perspectives and interpretations of reviewers and authors”. The redactor had to take in account all of them. It may become that the reporter use the reviews as a layer use testimonies, amplifying them or putting them into perspective. The reporter may have some doubt (The journal is a pluridisciplinary one) and that he tries to separate what is well known for him and about what he needs another appreciation about one review or another: is it too hard, or too biased, etc. The reporter presentation (as well as the reviewers reviews) is itself implicitly evaluated about its coherence, its ability to apply the implicit rules of the profession.

That sub-process « Presentation and argumentation » is strongly individual because it consists in presenting alone an individual work, but it is a « situated » presentation in a board meeting, so it is strongly oriented by this organisational situation and by the group phenomenon, that's why we represent it by the fig. 5, part in the individual work universe, part in collective work universe.

### Debate, collective elaboration

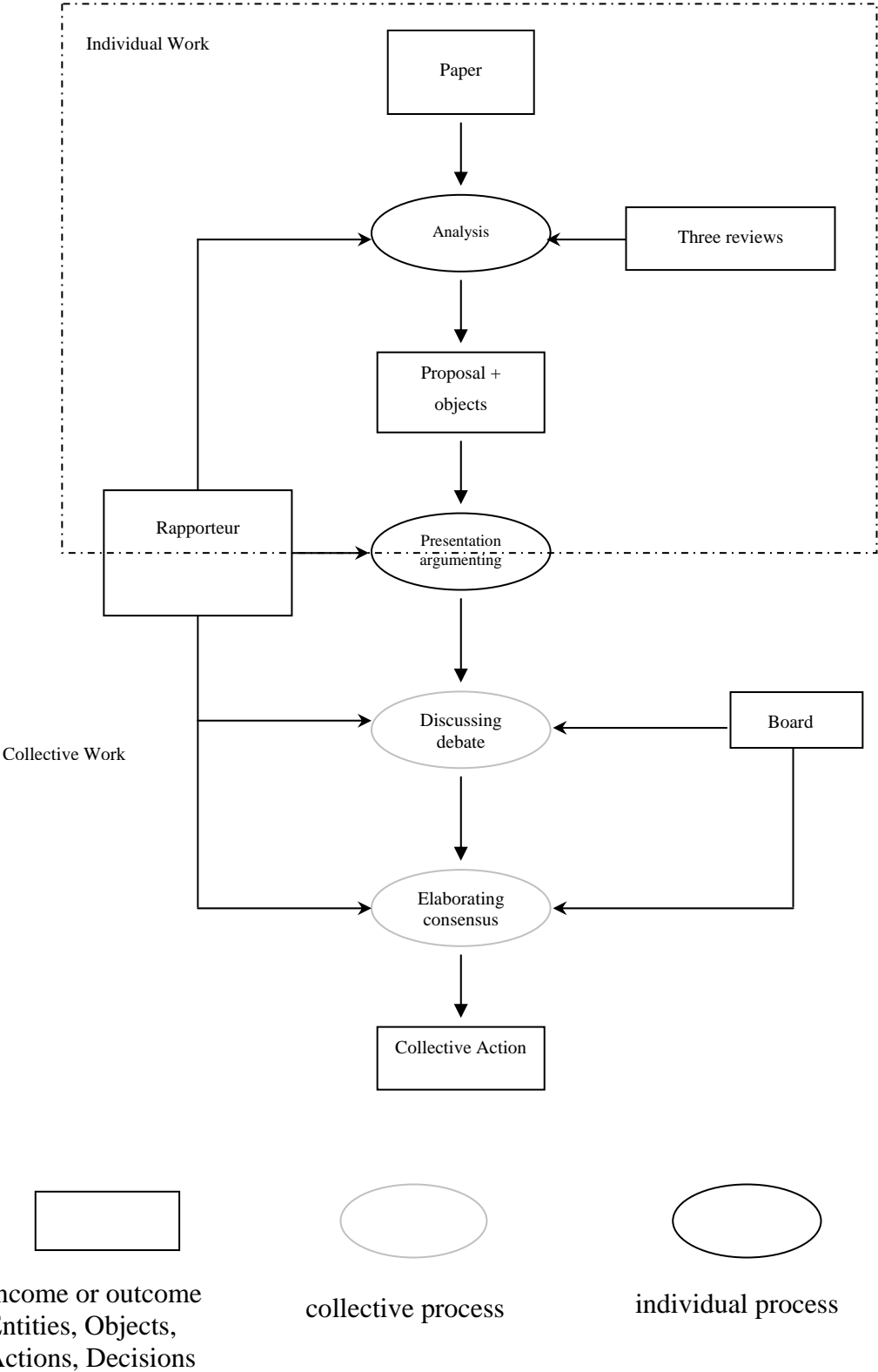
As we have said, the process « first reviews back » is not a simple validation, a choice between yes or no, (for example, the decision is not made by voting), it is, in fact a consensus research. And it is mainly located in that second sub process. Some part objections, shades of meaning, or doubts arisen and relativizent the first expressed opinion: that one of redactor. The redactors, depending of its coherence, perceive the redactor presentation. If the presentation lacks of coherence, the redactors react and oppose to. As well if the presentation presents a failure, but this case is quite rare.

Two points essentially made debate in the collective group and they are a way of strategizing. Point 1: Has the journal interest to publish that paper? What kind of interest? The question is particularly of some evidence for papers which obtained R and R with limits and which theme is of a limited interest for the journal. Point 2: As we know that the V1 is rarely satisfying, what is the author ability to modify their paper? Accord the R and R, behind the strict actual state paper eva-

evaluation is a project on what can become the paper, its potential and a gamble about the authors' capacity to make it evolved. The collective board consensus has to be built on a projection in the future, about what authors may really do, even they are not present and that it is difficult to evaluate their competencies, disponibility, and willingness to modify the paper. If "a reviewer is, first, a gatekeeper who makes sure that a manuscript has certain basic required features..."(Seibert, 2006) the editor (in the journal we had observed, he is a collective one) is a gatekeeper of the journal scope and of the journal strategy. Evaluate the paper adequacy to the journal scope is mostly done in the first part of PRP (cf. fig.1), rests here to do through every R and R attributed the day to day journal strategy.

### Consensus about a position

Thus, during the debate, the collective position is converging on the consensus. The consensual position is formulated several times, finally formulated into acts and validate by the group. The process takes end; it had taken about 15 minutes. Frequently, if a light objection or a doubt subsists, then another redactor, or redactor in chief propose to read the paper about an aspect that made discussion, and about what he is competent. Then the evolving constraints put on the paper or the redactor arbitration between two reviews positions are modified in the letter to author. The resulting consensus may be a redactor synthesis inflexion, or not, the point is that it is now a collective position: that one of the journal. And it may be very different from the reviewers' opinion as write Bergh (2006) "Remember, the editor is the ultimate decision maker and will be reading both the reviewer and author perspectives".



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FIG. 5 – Relationship between individual and collective work. Articulated sub-processes.



## **Discussion : Strategizing day after day**

### **Strategizing through PRP**

The strategy axe of the journal is to make the global scientific debate progress. The way, the journal practice the PRP build day to day the strategy of the journal. As we had previously shown in the PRP description, according an R and R advertising to paper at the frontier of theme, or at the frontier of validated level.

Maintain the journal scope, but positioning this scope on new themes is also a challenge, in day-to-day practices, accepting papers that are hardly discussed in the editing board do it.

One of the strategic difficulties of a journal is to progress in quality and to change of niche among the concurrent journals, because of the fascia of academic evaluation which plays a conservative part (Starbuck, 2005).

### **Retroactive loops**

The imbrication of individual and organisational in the PRP implies retroactive loops and of recursive processes that modifies each other's. It retroactive loop who allows sharing opinions and which allows also controlling it. These various loops, all together play a part of awareness in the organisation. For example, if individual work plays an important part in the process, the actor who plays it had been collectively chosen (as well as reviewer or as editor) and he is controlled by collective institutions at various steps of the academic life phases (Starbuck, Rynes). It is because the PRP is well established in a routine, because the reputation of each journal is based on practices around this routine PRP, and because these retroactive loops plays a part of control in the core process that the scientific community may build it trust.

### **An efficacy lying on usual and long processes intra et inter organizations.**

The PRP process is organization specific, in the sense that it is embodied in the routines, but “practice theory emphasizes the extra-organizational too- the practices deriving from the larger social fields or systems...” (Whittington, 2006). In fact, the PRP is largely and deeply shared through academic journals, the ways the different boards are practicing it can vary by a little dif-

ference, due to the identity of the journal. We may further and consider with S. Rynes (2006) that “each review cycle is also somewhat unique: an interaction of multiple parties, each with his or her own competencies, skills, personality traits and taken-for-granted assumptions and beliefs”.

Exchanges between redactors are lying on shared and common large and deep knowledge, on individuals and collectives knowing which are consistent and very well experimented. They are codified, even if they are formulated, if they are for a large part implicit. How to proceed is well known in the academic universe, it may be qualified of “habitus” as «a set of practices » and behaviours that characterise a group (Bourdieu, 1980). The PRP, is a at the same time, a process codified in a routine but also practices lying on individuals and collectives craft knowing, with tacit rules very adaptable with long learning. The dance between individual and organization include at the same time imposed figures and improvisation. Imposed figures supported by routines and which are useful in the field of professional practices intra and inter organization. In that dance between individual and organization, the peers group plays an essential function. In the academic journal that we have observed, it is the functioning of a stable group, where persons know each other, which plays the part of organisational control.

The organization we have observed, is a patricians community, which may be analyzed, as Whittington (2006) suggests it, by taking guidelines the works about Communities of Practices, even if we are not in the case of CoPs. Ce qui distingue d’une communauté de pratique c’est qu’il y a un objectif concret de réalisation d’un travail et d’un objet : la revue, ce qui est commun est la recherche d’une progression dans l’expertise individuelle par ses membres. L’apprentissage est long, il repose sur des connaissances et des savoir faire eux-mêmes très importants. It consists in « absorbing its particular mix of local rules and internalized standards » (Whittington, 2007). Rynes also underlines that this long learning consists in through various phases : at the same time for authors to learn to « read » the PRP but also in the part of reviewer and editor.

Explicit and tacit rules are used in that RIO in PRP. We shall not debate of explicit rules which are present in the routine. We shall examine their evolving process by the change of practices in the § Evolving routine Henry. The processes that we have described lye on tacit rules about what is a good paper and how to evaluate a paper. The review grids of automatic tools which are often

used for conferences (and on reviews adding), shorten precisely that transformation RIO. As we know, they have a few uses in journals because the evaluating work is more complete and deep.

One part of tacit rules consists also in knowing in « being » a redactor in an editing board ; He or she has to answer for his or her evaluation in front of his peers. So, he has to use it in an active manner, as a layer or a procure ; it's a much more active posture than that one of a simple reviewer. The redactors take care of their peers opinion, they participate to the editing board, only by reputation effect and the fact of acting their part in the journal and to progress with it, is their main personal motivation.

### **Shorted the cycle submitted/ published : Evolving routine Henry Assignment of a reporter.**

The routine assignment of a reporter, first step of the papers' selection has evolved during our observation period with the opportunity of a particular situation: several papers were received the day before the editorial board meeting. The board secretary was on vacation. To gain time, two editors in chief propose to assign a reporter without an editor reading note (represented on figure 1), that means delete the first step and the resource "paper" is directly used par the process editorial board meeting. When the new routine was used, it was applied on 2/3 papers, the others needing a detailed analysis and presentation to be allocated. The new routine was maintained and used in the same way: only for a part of the set of papers, and only when time was missing.

The competition between scientific journals, the evolving publishing medium and the financial challenge to maintained a journal lead to strategic pressure on the editorial board to shorten the cycle submission - publishing. That pressure forced itself upon the editorial board members, but they don't mentioned it. With this pressure background an opportunity came: the reception of a lot of papers during the secretary vacations.

The assimilation of the dictate « shorten the cycle» and the accommodation of the routine assign of a reporter, produce the adaptation of the editorial board and the change of the organizational routine. The external events are the pressure and the opportunity. The redactors' knowing permit the routine to evolve.

Considering the collective task, one may think that two main processes of knowing occur together: the classification among typicality of the paper, and the fit of assignment. When the collective task develops without redactor-in-chief presentation, these two knowing processes have to develop with fuzzy resources. The task is no more to validate or to modify the editor-in-chief proposal, all participants have to do their best to have a point of the view on the type of the paper, and to propose reviewers names without any helping external artefact. There is no more the medium of an individual analysis. The group, then is reduced to evaluating from elements coming from the author: title, abstract, key words and to a quick visual glance through the paper that the editor-in-chief do directly during the meeting: structure of the paper, some remarks (« there are a lot of schemas or maps about ....»), some bibliographical references for enlightening title and key words. Thus, considering collective activity, we could say the structure itself of the pre-existing task is modified, not only practices evolved, but routine was changed. Practices make the routine evolve. Considering the organizational process, without decomposing the collective task; one can consider that only a step is delete, the routine is shorter.

### **Knowledge engineering and practice-based**

The two ways of describing knowledge, learning and organizational processes, through organization science methods and knowledge engineering methods may be complementary, there may join in the step of characterization. In organization science, a certain discourse variation is permitted in describing practices. In knowledge engineering a unique description is researched, because it is thought as avoiding misunderstandings that is necessary to develop software.

We have only used the European knowledge engineering stream that differs the US one (Menzies and Van Harmelen, 1999) and which are founded on problem solving method (Wielinga, 1992). Our point of view does not include all the knowledge engineering methods.

One may see a certain contradictory to use methods founded on a cognitivist perspective and others founded on a practice-based perspective. But the use of these methods are complementary, as we have shown it in this paper and as others authors like Carlile (2002) have already done. It can be done, being careful of not detached abstractions from a deep practices analysis: « *Abstractions detached from practice distort or obscure intricacies of that practice* » (Brown and Duguid, 1991)

## The characterisation

We propose the process of characterisation as an essential step for practices analysis and for knowledge engineering. It seems to be a junction point between the two approaches. In the process of characterisation, the analyst chooses immediately a level of analysis, without apparent difficulty, as if the granularity imposes itself, that is that Goffman (1991) calls « that occurs here and now », that may correspond to the notion of « base level » used by Rosch. Actors know to call a routine, but they do not know to characterize activity.

The characterisation of processes and of knowledge consists in describing them in generic terms, without using a formalized method. Thus, this characterisation is a synthetic formulation, in day-to-day language, describing with the professional notions, what Feldman (2003) represents with, what she called “vignettes”. The characterisation is situated to the « knowledge level ». To characterize the activity that we wish to observe or to model, is to pick it up from the other activities, to distinguish it, that the actors does not need to do.

It is also a way of making categories among observed organizational processes. That allows to make the hypothesis that these processes are belonging to process types or to process type families. Following that way, we can make a second hypothesis : if these types exist, they can be found in various organisations and professional activities. We are referring, here, to the categorisation theory (Rosch, 1978) and to the notion of models library in the problem solving methods (Wielinga, 1992). Characterisation is thus a kind of descriptive vignette attribute to the observed activity, a sort of « type » of practice.

Characterisation is a preliminary step to the steps, which are producing detailed and formalized descriptions; the matter is just to know of what we are speaking of. That do appears immediately in the dialogue with actors or through practices observations. Characterisation implies interpretation and commitment of the observer, and it represents a possible orientation for the later development of work.

The knowledge engineering methods focus on further steps, more formal and more analytic ones and which distinguish knowledge, tasks, and communications. But some authors mention that step (Schreiber et al, 2000), (Aussenac-Gilles, 2005) and use in fact this notion without giving a great attention to it.. Thus in (Schreiber et al, 2000, p. 129) the concept is used and appears as a title to

speak of the action, done on a task, nevertheless, the term of characterisation does not appear in the bright index of the book.

Schreiber and al consider three steps in the knowledge modelization process (Schreiber et al, 2000, p. 169): the step of identification which consists in a familiarisation and a first task models inventory, the step of specification which complete the set of knowledge and inferences concerned by the software, the step of refinement which consists in detailing the used models for the development, and to pair them off with use scenarios and to begin simulations. For us, the step of characterisation belongs to the first step.

The characterisation of processes may be applied at different levels, first of all at the global level of organizational activity, then at different included processes, as we had done in this paper. Until the cognitive processes characterisation granularity then it joints the tasks and inferences models library of KADS.

## **Conclusion**

Through the example of the PRP in an academic journal, we have shown that RIO recovers strongly interrelated dependencies and control loops that insure the transformation of individual work in collective work. Strategizing occurs through day to day decision about core processes of the organization. We have shown that to modelize precisely these processes allows us to situate practices and their diversity. To do that sort of analysis and to describe the routine structure, knowledge engineering modelling is useful, particularly to enlighten knowledge and knowing. In this approach of representing tasks and routines, we distinguish a common step that we call characterisation.

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## References

- R. Agarwal, R. Echambadi, A.M.Franco, MB. Sarkar. Reap rewards : maximizing benefits from reviewer comments. *Academy of management journal*, vol 49, n° 2, 191-196, 2006.
- N. Aussenac-Gilles. Méthodes ascendantes pour l'ingénierie des connaissances. Habilitation à diriger des recherches. Université de Toulouse III, Toulouse, IRIT, 2005.
- D. D. Bergh. Editing the 2004 AMJ best article award winner. *Academy of management journal*, vol 49, n° 2, 197-202, 2006.
- F. Blackler. Knowledge and the theory of organization : organizations as activity systems and the reframing of management. *Journal of management studies*. vol 30, n° 6, pages 863-884, 1993.
- P. Bourdieu. *Le sens pratique*; Paris, Editions de Minuit, 1980.
- J.S. Brown, P.Duguid Organizational learning and communities of practice : toward a unified view of working, learning, and innovation. *Organization Science*, vol 2, n°1, feb 1991
- J. Charlet, C. Reynaud et R.Teulier L'ingénierie des connaissances in C. Cauvet et C. Rosenthal-Sabroux. *Les systèmes d'information*. Paris, Hermès, 2000.
- P.R. Carlile. A pragmatic view of knowledge and boundaries : boundary objects in new product developpement. *Organization science* 2002 Vol 13, N) 4 July-August 2002 pp 442-455
- S.D.N. Cook, J.S. Brown. Bridging epistemologies : the generative dance between organizational knowledge and organizational knowing. *Organization Science*, vol 10 n°4, pages 381-400, 1999.
- R. M. Cyert. and J. G. March *A behavioral theory of the firm*. Engelwood Cliffs, NJ: Prentice-Hall, 1963.
- Y. Engeström. Developmental studies of work as a testbench of activity : the case of primary care medical practice. In S. Chaiklin, J. Lave (eds) *Understanding practices: perspectives on activity and context*. Cambridge, Cambridge university Press, pages 64-103, 1993.
- M. S. Feldman. *Strategies for interpreting qualitative data*. Thousands Oaks, Sage, 1995.
- M. S. Feldman. Organizational routines as a source of continuous change. *Organization Science* vol 11 n° 6, 611-629, 2000.
- M.S. Feldman. Resources in emerging structures and processes of change. *Organization Science* vol 15 n°3, 295-309, 2004.
- A. Giddens. *The constitution of society*. Berkeley, University of California Press, 1984.
- E. Goffman . *Les cadres de l'expérience*. Paris, Editions de minuit, 1991.
- G. Hamel, C. K Prahalad. *Competing for the future*, Boston, Havard Business School Press, 1994.
- P. Jarzabkowski Strategic Practices: an activity theory perspective on continuity and change. *Journal of Management Studies* vol 40 n° 1, pages 23-55., 2003.
- P. Jarzabkowski Strategy as Practices: Recursiveness, adaptation and practice in use. *Organization studies* Vol 24 issue 3, 489-520, 2004.
- T. Menzies, F. Van Harmelen. Evaluating Knowledge engineering techniques'. *International Journal Human-Computer Studies* vol 51, pages 715-727, 1999.
- R. R. Nelson, S. G. Winter *An evolutionary theory of economic change*. Cambridge, MA, Harvard University Press, 1982.
- A. Newell, H. Simon. *Human problem solving*. Prentice Hall, 1972.
- E. Rosch, B. B. Lloyd (eds) *Cognition and categorization*. Hillsdale, Erlbaum, 1978.
- L. Rouleau 'Micro-practices of strategic sensemaking and sensegiving: how middle managers interpret and sell change every day'. *Journal of Management Studies* vol 42 n°7, pages 1413 1441, 2005.
- J. F. Rowland. The peer review process. A report to the JISC Scholarly Communications group, 2002.
- S.L. Rynes Academy of management journal editors' forum on the review process. Making the most of the review process: lessons from award-winning authors. *Academy of management journal*, vol 49, n° 2, 189-190, 2006.
- S. E. Seibert. Anatomy of an Rnad R (Or reviewers are an author's best friends...) *Academy of management journal*, vol 49, n° 2, 191-196, 2006.
- G. H. Schreiber, M. Akkermans, A. Anjewierden, R. de Hoog, N. Schadbolt, W. van de Velde and B. Wielinga Knowledge Engineering and Management. The Common KADS Methodology. 456 pages. Cambridge, MA, :MIT Press, 2000.
- W. H. Starbuck. How much better are the most-preigious Journals ? The statistics of academic publication. *Organization Science*, vol 16, n° 2, 180-200, 2005.
- R. Teulier, N. Girard 'Modéliser les connaissances pour l'action dans les organisations pages 389-413 'in *Ingénierie des connaissances*. R. Teulier, J. Charlet, P. Tchounikine (eds), Paris: L'Harmattan, 2004.
- L. Vygotski. *Pensée et langage*. Paris La dispute, 1997..
- B. Wielinga, G. Schreiber and J. Breuker. KADS: A Modelling Approach to Knowledge Engineering. *Knowledge Acquisition* vol 4, pages 5-54, 1992.
- R. Whittington. Completing the practice turn in Strategy Research. *Organization studies* Vol 27 issue 5 may 2006.

