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*Organization* 2008; 15; 811

DOI: 10.1177/1350508408091004

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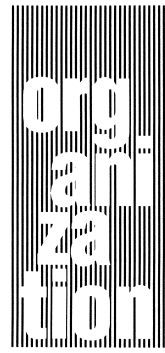
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# Connecting Knowledge to Management: The Case of Academic Research

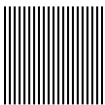
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***Abstract.** Drawing on in-depth interviews with research managers, this paper argues that academic research management is ideologically close to knowledge management. The research followed a grounded theory approach. This method appears particularly suited for this inquiry, due to the absence of a dominant theoretical framework, the consequent need for extra theorizing, and the appeal to develop a theoretical account that relies on the most privileged sources of this knowledge, namely research managers. The data analysis shows that competing conceptualizations of knowledge and associated management models provide the playground for academic research management. Owing to the impact of cultural and behavioural aspects in the dynamics of knowledge creation, shaping collectively crafted courses of action—rather than managing them—aptly represents the essence of academic research management. **Key words.** academic research management; grounded theory approach; knowledge management; organizational knowledge; university research*



Academic research management is an appealing yet under-researched area (Harvey et al., 2002). It is appealing because the academic research tradition stands in stark opposition to management. The image of the

DOI: 10.1177/1350508408091004

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solitary, truth-seeking, independent and self-employed thinker is a self-image that leaves little room for management (Ernø-Kjølhede et al., 2001). There is apparently a trend towards more managerial influence on academic research. Technological, economic and social developments are not only changing the way society and its institutions are organized, but are also reshaping the purpose, scope, conditions, structure and funding mechanisms of academic research (Ewan and Calvert, 2000). The necessity of managing limited amounts of public money more closely is leading governments to apply free-market principles to academic research, emphasizing 'audits' and 'accountability'. Particular trends towards more performance assessment of academic research can be noted (Ewan and Calvert, 2000; Harvey et al., 2002).

Such trends have led to an increased interest in various aspects of academic research work, particularly fuelled by the alleged emergence of alternative knowledge production modes (see Gibbons et al., 1994; Nowotny et al., 2001). Still, only a small number of studies examine the management of academic research at the levels where research work is done, viz. the levels of institutes and groups (notwithstanding the importance of such organizational arrangements in establishing the form and content of research work, see Morris, 2000, 2002; Whitley, 2000). For instance, Cohen et al. (1999) report that an increase in managerial pressures in public research institutes is dealt with through a renegotiation of the personal and professional interests of researchers. Ernø-Kjølhede et al. (2001) argue that the balance between managerial control and the individual autonomy of researchers might be found in a 'management for self-management' style, placing the managerial controlling task in the hands of the researchers. These studies are exploratory, as there is no established body of literature on the field and no substantial and systematic empirical work has been performed in academia. Besides, they reinforce many of the tensions, dilemmas and challenges that characterize the current academic debate (for an overview and critique see Trow and Clark, 1994).

The fragmented and sketchy understanding of topics associated with the academic research management practice calls for further theory-building. This leads to the question what theoretical and methodological guidance might be of use here. At first sight, theoretical insights from organizational knowledge and its management, as exemplified by the knowledge-based view of organizations (e.g. Grant, 1996) and knowledge management (e.g. Davenport and Prusak, 1998), might prove useful in suggesting possible new directions in this domain. Given the apparent connections between research work and knowledge creation (e.g. Fuller, 2002), the management of academic research bears a close ideological resemblance to knowledge management (KM). Knowledge management and academic research management appear as members of one family and their family resemblances may help make sense of their connections and differences. Research management offers an outstanding example of the management of a knowledge-intensive activity. Academic research is a timeless and innate



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type of knowledge-intensive work, and academic work involves knowledge creation in perhaps its purest sense. While 'knowledge-intensiveness' is a concept amenable to dispute (Alvesson, 2001), the tensions and complexities involved in managing jobs that are mostly based on knowledge creation are considered more severe than those involved in the management of jobs that involve high degrees of knowledge application.

Upon closer examination, though, the theoretical sources referred to above appear of limited value for guiding an investigation in the field of academic research management. In one sense, knowledge-based notions of organizations and management represent loosely coupled, developing and contentious perspectives, rather than robust theories fit to support hypothetico-deductive theorizing. In another sense, the contested character of both knowledge and management makes any definition of sensible propositions to test in this substantive domain deceiving, to say the least. Knowledge 'is a concept far too loose, ambiguous, and rich, and pointing in far too many directions simultaneously to be neatly organized, coordinated, and controlled' (Alvesson and Kärreman, 2001: 1012). Management, too, is an ambiguous term, to which many different meanings are attributed. What defines the function or identities of management cannot be understood as something fixed and final or meaning the same thing to everyone involved (Parker, 2004). Managing can be understood as a particular way of thinking and acting within organizations that is inextricable from its object. Consequently, the potential sphere of influence of management with regard to research knowledge depends largely on the viewpoints and practices of research managers.

If academic research management and knowledge management are indeed close relatives, what then is their family resemblance and what does that tell us about knowledge management? In this paper, the focus is on how the practice of academic research management can shed light on the possible prospects and limitations posed to management when knowledge becomes its object and to knowledge when it becomes subject to management attention. Here, grounded theory approach (Glaser and Strauss, 1967) might be helpful. This is an established organizational research method that seeks to generate theory—for instance, specification of knowledge and management concepts—through grounding, for example, the conceptualization of research managers' practices and opinions. In this paper, the principles and procedures of grounded theory approach are used to explore and develop a theoretical interpretation of how academic research management is defined and conducted, and how the effectiveness of such management is perceived by its proponents.

## Methods

The aim of this paper is conceptually to unravel the latent patterns that resolve the main concern and practices of research managers. For collecting and interpreting data, the research adopted a Grounded Theory Approach



(GTA, Glaser and Strauss, 1967). This method, whose genesis rests largely in studies of professional work carried out in complex organizational settings, appears particularly appropriate for researching managerial and organizational behaviour. What is more, GTA is useful for support theorizing of new 'substantive' areas, because of the naturalistically oriented data collection methods (Locke, 2001; Sousa and Hendriks, 2006).

GTA is a highly systematic methodology used for the collection, analysis and continuous comparison of data, whose purpose is the generation of an explanatory theory of basic common patterns in social life (Glaser and Strauss, 1967). Because of a perhaps somewhat uncritical heralding of the status of empirical data (e.g. Alvesson and Sköldböck, 2000), Glaser equates the method mostly with induction. However, even when the possibility of a theory-free, fully inductive approach is rejected, there is no need completely to refute the value of a GTA, as the principles of GTA fit well with methods of induction-informed abduction (Rennie, 2000). The theoretical concepts produced via GTA emerge from a continuous and abstract comparison of data incidents, rather than from existing theories. The constant comparison of codes, patterns, properties and associations, and the exploration of possible conceptual relationships should be inspired by a permanent openness to emerging concepts. Since GTA transcends the data to explain the theoretical preponderance of behaviour in a substantive area, it is abstract from time, place and people. The result is a theoretical contribution that fits (concepts express patterns in data), that works (concepts and their relationship account for the participants' main concern), that is relevant (it deals with the participants' main concern) and that is modifiable (as new data is analysed) (Glaser, 1978). These attributes can be seen as the four leading sources of trust in the method, that is, as the criteria through which the 'credibility' of a grounded theory is to be judged.

### **Empirical Research Setting, Interview Structure and Data Analysis**

Two fundamental choices were made in terms of research design. First, only management of publicly funded research was included, that is, research that was not financially dependent on commercial sources. This allowed a focus on the management of knowledge creation in perhaps its purest sense. Second, the research was conducted in the field of business administration and management studies in the Netherlands. Within this academic domain, research is organized predominantly by research institutes whose management structure comprises a director and programme coordinators. The former is responsible for delineating the overall research strategy and policy, while the latter organize research at the group level. Data collection took place between March 2003 and August 2004 and included institutes whose research programmes are explicitly organized around that research domain, namely the universities at Eindhoven, Enschede, Groningen, Maastricht, Nijmegen, Rotterdam and Tilburg.



The research-related documentation analysed (e.g. policies, themes and goals) enabled an understanding of how research is generally structured, at both the institute and the research group level. One of the researchers conducted 29 in-depth semi-structured face-to-face interviews with respondents formally responsible for research coordination tasks. The interviews covered four general questions. First, respondents were asked how they conceive research management. Second, they were invited to reflect on how they conduct research management. Third, they were asked how and why research quality is measured. Fourth, they were asked what effects they expected the combined practices addressed in the first three questions to have on the work of researchers.

Respondents' accounts were coded immediately and consecutively after the interviews in order to raise the theoretical sensitivity to emerging concepts. The codes offer researchers a 'condensed, abstract view with scope of the data that includes an otherwise seemingly disparate phenomenon' (Glaser, 1978: 55). In addition to the codes, an analytical elaboration of the meaning and possible relationships with other codes was explored in memos. The process of both coding and memoing is dynamic. This means that, since new data findings are constantly compared with similar ones from previous interviews, codes and memos are recursively reinterpreted and rewritten.

## Findings

### *Research Management Activities*

The analysis of the interviews shows that academic research managers recognize three key activities in their work, that is: it should be aimed at stimulating and facilitating the work of researchers; it should protect researchers against unwanted managerial influences, an activity labelled here as 'boundary management'; and it should seek to profile the identity of the research group, both within the research institute and as a recognition mark for outside parties.

**Stimulation and facilitation.** Respondents identified the leading research management activity as stimulating and facilitating the conditions for researchers to conduct good research. The idea of facilitating the work process clearly prevails over other management activities, such as controlling or directing. For instance, one programme coordinator suggested that:

... research management is an activity primarily aimed at facilitating, stimulating and motivating researchers to conduct and publish proper research.

Providing researchers with the means to do good research appears to be the cornerstone of the research managers' activity. The means include infrastructure (e.g. room, computer), funds (e.g. money, databases) and research context (e.g. group meetings, research seminars). These conditions are meant to ensure not only that researchers have the appropriate physical



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and social conditions, but also that they are not distracted from their work by marginal occupations (e.g. bureaucratic tasks). To put it differently, research managers admit that they have to ensure that those enabling means are not wasted on time-consuming and unimportant activities. This idea is bound to facilitate the research managers' work, since it might reinforce their sphere of influence. As one research director put it:

Facilitating the researcher's role is of pivotal importance not only for the researcher's performance, but also for both the process and the content aspects of managing research.

However, respondents acknowledged that they could not directly influence individual research agendas. This is a result of a combination of researchers' traditional stubbornness and a strong individualistic research tradition in the field of the social sciences. Research managers emphasized their powerlessness either to change the professional ethos of researchers or to challenge the tradition of the academic communities to which researchers belong or wish to belong. One research director conveyed this idea as:

Research programming in the business administration and management field is more difficult than in, for example, the physics or chemistry arena because there are no external drivers. The research topics are common and the interdependence between researchers is both technical and financial. To some extent, it would be desirable to adopt this research attitude also in our domain.

The characteristics of the local research setting and the profiles of the research group and its researchers shape the type of management interventions as well as their perceived effectiveness. While providing researchers with funds and the infrastructure is essential for facilitating research, the development of a research context emerged as a more critical and problematic activity. Research management activities seek to facilitate the research processes, while creating a buffer to protect researchers from 'bureaucratic assaults'.

**Boundary management.** Developing a stimulating research context is aligned with the idea of defining the conditions for protecting this context from interventions that might hinder its development. The concept of boundary management conveys the image that research managers should protect researchers against organizational attempts to regulate and control. In other words, boundary management is needed to protect researchers from more management. One programme coordinator suggested that:

Research managers should deal with the outside pressures likely to endanger the conditions for doing proper research, keeping them outside the research setting. Academic researchers are inherently embedded in professional bureaucracies. To do proper research, they should not be bothered too much with any kind of bureaucratic rules. Research management has to provide some sort of protection against these regulations.



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This suggests that the research manager should act as a mediator between the organizational demands for administrative control and the 'breathing space' researchers need for their work. Research managers seek to alleviate the bureaucratic burden. One programme coordinator elaborated this idea, suggesting that:

A research manager has to protect researchers against the outside, against bureaucratic things, protect them against requests for teaching, make sure that their research time is concentrated, ensuring that they can work. This is related to the research managers' administrative skills.

The notion of boundary management suggests a kind of divide between 'we' and 'they'. 'We' stands for the research group and its manager, while 'they' stands for the research institute. This notion is puzzling given that research managers also highlighted their problem with managing professionals who seek to have a voice in international debates. As one research director argued:

Researchers tell me that their research groups are not part of their 'system', because they have their colleagues and their discussions elsewhere around the world. This isn't nonsense; it creates tension between the worldwide localization of the processes of knowledge creation and the research groups I'm trying to manage.

There is some ambivalence here in that, on the one hand, research managers seek to develop their groups within the local community, protecting them against the administrative load. On the other hand, they seek to profile their groups within the broad peer-review community, which is seen to limit their sphere of influence.

**Profiling research groups' identities.** Profiling research groups emerged as a key concern across interviews. The underlying idea is twofold. First, it is aimed at inverting the both loosely coupled and individualistic working traditions that have characterized researchers in this academic domain. Second, it is aimed at reinforcing group coherency around a self-binding research focus, increasing commitment and funnelling work outputs. As one programme coordinator maintained:

Researchers have little knowledge of each other's work. For instance, in a recent discussion within our group we realized that three researchers were unaware that they were reading about the same topic and were searching for the same thing.

Researchers often behave as 'hobby seekers', it was argued, which creates a tension between their individual orientations and goals and those set by research institutes. Although research managers do not seek to dispute the weight of this professional culture, apparently they are trying to stimulate a common working ground through involvement. The strategy used is that of promoting a bottom-up definition of an umbrella focus that embraces the dissimilar research interests of the group members. One research director illustrated this by saying that:



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... the existing research groups did not cooperate very much. They were a bunch of individuals, not really a team. We adopted a decentralized bottom-up approach to research management, and asked our top researchers to form their own groups. Our current groups reflect their choices, which has somehow stimulated teamwork. In terms of people, I have been putting much effort into the transition from group to team focus. In terms of content, my goal is to try to harmonize individual research agendas by developing local research programmes.

The idea of explicitly imposing a research programme on researchers appears absent. Conversely, participative bottom-up schemes are expected to improve the outcomes of research groups and, consequently, those of the institute. As one research director suggested:

We have small groups of people working on each research topic. This diversity of people and scientific interests might endanger the achievements of the research institute if there is no binding research focus.

The collective development of a research focus results in a self-binding, and thus legitimized focus, as it derives mainly from the interplay between the different backgrounds, research perspectives and scientific orientations of a group's members. This allows researchers to find new opportunities to cooperate within their own research setting. Identifying a binding umbrella theme that epitomizes researchers' academic orientations reinforces the profile of the group. One programme coordinator illustrated this notion by arguing that:

Without a research focus we cannot manage a research group. We have to develop a coherent focus together with the researchers. This actually works as a kind of loop: we have a research focus that directs the interests of the researchers, which helps them to conduct research together, which leads to output that can be discussed by the research group as peer review, and which might help in refocusing the programme.

The development of a comprehensive research focus that embraces all of the researchers' fields of interest, while not impairing their room for manoeuvre, is expected to reinforce the group identity.

### ***Main Challenges***

**Boundless communities.** The concept of the boundless community relates to the fact that the physical borders of the research institute do not define the work setting in which researchers operate and evolve to their full satisfaction. As one research director suggested:

There is tension between the worldwide localization of the processes of knowledge creation, and the research groups I am trying to manage. Consequently, the faculty functions as a hotel, with a room, a chair, a desk, a telephone and a computer. Figuratively, they ask me to be a good hotel manager.



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For researchers, the national and international academic communities in which they seek to position themselves are synonymous with networking, fair peer-review and international scientific status. This idea soon emerged as a characteristic that evokes the limited scope of influence of research management. One programme coordinator conveyed this restricted influence as:

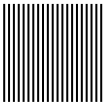
Researchers are embedded in certain academic traditions and communities based on status and peer review, whose developments and changes inevitably affect them. Also, academic communities are international communities and not small communities in a local research setting. Researchers typically develop their own academic networks from which they get their peer-review assessment. Thus, the peer review is not bounded or demarcated by the institution. This implies that the peer review does not follow a hierarchical structure and that research management cannot fully control the work of researchers.

The idea of a researcher as a player in a boundless arena partly justifies their loose organizational affiliation. This is related to the coexistence of two types of status. Research organizations, which have explicit, hierarchical and affiliation rules, confer a formal status on researchers (e.g. research fellow). The international peer-review community grants researchers an informal status (e.g. key participant in academic debates), based on tacit norms and a dynamic assessment of work relevancy. Researchers try to score in both arenas. On the one hand, they need formal anchorage to an institution that provides them with the infrastructure needed to carry out their work (e.g. room, salary, career). On the other hand, they seek informal anchorage to a peer community that is likely to provide them with an external drive, recognition and an internationally conferred status.

### *Quality Quest*

**Research quality as a contested affair.** Respondents suggested that the debates about research quality are both provisional and ongoing, as quality perceptions are unavoidably controversial. Both researchers and academic communities construct unarticulated notions of what research quality is. This characteristic of quality as both an individual and a collective construction raises problems for research management. One research director illustrated this by saying:

Often we know quite well that we've done a good job, even though it might be very difficult to understand or explain why. Everything else we can say about quality is circumstantial and indirect, which is not good for policy makers. Researchers know each other's status and quality ('who is who'). The concept is clear to everybody, though it is very difficult to measure it and take actions upon it, as is often the case in our field of work. This is a key element in managing research.



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The academic background and the quality notions of the academic communities where researchers seek affiliation shape the individual and collective quality notions. Since research institutes are often multidisciplinary groups of individuals, it is problematic to find a generally accepted notion of quality. One research director argued that:

It is not a trivial task to define what good research is. What is good is what our society and our research communities consider good. However, this does not decrease the ambiguity of the term. The multidisciplinary profile of our research institute brings problems as to an accepted definition of 'a good publication in a good journal'. We do not have a common scientific background. The different academic backgrounds of researchers are reflected in their distinct scientific frames of reference, which also shape the kind of publications they consider good.

While at the research institute level the definition of a consensual quality standard appears to be rather problematic, at a research group level this might assume a less contentious character. The reason is that in their search for identity, research groups define what they consider a good research output, conciliating scattered notions of quality. This definition is tied not only to the research goals they set, but also to the standards of the research community with which they seek affiliation. The high value put on the external peer-review quality assessment adds to the problem at the research institute level.

**Imperfect local quality assessment.** Respondents argued that the quality assessment mechanisms fail to discriminate between 'good' and 'less good' research. These mechanisms are seen to represent proxies to quality but not to translate quality as such. Research institutes sought inspiration in the SCI and SSCI journals as regards references to quality, which is perceived as a form of diminishing the ambiguity of the assessment. Yet, this does not eliminate it, especially in multidisciplinary groups. One research director argued that:

... researchers from the ICT field consider publications in conference proceedings just as valuable as publications in academic journals, claiming that their impact on the research community is both faster and more influential. Researchers from the mathematics or psychology field oppose this, claiming exactly the opposite.

It is claimed that only peers can properly assess quality. Since the goal of academic research is to further knowledge on a specific domain, peer assessment should be used to reformulate and restate the researchers' contribution to science. The complexity of the peer-review assessment is not easily amenable to assessment instruments.

### ***Motivating Researchers***

Respondents maintained that motivated researchers are crucial for improving research quality. What motivates researchers and what role



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research managers can play here emerged as key issues. It was argued that peer recognition plays a major role in the motivation of researchers. One programme coordinator suggested that:

... being asked to referee an article, to edit a special issue or to write a chapter for a book also motivates researchers.

However, respondents agreed that motivation is not within the research institute's sphere of influence. In fact, despite considering it as critical, respondents suggested that motivating researchers is far too problematic. For instance, one research director suggested that:

... it is very difficult to motivate someone who is not intrinsically motivated to conduct research. We consider that a newcomer who is attracted by the research focus is already motivated when he or she is appointed. I also think it is not an easy task to keep researchers motivated, even if they are already motivated.

Internally, research managers try to motivate researchers by developing an intellectually challenging research context. One programme coordinator suggested that:

... researchers are motivated by good discussions, good articles, good stories, and workshops.

While another argued that researchers:

... are motivated by the chance to work together on a challenging and interesting topic and to see that that work leads to improving their own knowledge of that topic. It is a combination of working together and discussing research interests, gaining knowledge from that process.

The development of an intellectually inspiring work context is intended to reproduce partially the dynamics and sources of the researchers' motivation, perceived as resulting from a subtle balance between intrinsic (virtually unmanageable) and extrinsic (partially manageable) elements.

## Discussion

### *Similarities and Dissimilarities to Knowledge Management in Industry*

Academic research, particularly when it concerns basic research as addressed here, provides an interesting case for connecting knowledge to management. It is arguably different from commercial settings, which serve as the typical home base for the KM literature. A relevant question then is how the results of the study compare to KM in an industry setting. The data show that three challenges tackled via three management activities define the core of KM in academia. Key challenges research managers face are boundless communities, the quality quest and researchers' motivation. The notion of boundless communities concerns the possible management tension involved in influencing local cosmopolitans (Glaser, 1963), that is, professionals whose orientations



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and priorities refer to evolving research communities, rather than local 'enablers' vis-à-vis 'constraints'. Quality management in academia, too, is a thorny theme. Quality management necessarily imposes rigid and stable institutional boundaries. These often involve clashes with the more fluid validation boundaries that disciplines build to safeguard their quality via communication among peers (Fujigaki and Leydesdorff, 2000). Motivating researchers, the third challenge, is considered critical to performance, yet mostly outside research managers' direct sphere of influence. Research managers tackle these challenges mainly via stimulation and facilitation, boundary management and profiling research identities. Boundary management is central. It involves safeguarding the porous boundaries between researchers' work. That is, in its core research management includes the apparently paradoxical function of protecting researchers from more management. Unless managers are able to protect institutional research boundaries, their other management roles remain futile. In other words, boundary management is a precondition for effectively promoting an inspiring work context through the stimulation and facilitation of working conditions. It also affects whether profiling a research group's identity through developing a meta-identity will provide researchers with a sense of belongingness and thus enhance their disposition to cooperate.

The question then is how management of academic knowledge production connects to common KM debates. Value of knowledge is the basis for connecting knowledge to management because value rather than knowledge underlies the management objective. Compared to typical KM, debates of knowledge in universities are less clogged with connections to value and performance. Obviously, discussions of science's societal roles have always addressed value issues, and in recent decades a reinforcement or revival of value elements in these discussions is noticeable. Underlying developments include trends of marketization and commercialization pushing the 'Humboldtian' university as an autonomous body of self-governing professionals away from mode-1 to mode-2 science (Baert and Shipman, 2005; Gibbons et al., 1994). Such developments also imply that the differences between academia and commercial knowledge-intensive firms are gradual rather than absolute, and are subject to change. As, for instance, Kleinman and Vallas (2001) note, academia and industry show trends of convergence, because of an 'industrialization' of academy and a simultaneous 'collegialization' of industry.

Yet we argue that in academic settings a less value-contaminated understanding of knowledge moves to the foreground. In debates of academic knowledge production, the economically-inspired value propositions and associated managerialism are mostly treated as the product of external pressures. Reputation, prestige and recognition continue to provide academia's prime coordination mechanisms (Dewett and Denisi, 2004; Whitley, 2000). Therefore, even if the dichotomy academia-industry does not involve a strict separation, the reconstruction of KM practices in



universities allows us to inspect the role of knowledge in mainstream KM. Are these KM debates about knowledge or mostly about value creation loosely coupled with knowledge creation and application? As the data presented above suggest, the key issue in 'academic KM' is the tension between individuals as members of global, boundless communities and management as representation of local, institutional forces (cf. the first challenge and the second set of practices identified above). Differences between quality and motivation management (the other two challenges) and the practices of facilitation and profiling identities derive from these. Based on the data presented above, we offer three themes to explore how practices of academic KM shed light on commercial KM.

**A strict separation of knowledge and management is artificial.** As Alvesson and Kärreman (2001) argue, a theme that remains largely unexplored in KM literature is how the connection of management and knowledge is to be conceived. The focus is on phenomena managers should be aware of and practices they could adopt. Specification of management appears mostly in the form of tasks and roles of groups and departments (e.g. knowledge centres or knowledge teams). It also includes identifying individuals that are to facilitate such knowledge processes as knowledge sharing and knowledge creation (e.g. knowledge brokers or 'rainmakers'). Much attention is given to technologies as enablers of these processes, with the implied management task of providing these technologies. In a separate stream of KM literature, HRM practices are linked to KM objectives (e.g. Cabrera and Cabrera, 2005; Evans, 2003). Alvesson and Kärreman put forward that by not addressing the implied linkage at a more fundamental level, the KM literature fails to notice the possible contradiction implied in the concept. Because knowledge is associated with ambiguity, lack of specificity, and dynamics, it is a phenomenon that is difficult, if not impossible to manage in a traditional sense. Therefore, what gets managed under the label of KM may well be at odds with knowledge. 'Knowledge management as a concept is thus threatened by falling into pieces if both the two ingredients are taken too seriously' (Alvesson and Kärreman, 2001: 1015).

What the data presented above show is that the implicit separation of knowledge and management as conveyed by the term KM is hard to defend. As boundary managers, research managers are not passive consumers of management directives. They actively seek ways not to manage too much, in view of researchers' idiosyncrasies. Managers play dual roles, as most of them are simultaneously administrators and researchers. In one way, this twin identity inspires their management behaviour, as they are aware of researchers' needs, drives, concerns, expectations, etc. In another way, it blurs the traditional role distinction between the manager (who plans, organizes, coordinates and controls work) and the managed (who works). The separation between knowledge as something that is manageable and management that builds on some understanding of research knowledge appears to be artificial. KM in this understanding has very little to do

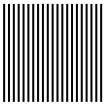


with elicitation and representation of knowledge as preconditions for management control, to be separated from knowledge usage in task execution (Sewell, 2005). The key to understanding research management is not to be found in the formal paper systems that explicate criteria for research quality, nor in the rhetoric that heralds a 'knowledge competition among universities' nor in the need to 'define the niche for a research group'. Academic research management remains low in meaning outside the practices of managing by individuals who adopt the dual role of manager and researcher. Therefore, when both knowledge and management are taken seriously, the apparent contradiction in the term knowledge management disappears, at least when that term is assigned a different meaning than in mainstream KM.

This also implies that ICT cannot play first fiddle in KM and the prime goal of KM does not lie in 'leverage of key learnings', 'exchanging best practices' and the like. Social participation is the key issue when knowledge and management are brought together. What is striking is that throughout the interviews themes such as leverage, knowledge sharing and ICT usage did not appear. Attempts to capture knowledge in repositories or best-practice databases as key elements of KM programs (e.g. McNulty, 2002; Newell et al., 2006) are predicated upon a strict yet indefensible separation of knowledge and its management. The connection between KM and technology use thus appears as unnatural and perhaps even far-fetched.

**Multiple changing perceptions of KM coexist within an organization.** Closely linked to the strict separation of knowledge and management in KM is the notion that management has to explicate a clear and unambiguous link between the two. At the organizational level, this link involves specifying a knowledge strategy that needs to be translated into management practices (e.g. Zack, 1999). As argued by several authors (e.g. Alvesson, 2001; Driver, 2002), KM typically involves normative control rather than management via work directives or enacted blueprints. Knowledge sharing is heralded as desirable, a knowledge-friendly culture is promoted, and development interviews are used for assessment of whether individuals come up to the prevailing standards.

What the data confirm is that notions of dispute and dialogue are crucial for making sense of KM, but are largely ignored by most of the KM literature (see Schultze and Stabell, 2004). Many perceptions coexist regarding how to manage or how not to manage given a focus on knowledge. Not one clearly delineated set of norms feeds into management as normative control, but various norm sets with varying degrees of specificity and internal conflict. Even if clashes may result, more often between management and researchers than among researchers, this does not have to be problematic. One key task of the boundary management function is to renegotiate potentially contentious norms into a workable mould at the shop floor (see Cohen et al., 1999). The practices of research management build on the recognition that researchers' orientations and perceptions are not given, but resonate in



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the viewpoints and practices of their communities. The work reality of a research group is negotiated and defined in interaction, rather than preset or imposed. Under the guise of formal arrangements, research groups evolve close to the informal and emergent lines of epistemic communities and communities of practice. Academic research management is characterized by the need to provide a delicate mix of guidance and freedom, seasoned with the recognition of the inescapable challenges posed to that mix. The research manager acts as a facilitator, that is, as someone who tries to set the general tone for working, rather than exerting direct control over work processes. In this way, research management comes close to the idea of 'shaping' rather than 'managing' (Ferlie et al., 2002).

### **Knowledge-as-practice is the umbrella for understanding knowledge-as-asset.**

A key theme of the KM literature concerns the conceptualization of knowledge. Two camps dominate this arena, labelled as cognitivist (Chiva and Alegre, 2005) or objectivist thinkers (Hislop, 2005) and adherents of a 'social-practice' (Chiva and Alegre, 2005) or 'practice-based' approach (Hislop, 2005). The cognitivist approach to KM, which resonates with an 'epistemology of possession' (Cook and Brown, 1999), treats knowledge as an object or entity that can be converted, codified, commodified, etc. It feeds into the neo-functionalistic mainstream thinking of KM aimed at value optimization of knowledge as an asset (see Schultze and Stabell, 2004). The social-practice approach, on the other hand, treats knowledge as an organic process, which privileges social interaction and intersubjective sensemaking as a way to facilitate knowledge-creation and knowledge-sharing processes. It relates to what Cook and Brown (1999) define as an 'epistemology of practice', which stresses that a separation of knowledge from the processes, activities and contexts that produce it, ignores its situated, contested and mediated character (Blackler, 1995).

The data empirically confirm that the social-practice approach provides a natural connection for making sense of academic research management as something KM-like. Therefore, they confirm the inherent limitations of mainstream cognitivist thinking in KM. The way managers go about organizing research work, clearly shaped by its prospects and challenges, indicates that they think of research as an activity that is inextricable from a complex, fluid and dynamic socio-professional web of relationships and influences. Consequently, research managers seek within the organization (that is, within the faculty or department) to promote and reproduce the activities, norms, values and beliefs that resemble those of the communities they co-represent. This suggests that the practice of research management treats research work as processes whose latent possibilities and impossibilities are inseparably embedded in the context in which they develop. The practices of management, the practices of research, and the internal and external aspects that inspire these practices are intertwined in finely tuned ways.



The findings also indicate that interpreting research management via a practice-based approach to KM alone is not satisfactory. Elements of knowledge as possession and associated objectivist management approaches pervade the discussions and practices that research managers engage in. Research managers are responsible for organizing the functioning of research groups against the backdrop of organizational arrangements that involve, for example, performance rules, procedures, expectations, goals and budgets, increasingly drawing on such managerial principles as 'efficiency', 'selectivity' or 'value for money' (Parker and Jary, 1995). This representational exercise dissociates knowledge from the knowing subject, since it draws on physical manifestations of knowledge. In so doing, the practice of research management inevitably involves elements of 'possession', as organizational interventions pertaining to research quality betray the urge to commodify its value. Yet the representation appears hardly meaningful in a standalone fashion, but as a medium for debate. The problem does not lie in thinking of knowledge as an asset, but in thinking of knowledge as nothing but an asset.

Therefore, thinking of the management of knowledge as being driven by either 'practice-based' or 'objectivist' thinking is deceiving, to say the least. Epistemology-of-practice thinking is often developed in stark opposition to epistemology-of-possession perceptions. The notion of a generative dance between the two stances, as stressed by Cook and Brown (1999), typically gets lost in the process. Even if an understanding of knowledge as a valuable commodity is inherently limited, it should not be forgotten that aspects of research knowledge that can be seen as possessions (manifestations, products, competences, etc.) provide meaningful elements in research management discussions. What the results of the empirical work show is that 'knowledge as practice' and 'knowledge as possession' approaches coexist in different and not always conflicting ways and magnitudes. They are constantly exposed to many forces. Often reflexively, they influence the various practices of management. In other words, knowledge as practice and knowledge as possession are not distinct types as Cook and Brown see them. This suggests that the practice—possession dichotomy is conceptually useful but empirically inadequate to draw a convincing picture of the prospects and challenges posed to management when knowledge becomes its subject of attention.

## Conclusion

The challenges posed to academic research management as they surfaced in the interviews with research managers draw attention to the reflexive nature of this professional activity. The coexistence of different conceptions of knowledge and management highlights the prospects and constraints that surround managerial attempts to manage knowledge. The impact of cultural (boundless communities, quality quest) and behavioural (motivation)



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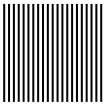
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aspects in the dynamics of knowledge creation processes is crucial, yet difficult to determine. These aspects unpredictably affect the natural development of academic knowledge production itself, the organizational knowledge appropriation mechanisms, and the social and physical setting that affects how academic researchers sell their past endeavours or craft their future plans. While the challenges involved are beyond direct managerial influence, they inescapably mould the nature and impact of managerial actions. This study thus empirically supports the notion that an epistemology of practice is essential for understanding issues of management vis-à-vis knowledge. It highlights the need to embrace notions of knowledge as social practice when interpreting management activity that is aimed at steering or facilitating practices of knowledge creation. Furthermore, the data show that sensemaking of management vis-à-vis knowledge needs to recognize and integrate epistemology-of-possession thinking into the overall picture.

While this paper adds to the discussions of academic research management and to the broader debates of management with respect to knowledge, it also has its limitations. The study was conducted in the Netherlands and solely within the fields of business administration and management studies. It would be interesting to contrast the theoretical concepts that emerge from this exploratory inquiry with those from research management approaches in other research streams, for example, in other social sciences (e.g. economics) and in the natural sciences. Investigations in different national contexts might help to focus the emerging picture. Although we fully acknowledge the problem of generalizing the findings presented here to other disciplines and settings, we should like to stress that, as shown in this paper, a grounded theory interpretation of academic research management practices appears fruitful for the ongoing debates on organizational knowledge and associated management. It produces a conceptually rich picture of the prospects and the constraints management faces when knowledge becomes its object, and of the tensions and limitations that knowledge endures when it becomes subject to management attention. The clear family resemblance between discussions of knowledge management, organizational knowledge and academic research management may thus prove prolific on condition that these topics are not taken in a too narrow, historically-biased sense.

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