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Making Sense of Research: The Dynamics of Management Research in France[1]

BERTRAND VENARD

Abstract *Management research has received little attention in the sociology of science. This qualitative survey explains the limited participation of French scholars in the international academic journals of management. The theoretical framework is social cognition. This paper focuses on the categorisation process and relevant attributes. Final discussion suggests new research avenues concerning categorisation automaticity, variability of attribute effect, mediation process, and category inhibition.*

Keywords: social cognition; sociology of science; sense making; categorisation; management research; France

Introduction

Participating in academic conferences and reading journals often gives an impression of American supremacy in the field of management science. There are various signs of this domination. Many conferences are organised in the US and many academic journals are published there. Many authors are American citizens and work or have studied in the US. Most citations are to American publications. Other nationalities are much less active in the field, especially in terms of authorship in international journals.

Engwall has evaluated the contribution of authors based in France to international journals, their geographical home bases, and their research orientation.[2] Engwall uses the citations in 15 top management journals to trace the French academic presence in the field from 1981 to 1992. His analysis reveals that authors based in France, like other non-US researchers, account for only a small proportion of the articles in the surveyed journals. Less than 1% of the contributions have an affiliation with a French institution, whereas the North American authors alone account for 86.4%. His study also demonstrates that one-third of the co-authors of 'French' articles are not French. Furthermore, it appears that 50% of the France-based authors are INSEAD faculty members, 'which, although physically in France,

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must be regarded as an essentially international institution with a majority of non-French nationals and holders of American doctoral degrees'.[3]

Déry analyses references in the *Strategic Management Journal* between 1980 and 1993 and shows a nearly complete absence of citations to authors from French institutions, except for INSEAD.[4] Conscious of this situation, French academics are engaged in debate on how to internationalise French management research.[5] It is clear, as Engwall acknowledges, that there is 'no evidence of quality problems for French research'.[6] France has a tradition of intense intellectual debate between scientists, debates that are visible in various French academic journals and books. The problem lies with quantity.

Showing the weak presence of any nationality in academic circles is important, but it is also important to explain the weakness. Why are so few French authors published in international academic journals? In the first part of this article, we will examine management research in France. In a subsequent section, this paper will develop a theoretical framework based on the sense-making approach, the cognitive process associated with doing research. The qualitative methodology will be described in the next section. We have conducted face-to-face interviews with researchers in France. After this description, we will discuss the categorisation of French management researchers. This will lead to our conclusion.

Research Subject: Management Research in France

One explanation of the limited French presence in international management journals could be the relative novelty of management science in France. For a long time, French institutions concentrated on teaching management rather than on doing any research on the subject. Some business schools are long-established: ESCP in 1819, HEC in 1881, or Audencia in 1900. A reason for this focus on teaching rather than research could be found in the corporate governance of French business schools. Indeed, French business schools are often financed and managed by chambers of commerce and industry. Chambers of commerce are semi-public bodies, created by Napoleon Bonaparte in 1803, to serve local business communities. Each chamber was responsible for a limited geographic area. Within this area, French entrepreneurs, many of them managing small family businesses, very often dominated the business community. For them, the most important task was to educate young Frenchmen in skills useful for local trade and industry, not to finance research.

Until the 1950s, there was virtually no management research in French institutions. The French government then decided to send some young Frenchmen to do their PhDs in the US in the 1960s and 1970s. The FNEGE, *Fondation Nationale pour l'Enseignement de la Gestion* (French Foundation for Management Education), was the main institution structuring the process and sponsoring the programme.[7] Until recently, the FNEGE was still financing scholarships for the best French researchers to enhance their international experience. Returning to France from the most prestigious American universities, the young lecturers participated in the creation of the new field in France.

Along with the novelty of the field, another important feature of management research in France should be recognised: the key role of public institutions. The French state has a crucial role in organising and investing in various research areas.[8] The French state finances more than 50% of research in the country. This is also true in the field of management, where the vast majority of the researchers

work for the public sector. In this field, the French public sector consists mainly of universities (all of them public), the CNRS (Centre National de la Recherche Scientifique, the main public research agency), and some engineering schools doing research in the management field.

Another characteristic of the French case is the existence of a dual management education system. The main education system consists of universities. They are all public and are therefore under the supervision of the French Ministry of Education, which has little experience in the management field. Management education began in the 1960s under its auspices. University growth was rapid and universities now provide education to the vast majority of management students in the country. Universities do not select most of their students. Acceptance is determined by place of residence rather than past academic achievement. French students usually study in the city where they live.

The second management education system consists of business schools, independent of the universities. Chambers of commerce and industry created many of them. The number of business schools has sharply increased from 84 in 1980 to 292 in 1992.[9] It is necessary to differentiate between the top *grandes ecoles* (around 10 business schools) and the others (more than 300 establishments). Top *grandes ecoles* are recognised as such by the *Chapitre de la Conférence des Grandes Ecoles* (Higher Education Association of Schools in the country, equivalent to the Ivy League in the US). Members of the *Chapitre de la Conférence des Grandes Ecoles* practise a very selective process when screening prospective students, who have to pass national exams to be accepted. Because of their involvement in the industrial sector and because they have existed for a long time, they occupy an important place in professional circles. *Grandes Ecoles* have educated an important part of the corporate elite of French society. Former students very often hold higher positions than students of the universities. Many senior French executives are g*rande ecole* alumni.

Until the 1980s, few business schools invested in research. As a result, business school lecturers are more scarce on editorial committees than their university colleagues. Only 15% of business school teachers compared with 33% of university teachers belong to editorial committees that edit French journals.[10] Business school teachers have also published fewer academic articles. Business school lecturers have published an average of eight articles while university teachers have an average of 14. With just one exception, business schools do not offer doctorates. It is only recently that the top *grandes ecoles* started to recruit lecturers with doctorates, since before only industrial expertise was valued. The top *grandes ecoles* have now made research a strategic priority. As a result, while only 50% of lecturers in most business schools have doctorates,[11] 80% of lecturers in universities and the top business schools have doctorates.

> The best business school lecturers are quite similar now to university lecturers, research is important for both, but business schools have more resources. There is a real research status in the leading business schools.
>
> (University professor)

International certification of business schools (such as the European EQUIS and the American AACSB) means that research is now compulsory if they are to maintain their status.

Along with universities and business schools, there is a third institutional subgroup which consists of CNRS researchers and certain schools for engineers, mainly the *Ecole Polytechnique*, the *Ecole des Mines de Paris*, the *Ecole Nationale des Ponts et Chaussées* and the *Ecole Centrale Paris* (ECP). This amalgam is confusing. This group is primarily made up of civil servants and full-time researchers. An example is ECP, a private institution which receives almost 44% of its annual budget from state funding. Most professors in this group are researchers with a small teaching load. CNRS members are paid by the French government to perform research only. One famous school of engineers, the Ecole Polytechnique, has its own renowned CNRS management research laboratory, CRG, *Centre de Recherche en Gestion*. The laboratory is staffed by full-time researchers. The position of such an engineering school is remarkable in France. Created in 1794, the *Ecole Polytechnique* is an elitist institution, which until the 1980s, accepted only 250 students a year. It now accepts about 450 per year.

> *Ecole Polytechnique* accepted the CRG's request that it not be required to publish in a scholarly journal from 1972 to 1979, the time needed to put together an effective team and to accumulate an initial body of significant data based on in-depth field work; this strategy is virtually unimaginable in the American 'market'.[12]

Another example, *Ecole des Mines de Paris*, illustrates the pertinence of this group. Although an engineering school, the *Ecole des Mines* has one of the oldest management research laboratories in France and also has vast resources.

> … with around 300 teachers for 100 students, we have one of the highest teacher–student ratios in France. This gives us the time to follow the work of the students correctly and to become involved in research projects.
>
> (Engineering school lecturer)

Making Sense of Research

To understand the reasons for the limited presence of French researchers in international academic journals, we adopt social cognition theory.[13] Social cognition is a progressive field of research that has grown in recent years, resulting in a better understanding of cognitive processes.[14] The analysis of cognition is now a major research stream in the field of management. One basic assumption of cognitive theory is that individuals have a limited ability to process the rich variety of stimuli in their environments.[15] Because of their bounded rationality, individuals have an incomplete understanding of their worlds. But at the same time, individuals have to consider complex and demanding social environments. Faced with uncertainty and difficulties of interpretation, people try to make sense of their activities and to structure the unknown.[16] Individuals make sense of their environments by putting environmental stimuli into a particular cognitive framework that can explain reality.[17]

However, the link between the sense-making framework and action lacks clarity. In the sense-making framework, we do not know how the action is started from a given sense.[18] We can imagine a construction of sense, which would not imply going from a specific interpretation to a particular action. By action, we mean 'any

significant change in ongoing organisational practices, such as a substantive alteration in product or service offerings'.[19] Categorisation is one way of explaining how cognitive processes lead to action.[20] Rosch defined categories as cognitive classifications that group together objects, events, and the like, that have similar perceived attributes. Categorisation theory assumes that individuals employ schema to understand their worlds.[21] A schema is a 'cognitive structure that represents knowledge about a concept or type of stimulus, including its attributes and the relations among those attributes'.[22]

Therefore, to understand the link between interpretation and action one must identify the salient and meaningful attributes used by individuals in a given context. At the beginning of the article, we noted a specific action: the practice of management research. The question we asked was: why is French management research under-represented in international journals? The task, then, is to find the attributes which characterise the category 'management researcher' and lead to the weak international presence of French management researchers. Since attributes are context dependent, we look mainly into the sociology of science literature to find these various attributes (see Table 1 for a summary of the various attributes).

Take the variable 'gain/loss'. In an idealistic view of science, Merton noted disinterestedness as a key norm to guiding the work of the scientist, but at the same time, he recognised the importance of the reward system in a scientific career.[23] Anthropologists studying researchers have found that scientists are guided in their actions by their interests or goals; for example, to find key resources.[24] Latour has described scientists as highly competent strategists in building alliances of scientists and non-scientists all committed according to their self-interests.[25] As Barber notes, 'concrete science is analytically a stratification and reward system'.[26] Even collaborations on the individual level are driven by the possibility of gain, whether material, intellectual or social.[27]

The valorised identity could be another important element in understanding the category 'management researcher'. The enhancement of the status of the secular scholar is a major step in the history of science.[28] Hagstrom has defined a researcher as somebody exchanging information for recognition.[29] In modern societies, the increase of scientific discoveries is linked to the creation of full-time teachers and researchers with a valued status. We take the term of value in its philosophical sense of what is considered as ideal by a moral person and what gives the norms for his behaviour. Social identity theory characterises behaviour as highly regulated in terms of self-concept as a group member.[30] Behaviour is often based on individuals'

Table 1. Variables and attributes of management researchers in France

Variables	Attributes
Gain/loss	Researchers are influenced in their work by the possibility of gain/loss
Valorised identity	Researchers have a valorised identity as scientists
Community membership	Researchers have to fulfil a fundamental need for belongingness. They look for allies within various pertinent communities
Independence	Researchers look for independence in their work
Continuity	Researchers decide their present actions based on their past actions
Accountability	Researchers are influenced in their work by the control procedures applied to them

awareness of having a shared sense of identification within a social group.[31] The question is, of course, to identify which social group is salient. Indeed, when a particular social identity is pertinent, the individual will be motivated to maintain or raise his/her self-esteem by promoting or enhancing the evaluation of the social group to which he/she belongs.[32] In our case, a research teacher can decide to do research if he/she sees that the identity of a researcher is highly valued.

A community membership may also influence scholars to do research. The categorisation process is used to fulfil a fundamental human need: the need to belong. A number of social psychologists have worked on the idea that individuals strive for connection with others and that this has consequences for cognition.[33] The question is: to which social community do researchers belong? Some authors have noted the existence of powerful invisible colleges ('social organisation of the entire set of members of a research area')[34] or 'academic tribes'.[35]

At one time, it was assumed that social structures and processes did not shape scientific work. In the *Republic of Science*, Polanyi describes the context of discovery (observation and interpretation phase) as being strictly separated from the context of justification (the phase for granting legitimacy to a scientific statement).[36] But the observance of real research practices has allowed certain authors to question this dichotomy between discovery and justification.[37] Scientists develop strategies to convince and rally allies. Latour and Woolgar argued that scientists:

> appear to have developed considerable skills in setting up devices which can pin down elusive figures, traces, or inscriptions in their craftwork, and in the art of persuasion. The latter skills enable them to convince others that what they do is important, that what they say is true, and that their proposals are worth funding.[38]

Finding allies is clearly a goal for researchers,[39] especially if we consider the importance of the scientific community in accepting a new paradigm.[40] 'Without the enrolment of many other people, without the subtle tactics that symmetrically adjust human and non-human resources, the rhetoric of science is powerless.'[41]

While this community membership can be important for management researchers, it should be noted that independence can be just as significant. In fact, one of the principal problems for research managers is to put order into the disorder that stems from the strong desire for independence in researchers.[42] The existence of both community membership and independence can seem quite paradoxical. In fact, the attributes are not 'used' at the same time. Social actors can mobilise one attribute for a specific situation and not for the other. But, as we will see in the French example, both attributes are highly functional in terms of connection to research work. For example, a literature review could be a solitary endeavour, in which a researcher works independently in a library. At the same time, the researcher has to consider his peer community if he is to publish his work.

Another variable to consider is continuity. Not only does interpretation lead to certain action, but one action inevitably leads to another. In fact, a given action is never isolated. An action is situated in a flow of various other actions. A relationship exists between different actions performed at different times.[43] Argyris has developed a theory in which interconnected propositions have a form of 'if … then'.[44] It is clear that the explicit character of the interpretation and of the action n (with an 'if … then' form explicit) will make action n+1 more certain for the actor himself. One of the reasons for this continuity in action is the retrospective characteristic of

sense making. The people involved often know what they are doing only after doing it. The retrospective factor in sense making helps justify actions already taken,[45] and lends continuity to future actions. People select beliefs that allow them *a posteriori* not only to explain a past action, but also to explain future actions.

Finally, one of the key concepts in understanding the development of scientific knowledge is the notion of enrolment. Scientists must enrol allies who think it is in their own interest to lend support. It is clear that finding allies implies a degree of communication and visibility. The ability of an individual to act is linked to the visibility of his action and its effects. 'Scientific advance is dependent on the efficient communication of ideas … without it, rewards could not be allocated properly. Recognition is conditional upon the visibility of scientific work.'[46] The perceived visibility of an issue is related to the publicity surrounding the issue and the level of exposure both inside and outside groups. The more visible the issue, the more likely the individual will act according to the issue.

So, on the one hand, scientists try to convince allies in order to gain key resources. On the other hand, allies will try to evaluate the scientific development process and its knowledge production. An important part of the institutional framework in which scientific knowledge is developed is also the control system which allows allies to observe scientists. Some authors have argued that administrative supervision tends to restrain innovative behaviour by imposing rules and procedures.[47] Thus, it is important to understand who controls the scientist as well as how and to what extent the control procedures applied to management researchers influence their actions.

Research Methodology

We interviewed 55 persons between 1996 and 2000 from the following academic institutions: the CNRS, French universities, engineering schools, and some of the top 10 French business schools. Whenever possible, we interviewed at least two persons in each institution, one teacher-researcher and the person responsible for their laboratory or their research director. In two business schools, we also interviewed the managing directors. The characteristics of the interviewees are described in Table 2. Business school respondents constitute the largest group (33 out of 55 interviews). The sampling is not critical as all types of French institutions have the same weak presence in international publications.

Interviews lasted between one and two hours and were transcribed. Most took place in the office of the interviewees. Interviews followed an interview guide that covered the career of the respondent, the management field in France, research management in the institution, and themes related to different attributes. Inter-

Table 2. Characteristics of the respondents

Type of institutions	Lecturers	Persons in charge of management research	Total	% of total
Universities	8	6	14	25
Graduate business schools	22	11	33	60
Engineering schools and CNRS	4	4	8	14
Total	34	21	55	100
% of the total	61	39	100	

view notes allowed us to check the transcript accuracy and to understand incrementally our research objects. Key elements were highlighted directly on the transcripts. Despite using the same interview guide for research protocol, we were also able to add specific questions according to previous interview analysis. This was done each time, until we were able to formulate our first analysis grid.

After the completion of all the interviews, the transcripts were again analysed to note any quotations that were illustrations of our previous theoretical framework and interview analysis. All key attributes were examined. In a third step, we drew up a new draft of our final analysis framework, with the description of different attributes leading to conducting management research in France. This framework was given to two French colleagues in a business school who checked the accuracy of our overall analysis according to their understanding of management research in France. All the transcripts were then re-examined and various quotations were selected.

We then presented our findings to three groups of management lecturers. The first group was composed of French colleagues in a business school, the second was composed of foreign colleagues, and the last was a mix of French and foreign colleagues. This process enabled us to check the accuracy of our analysis grid and to see to what extent our understanding was context dependent. In the last stage, a final paper was written and the transcripts were re-examined to check if any important element was missing. As expected after a long analysis process, our analysis of the collected information was, to the best of our knowledge, exhaustive.

Conditions of French Management Research and its Effects

The interviews we conducted with French researchers allowed us to describe in detail the various attributes that motivated them to conduct any given research. A discussion of these attributes follows (see Table 3 for a summary of the various variables, conditions and effects).

Table 3. Variables and conditions of French management research and their effects

Variables	Conditions	Effects
Gain/loss	No loss Early tenure	Lack of incentives to publish internationally
Valorised identity	Difference between pure researcher and mixed researcher with teaching and administrative activities	Self motivation because of valorised status Overload of French academic because of mixed activities, leading to difficulties in devoting enough resources to international publication
Community membership	Community of reference: France Limited size of the French management research community	Important to be visible in the French arena, but not abroad
Independence	Strong independence of French management researchers	This leads to the rejection of any accountability
Continuity	Important mimetic emulation by French academics	Existence of a continuity, when young scholars imitate older French academics with few international publications
Accountability	French management researchers avoid economic, institutional and hierarchical constraints. Logic of control academic, but within the French space	Difficult to control academics Social demand for international publication is non-existent

Gain without Loss

One motive for doing research may be the possibility of gain. Management researchers can decide to use part of their time to do research with hopes of concrete rewards. We exclude here the reward of enhanced reputation of the researcher, which may be an important motivator of research and will be analysed separately. French institutions offer various incentives derived from an evaluation of the completed research of individuals, and involving a selection of the following:

- tangible elements of honorary recognition, such as a large office or an assistant;
- a specific research budget with the expectation of publication;
- free time (from two to three months up to one year) for specific research projects, again with the expectation of publication; and
- internal promotion and bonuses.

The researchers we interviewed explained the link between the attribute of gain and research activity.

> The main incentive is to progress one's career.
>
> (Laboratory head)

> Research teachers are aware of the internal system of evaluation, which means going from one grade to another, which in turn has repercussions on salary.
>
> (Laboratory head)

This does not mean that research behaviour is determined solely by potential gains. Some researchers may be unfamiliar with the indicators used to judge them and the rewards at stake. In particular, young French scientists may have limited understanding of their academic communities. In parallel with the socialisation process within the academic community, researchers develop strategies guided by their own judgment. Beyond individual incentives, gain can be collective.

> We felt the need to structure the team and to focus on certain common research themes since the university had set that as a condition for giving financial means.
>
> (University researcher)

> The President and Dean of the University insisted that we have research actions in common with the economists; it was a condition to justify the use of new premises and an increase in the research budget.
>
> (Senior management teacher)

One peculiarity of the French system which could minimise research is the absence of loss. If a gain associated with research can incite action, a loss might be incurred from the absence of research. Because most French lecturers receive

permanent contracts rapidly, they might lose nothing if they fail to publish. In the public system, academic staff members are granted tenure (they become *agent titulaire*) after only one or two years.[48] After the *titularisation* (attribution of tenure), it is extremely difficult to fire them. In the graduate business schools, lecturers are most often recruited on a contract of indeterminate length (*contrat à durée indéterminée*) with a probation period of between six and 12 months. Thus, unlike the US system, a lecturer's job contract cannot be cancelled on the grounds of poor research performance.

> There is no sanction against those who do not produce anything.
>
> (University teacher)

> If somebody produces nothing good in research or in teaching, nothing happens. There is no culture of evaluation with sanctions here, except for recruitment and the aggregation [French professor certification].
>
> (University teacher)

> Within a particular grade, progression is decided on a national level according to the length of time in the post, whatever the quality of the work of the individual.
>
> (University teacher)

However, research can lead to promotion from permanent lecturer to full professor, which brings financial rewards. While career progression according to research activity can be a goal in the early part of professional life, this incentive decreases with advancement within the hierarchy.

> The majority of teachers do not do research because it is no longer given value when you are professor [with tenure].
>
> (University teacher)

> In our profession you can quite quickly reach a level where you do not have to do research anymore, since this activity has no evaluation.
>
> (University teacher)

> [A research teacher is like] an investor who builds up his investment at the start of his career and who lives on his income with his creativity wearing out.
>
> (University teacher)

With no loss and early tenure, it is not surprising to see many French researchers curtailing research early in their careers and therefore ceasing to publish in international journals. Furthermore, except in the top 10 business schools where incentives were created, most French academics have no particular incentive to

publish in international journals. Even in top business schools, some colleagues argue that private consulting is financially more interesting.

Valorised Identity

In France, researchers are more valued than teachers. The status of a full time CNRS or engineering school researcher (who teaches very little) surpasses the status of a university or business school research-teacher (mixed activity). This differentiation comes partly from an elitist view of research, long held in France. For example, the Collège Royal was created in 1530 to teach disciplines not taught at the University of Paris, established in 1257. What is now the Collège de France is still a very special institution because it has only one scholar for each research field. His or her duty is to conduct high-level research and to teach a few hours a year, mainly to other scientists. Bourdieu and Foucault were professors at the Collège de France. Another example is the creation of the Paris Academy of Science in the seventeenth century. The Academy of Sciences was a place for the official recognition of the contributions of *savants* (scientists), rather than a place of knowledge creation.[49] At the time of the French revolution, the role of science was further enhanced in French society. For example, Destutt de Tracy created the word 'ideology', for the science of ideas. Those who propagated ideology wanted to 'submit France to the learned, who possessed knowledge'.[50] This elitism could explain a certain nobility that still attaches to being a French academic.[51] The word 'noble' is not too exaggerated if we consider the high level of social reproduction in French society. Students from the French upper classes succeed at school and in their careers more than their peers. Furthermore, in the French context, the professional is honour-bound to do his or her job well;[52] this is especially true of French researchers.

So, a great tradition of elitism in science has existed in France since at least the Renaissance. Five centuries have crystallised not only statutory opposition but also identity opposition in France. A highly valued identity is gained by the researcher who produces scientific knowledge certified by articles in international reviews with editorial boards. The social position of a researcher corresponds to that of a civil servant working for a state agency, such as the CNRS. In this last case, the CNRS is a 'true Republic of Science'[53] where the production of knowledge is the main goal, this goal being highly valued in French society. Another identity is that of research teacher, able to renew knowledge and transmit it to a public that is essentially made up of students in higher education. This identity is sometimes less valued than the first.

In the field of management research, we find this identity factor in scientific activity. Researchers clearly have a motivation linked to their perception of the identity of a scientist. The valorisation is personal.

> If I do research which takes up a lot of my time, it's at my initiative. It is the noble part of my job.
>
> (University teacher)

> Research is an honour. We have set up a hierarchy of skills. Those who are at the top of this hierarchy are the researchers.
>
> (Director of research team)

> Our identity is first and foremost that of a researcher. This constitutes a stifling pressure which pushes everyone to produce in research.
>
> (Head of laboratory)

The valorised identity leads to many researchers continuing their research activity throughout their career. However, this is not necessarily reflected in publications in international academic journals. Furthermore, a problem for the mixed researchers is often the heavy workload, involving not only research, but also teaching and administrative duties. The great majority of French management researchers are engaged in many other activities unrelated to research.

Community Membership

In the case of management research, French scientists look for allies within various communities. It is strategically important for researchers to belong to a specific research group. The activities of discovery and justification of French management research take place in the national community. In France, there is a real community of management researchers (there are also some divisions). One explanation is certainly the small size of the French community. This facilitates social interactions among members.

> The size of the French community of management researchers is small which means everyone knows everyone. This community federates around a main common objective.
>
> (University teacher)

Secondly, the existence of intermediary institutions could explain the existence of the community. Intermediary institutions allow mediation between research performance (and its outcomes) and society at large.[54] For example, the research network creates linkages among institutions, committees, councils, programming bodies, etc. A large part of the literature has highlighted the fact that national institutional features have the most contributory influences in shaping scientific development.[55]

During our interview process, we tried to understand in particular the pertinent spaces of justification for French management researchers. At first sight it seems that the place of scientists is not limited by national borders, and that it covers the planet, or at least the zones concerned by a given research area. In various scientific fields, scientists are members of 'invisible colleges', unofficial organisations, in which information circulates, social interactions occur, and articles, advice and resources are exchanged.[56] Some authors have noted the existence of a technological community, defined as a collective group of scientists and engineers working on the same problem.[57] They emphasise the importance of the researcher's environment beyond his laboratory. An idealised vision would be of a 'scientific community traditionally seen as a space of free circulation of information, in which researchers and other learned people not directly concerned could share information and services with no limitation'.[58] This view implies the existence of a single research community, or a unique space of discovery and justification.

However, most crucial to our current concern is French national space. The space of the French management research community is essentially national, except for work with French-speaking colleagues, for example, Canadian, Belgian or Swiss. For French management researchers, the usual area for justification of their work is their own country. The most well-known conferences within the French community are held by French organisations in France. The public present at these conferences is, for the most part, French; the language of communication almost exclusively French. French management researchers do not have to justify themselves to the international management community.

For a French management researcher, being a member of the research community means being visible within the French community. Publishing in French, in French journals, participating in French academic associations are important elements of a successful career. This is, of course, not a problem in itself. The French tradition of *esprit critique* leads to intense academic debates. However, what is surprising is the virtual absence of international space of justification for most management researchers.

Independence

To explain the motivation to do research, another factor should be recognised: independence. Conformity, reinforced by community membership, should be put into perspective. A strong feeling of individualism exists among researchers. The type of people who decide to become researchers could explain the need for independence. Independence is a major element in the choice to become a researcher.

> No boss, no work schedule, the possibility to take my vacation when I wish.
>
> (Young researcher)

> … researchers are people who have lots of energy, are analytic and are highly individualistic.
>
> (Research director)

Researchers themselves often give their freedom as an important reason in the choice of their profession. They often wish to work more individually than collectively, to avoid hierarchy and to achieve a certain degree of autonomy.

> We were incapable of developing strong research themes because that clashed with the specific research of each individual. Everyone continues to do what he wants.
>
> (Director of laboratory)

Another explanation could lie in the scientific work itself. Individualism would seem to be a major characteristic in the profession of the researcher. The nature of research work tends to accentuate this desire with writing and editing alone, or individual research in the library.

> The system encourages individualistic behaviour. Between isolation and the absence of evaluation of collective work, the researcher works alone. In addition, only individual production is evaluated.
>
> (Director of research)

> One of the difficulties in creating a community is that people are seldom at the workplace, at most two days per week and that's not counting over three months of holidays per year.
>
> (Young researcher)

This relative absence makes interactions more difficult and reduces the possibility of developing a feeling of belonging to a collective body. One method of creating this community could be to select candidates for the position of researcher who would work well with others in the laboratory. However, in certain institutions a national body imposes candidates.

> In practice we are not directive in the recruitment process. We select a person from a group of candidates. A jury of around 10 people questions each candidate for between 10 and 20 minutes. It is not possible to know whether the successful candidate will integrate well into our research group.
>
> (University professor)

Given this level of individualism, institutions are to some extent obliged to grant a certain degree of freedom to researchers. French science policy has allowed a high degree of autonomy for scientific institutions in charge of academic science, the universities themselves and research agencies.[59] 'Most decisions regarding scientific activities and orientations of individuals and laboratories were largely in the hands of scientists or of scientific committees, the members of which are elected by their peers.'[60] This independence has no direct influence on the international publication record of French academics but reinforces another attribute: weak accountability. Independence is both an *ex ante* element in selecting a research career (young scholars choose the profession) and also an *ex post* behaviour (researchers need freedom in their research; for example, in selecting their research agenda). The desire for independence explains the refusal of French academics to tolerate any control system in their work, which means weak accountability.

Continuity

We can assume that most of those who do scientific research have done research previously. The continuity corresponds to the important mimetic emulation within French academics. Researchers imitate their peers. Through socialisation, individuals learn specific interpretations and associate pertinent actions. Selection, followed by socialisation of a new employee into a laboratory, will be accompanied by the creation of an initial sense that will subsequently change, but which will influence future decisions and therefore the researcher's actions.[61] True, there can also be a socialisation effect from the national community of management researchers, but young scientists develop their knowledge about different research

methods or various research fields within the French community. The researcher may also learn actions through joint research. Indeed, as Clarke and Fujimura point out, the different elements of research are most often co-produced.[62] Whether the process is formal (for example, research meetings), or informal (exchanges of information during conferences), researchers co-participate in the choice and elaboration of actions.

Certain actions are gradually standardised through repeated practice. The repetition can become a ritual. Indeed, a community needs rites, which allow for the repetition of agreed gestures that have an agreed sense.[63] Belonging to a scientific community is only possible through the repetition of rites (for example, the structure of a thesis defence). These rites may take on different forms in a research laboratory. The objective of the rite is to allow for a collective grouping in a given space and time, with the greatest number of intellectual interactions possible.

> The function of the rite is to create a dynamic of exchanges on scientific subjects.
>
> (Research centre director)

The most frequent rite is the monthly meeting to present current research work. This meeting would seem to represent the minimum level of organisation for a research team. Also important are seminars on fundamental works, presentations on the progress of doctoral theses, seminars by visiting researchers and departmental meetings. Clearly the objective here is to organise a time for researchers to meet, but also indirectly to reinforce the different norms associated with scientific work in the individual conscience. This learning process becomes even stronger when it is carried out with the guidance of peers.

> The rite is a moment of socialisation where everyone signals their adhesion to the community and the respect of the rules associated with that community.
>
> (Director of research team)

Through various means (peer relationships, socialisation, co-production, repeated practice and rituals), there is a certain continuity of action in the French management field.

> The senior French professors publish rarely in international academic journals: the young scholars are not required to do it.
>
> (University researcher)

Imitation of previous generations could explain the continuity in the lack of international publications. For example, it was always rare to see French academics at international conferences. In particular, French doctoral students did not participate in international doctoral workshops. This changed in the middle of the 1990s when young researchers started to submit their work to international audiences. Data for the Academy of Management (AOM) show this phenomenon. At the 2001 conference, 32 academic researchers from France were registered as speakers, including 11 from INSEAD (INSEAD is a leading international business school

Table 4. Registrations of academics from French institutions at Academy of Management Conferences, 2001–2006

	Registrations from institutions based in France	Registrations from INSEAD	% of INSEAD records in total
AOM 2001	32	11	34
AOM 2002	78	38	49
AOM 2003	94	41	44
AOM 2004	99	30	30
AOM 2005	112	29	26
AOM 2006	145	76	55

Source: Academy of Management website (http://meetings.aomonline.org).

based in France with just a few French academics) (see Table 4). Without taking INSEAD into account, during this particular year only one registered French academic had a competitive paper. In 2002, 78 'French' academics were registered, including 38 from INSEAD; in 2003, 94 (including 41 from INSEAD); in 2004, 99 (including 30 from INSEAD); in 2005, 112 (including 29 from INSEAD); and in 2006, 145 (including 76 from INSEAD).

Accountability

On the one hand, French management researchers exercise control over their work. One of the main mechanisms used is that of fixed deadlines for research, such as the date for the defence of a thesis, or for answering calls for conference papers or for articles for specialised journals. On the other hand, there is the question of how to control the work of researchers. Different approaches might be used to control scientists: economic, institutional, hierarchical and academic. Economic control is based upon evaluation of resources used. Institutional control focuses on work within a research and teaching organisation; for example, presence in the research centre or participation in management committees.[64] Both control types are usually relatively weak in the French context. Hierarchy is another means of control. A hierarchical superior may legitimise, through authority, an appropriate social conduct for the researchers. A hierarchical superior should be able to encourage colleagues to become involved in research work and publish in international journals.

However, direct hierarchical supervision is not evident in French management research laboratories. No matter what their title—dean of research, director of research, scientific director—the people who find themselves in charge of research activities usually have the following functions: identification of research themes/areas (strategy), administration of research (management of research budget), achievement of quality norms (control), and informing the public on behalf of the research team (communication). But even if people are made responsible for the work of others, they cannot give them orders.

> Real power would be the possibility of recruiting, promoting or firing, I do not have that power.
>
> (Head of laboratory)

> Even the chancellor of the University has no direct hierarchical relation with the professors. The chancellor cannot influence individuals. In fact, a professor is uncontrollable.
>
> (Director of research)

> The relation between the director and us is one of equality, without any real hierarchy. The director does not control us. The director is just a researcher who is there to look after the chores like administration.
>
> (University researcher)

Control is academic rather than hierarchical, economic or institutional. Management researchers discuss their research work with their peers. Young researchers work under the supervision of their thesis director. In addition, researchers who work in teams agree on the approach taken to do the research work. Teamwork implies a mutual control of the work done. In the opinion of researchers, the control of research work is the duty of their peers and not of their institution. Some external control is exercised through the process of sending papers to external reading committees before submission to editors for publication.

> The editors [of academic journals] are the people who are supposed to do the job of selecting material, not me.
>
> (Research director)

Reading committees, whether formal or informal, are obliged to judge the work of colleagues. The objective of such controls is to ensure a minimum standard of quality for scientific publication.

To understand fully the effect of the accountability variable, it is necessary to acknowledge the existence of social accountability for management researchers. Management researchers have to produce knowledge that is useful to industry, government, or society. This implies that a specific social group evaluates the utility of management research. From the definition of the research problem, to the circulation of results, external social groups may well demand to know what researchers are doing. However, the evaluation criteria of external social groups may be quite different from those of researchers and their peers. Furthermore, in the field of management research, researchers also have to consider the criteria used by the people they are studying. Though they are free to ignore such external criteria, management researchers are usually sensitive to the broader implications of what they are doing.[65]

> We do a lot of applied research which corresponds to a social demand. This use is valorising both internally and externally.
>
> (University teacher)

However, French firms seldom participate in management research. If they are studied, they are reluctant to permit publication of the results in France or abroad.

Thus, this element of social accountability does little to enhance the internationalisation of French management research.

As we have seen, French management researchers are influenced by academic accountability rather than by economic, institutional or hierarchical accountability. On the one hand, academic accountability does not influence them to publish in international journals. For example, some key institutions seem to ignore the need for international research. In the public system, 'the internationalisation policy is not a priority for the French Ministry of Education … The highest decision levels are not sensitive to realities faced by the base'.[4] The French community acknowledges this situation. For example, in 2002, a conference organised in France illustrated both the consciousness that French management research should be more international and also the growing pressure on French lecturers.

New academic pressure to be visible abroad is making itself felt. For example, the CNRS published a ranking of management academic journals in 2003. Most of the 'A' journals are international and in English (the majority of these American). Other rankings exist in the top 10 business schools. Leading business schools are now accredited by international bodies such as EFMD or AACSB and have to develop research. As a result, French scholars in recent years have been more visible in international academic circles. As we have seen, the number of French speakers at the Academy of Management increased four-fold between 2001 and 2006 (see Table 4). At the same time, most French business schools have no significant research.

Conclusion

This paper has sought to understand why there is so little French management research in international academic journals. The sense-making approach explains why people are sensitive to various invariants of their environment and how they understand their world with specific mental representations. Individuals categorise their environment in order to understand it and then act according to their perceptions. Interviews with management researchers in France allowed us to investigate their categorisations. It appears that French management researchers rapidly receive a tenure contract, which is not conditional on performing research. However, French researchers are motivated to do research since their profession is highly esteemed in France. The notion of the *savant* is embedded in French history and culture, but the value of this identity is essentially restricted to France. Recognition abroad for management researchers is not crucial.

French institutions could try to increase the international presence of the French researchers. However, other attributes of the management researcher category limit the institutional ability to direct researchers. Management researchers are characterised by a strong desire for independence. In addition, there is inertia in the system. Repetition of actions contributes to this inertia. Furthermore, French management researchers see themselves as accountable mainly to themselves and to their French peers. This accountability is personal and academic. Hierarchical and institutional controls are less powerful. It is also important to consider the social accountability characteristics of management research.

This research has clear application in the management of researchers. The basic idea, of course, is to try to induce researchers to do more research with international visibility. For example, institutions might consider incentive schemes linked to research productivity. Research team managers might do well to focus on the iden-

tity of researchers. Thus, some researchers could be valued by their institutions both internally and externally. Furthermore, the community spaces should be identified; for example, by avoiding the effect of weak international recognition because of the importance of the national community space. The continuity attribute is also a good framework to develop various policies such as a better socialisation process or specific rituals (leading, for example, to a better sense of belonging). Finally, it is clear that the independence and accountability attributes are critical.

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