

***MANAGEMENT AS REFLEXIVE PRACTICE AND THE
ROLE OF TRANSACTIVE KNOWLEDGE***

Theme: The Social Processes of OL and KM

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Abstract

The paper analyzes management practices as reflexive practices based on transactive knowledge (Brauner, 2002). It relates the concept of transactive knowledge systems to central concepts of structuration theory (Giddens, 1984), namely structuration and the duality of structure. Structuration theory provides a practice-based foundation of the concept of transactive knowledge systems. It sheds light on the social processes involved in (meta-) knowledge generation in systems, groups, or communities of practice. Distinguishing between knowledge and metaknowledge allows for a better understanding of the involvement of knowledge in performing reflexive social practices. Furthermore, the paper refers to budgeting for an illustration of transactive knowledge in management practices.

Management as reflexive practice and the role of transactive knowledge

Introduction

Studying organisations as fields of practice has come to be one area of the enactment of "the practice turn in contemporary theory" (Schatzki, Knorr Cetina & Savigny, 2001; cf. Brown & Duguid, 1996; Gherardi, 2001; Nicolini & Holti, 2001). When agents in social systems in general, and in organisations in particular, act towards each other they relate in specific and regular ways. These ways can be understood as practices that constitute patterns of social relations. Organisations are thus produced through the continuous flow of social practices. Furthermore, management practices are a constitutive feature of organisations. Understanding management and non-management practices, thus, is helpful for understanding organisations. Practices depend on knowledge that agents apply in their acting. Consequently, it is necessary to clarify the role of knowledge in organisational practices to understand management practices.

Structuration theory (Giddens, 1984) provides a reasonable framework for conceptualising management and other organisational practices. Management is seen as reflexive practices of controlling the process of reflexive structuration (Ortmann, Sydow, & Windeler, 2000). But the structurationist concept of practices lacks a thorough underpinning with a viable concept of the knowledge bases of actors who perform these practices. A distinct model of the social organisation of knowledge is provided in the concept of transactive knowledge systems (Brauner, 2002; Moreland, 1999; Moreland, Argote, & Krishnan, 1996; Moreland & Myaskovsky, 2000; Wegner, 1987, 1995; Wegner, Erber, & Raymond, 1991; Wegner, Giuliano, & Hertel, 1985). Transactive knowledge systems are developed and used in interaction and communication in social systems. It is particularly helpful to distinguish between the actors' object-level knowledge and their knowledge about other actors' knowledge, i.e. their metaknowledge. This distinction between knowledge and metaknowledge (Brauner, 2002) provides a basis to better understand management practices. We will present a conceptualisation of management practices that contains the social organisation of knowledge through transactive knowledge systems. We will furthermore illustrate the strengths of this conceptualisation through referring to an example from a study on management accounting processes in Britain and Germany (drawn from Ahrens, 1999).

Practices in organisations

In his study on management accounting practices in Britain and Germany, Ahrens (1999) describes a meeting of management accountants and sales managers of a German brewery. Subject of the meeting is the demand of the company's board for serious cuts in expense budgets for sales and marketing due to negative sales variance against plan. The sales managers, Herr Schmidt and Herr Schwarz, argue that these budget cuts will undermine the long-term strategy of the company:

"Herr Schmidt is strongly opposed. 'In that case we will have to *einklagen* (Footnote: Engl. to sue for. Note the legal overtone.) our strategy. You can't have both. Do we want to position ourselves long-term in the market or do we want to cash in the short run?' (...)

(...) Herr Schmidt receives support from the other discussants when he insists that volumes had been planned on the basis of the present level of expense budgets. 'I find that highly dangerous.'

Herr Claus (the head of management accounting): 'In that case we need to make the premises clear and properly represent them [to the board]' (Ahrens, 1999, p. 68).

The discussion is highly controversial and the sales managers' and the management accountant's views concerning the budget cuts differ substantially. Whereas the sales manager refers to the formal long term strategic plan, the management accountant refers to the formal decision of the company's board. Both relate to idiosyncratic stocks of sales and management accounting knowledge. At the same time the interaction process runs smoothly because both share knowledge on how the process of negotiating budgets works properly in the company. It is important to note that in this brewery – like in most German companies - the role of management accounting is to organise the planning and budgeting processes, but that substantial planning is the domain of functional management. That is the reason for the management accountant, Herr Claus, to insist on sticking to the formal procedure of "properly representing" the sales department's position to the board. Thus, the budgeting process is, on the one hand, based on diverse stocks of knowledge and, on the other hand, on shared knowledge about common practices. These practices enable the participants of the budgeting process to connect their actions appropriately.

Social practices are regularised types of acts which agents perform in their action (Giddens, 1984). As patterns or blueprints of actions they are more or less independent of specific situations. Performing social practices allows agents to act in a consistent way over time and space. Their action is thus calculable for other agents and the latter may connect their action to it, performing appropriate practices themselves. The existence of practices is the basis of stable expectations, which agents develop over time concerning the action of others. Thereby they enable social interaction.

Social practices do not exist but through social action. Knowledgeable agents apply social practices as patterns for action in specific situations (Cohen, 1989). Social practices must be adjusted to the respective circumstances. This adjustment is the achievement of the agents acting according to these patterns. Every repetition of a certain practice will hence be slightly different from the other. But we may speak of the reproduction of practices as long as the underlying pattern is stable. This stability is based on rules. Referring to the budget meeting cited above, we may speak of constant practices of budget negotiation as long as the role of

management accountants remains mainly formally organising the process. In the British breweries, which Ahrens (1999) studied, management accountants were deeply involved in substantial planning. These budgeting practices differed from the practices in the German breweries.

Practices, thus, allow for the continuity and ordered reproduction of organisations by knowledgeable agents. Organisations are social systems. Social systems may be defined as "patterning of social relations across time-space, understood as reproduced practices" (Giddens, 1984, p. 377). The reproduction of practices is based on the structure of a social system. In the structurationist view we follow here, structure consists of rules of signification and legitimation and of allocative and authoritative resources. Signification concerns the constitution of meaning. In the case of the German brewery, rules of signification refer to the basic understanding of the brewery as an economic organisation expressed through the importance of accounting numbers as interpretative schemes. Rules of legitimation refer to the constitution of legitimate action. In this case, adhering to certain formal procedures constitutes the legitimacy of the sales managers' actions. Allocative and authoritative resources are economic and technical as well as administrative means of domination, for example the formal right to make a decision on budget cuts.

According to the notion of the duality of structure, these rules and resources are at the same time the medium of action and its result (Giddens, 1984). Agents rely on structure as enabling and constraining conditions of their doings via performing practices. Simultaneously, through applying rules and acting towards resource allocations derived from the structure of the social system, they reproduce the structure. It is worth noting that reproduction does not imply the absence of change of structure. On the contrary, the necessity for adapting the abstract patterns of social practices to specific social situations leads constantly to more or less pronounced aberrations from the "correct" patterns. Reproduction of structure implies its continuous change (Giddens, 1984). Thus, in the German brewery resource allocations and rules of signification and legitimation may change over time. For example, if the sales managers' resistance against the board's decision on budget cuts would be successful (which, in this case, was not), and this would happen repeatedly, the rule linking sales variance and budget cuts might be loosened or modified. We would interpret this as a slight modification of structure in the process of its reproduction through performing practices. But, if the role of management accounting would change from formally organising planning and budgeting to be more deeply involved in substantial planning, this can be interpreted as a major change in organisational practices resulting in a change of structure.

Performing practices relies on the existence of the structure of a social system, and, at the same time, the existence of structure is based on the practices performed by knowledgeable agents (Cohen, 1989). As a consequence, structure exists in two forms: on the one hand, as instantiated in action and, on the other hand, as memory traces (Giddens, 1984), or agents' knowledge. Looking at organisations understood as social systems from a practice-based view implies that the existence of, and the social processes in, organisations are seen as based on action as well as on agents' stocks of knowledge. The agents' idiosyncratic and shared knowledge, thus, is constitutive of organisations and other social systems. If in the budgeting example structure changes due to sustained modifications of budgeting practices, this implies a change of the agents' knowledge about practices and about rules and resources.

Management practices

Generally speaking, management practices are social practices in organisations that aim at monitoring and controlling the system reproduction and the performance of organisational practices. More specifically, management practices are at the core of the reflexive self-regulation of social systems (Giddens, 1984). Ortmann, Sydow & Windeler (2000) speak of organizing as reflexive structuration. Organisations are social systems in which the structuration, i.e. the process and mode of the reproduction of organisational structures, is reflexively controlled through practices. Rules of signification and legitimation, and the allocation of resources are subject to discursive reflexion of agents in the organisation.

More specifically, management practices can be understood as meta-practices. They are practices of monitoring, controlling and organising other practices. Budgeting, for example, organises and controls other organisational practices in several ways (cf. Macintosh & Scapens, 1990): Through formal and informal rules of budgeting, substantial planning is influenced in such ways that certain alternatives may not be considered because they would exceed the budget frame. Planning procedures may be influenced because budgeting rules and practices may imply that some decisions require special authorisation. In the example given above, the head of management accounting, Herr Claus, can insist that the argument of the sales department must conform certain formal rules. Falling short of the budgeted sales volume of beer automatically triggers cuts in expense budgets, which the sales department in the end – as Ahrens (1999) reports further – may not oppose effectively.

Reflexive structuration (Ortmann et al., 2000), or reflexive self-regulation (Giddens, 1984) of organisations includes reflexivity in the sense that the reproduction of the organisation is reflexively organised through meta-practices. Meta-practices regulate organisational practices and through this regulation they exert influence on the reproduction of organisational structures, understood as rules and resources. Organisations as patterns of practices reflexively reproduce the conditions of organisational practices through the performance of practices and meta-practices. But reflexivity of organising may have another meaning, too. Management practices, like all social practices, are performed by knowledgeable agents. That is, they are based on agents' knowledge. Regulating organisational practices through performing management practices implies reflecting on the practices themselves, and their social and physical context. In the same stance, performing meta-practices implies that agents reflect on the stocks of knowledge, which inform their action. Reflexivity of structuration in organisation, thus, is rooted in reflexive cognitive processes of knowledgeable agents.

Before we discuss the constitutive role of knowledge and cognitive processes for management practices, a remark on the distinction between management and non-management practices shall be made. Strictly speaking, all action and, hence all practices, exhibit operational and dispositive aspects which may only be separated analytically (cf. for example the discussion of the "ghost in the labour process", Manwaring & Wood, 1985). Management positions are characterised by the formal requirements (and expectations from others) of employing practices regulating others' practices. Thus, performing management practices is not limited to persons who are formally designated managers. But we will only speak of management practices if they are discursively reflected upon by the performing agents. Managing – and thus reflexivity of structuration of organisations - in our view means that the reflexive regulation is intentional. It is based on "discursively mobilized forms of information flow" (Giddens, 1984, p. 203). To speak of management practices implies that

both meanings of reflexivity of structuration mentioned above – reflexivity of structuration as meta-practice and reflexive cognitive processes of agents – have to be fulfilled.

Management and transactive knowledge systems

Management practices are performed by agents that are knowledgeable in many respects. Agents need to possess knowledge on social practices that are required for the day-to-day activities in a social system and for interrelating actions meaningfully (Garfinkel, 1967). Knowledge about this kind of social practices is usually widely shared in a community of practice. Giddens (1976) relates to this knowledge as "mutual knowledge". Agents rely upon this taken-for-granted knowledge when they interact with other agents and they expect the other agents to act according to this knowledge, too.

Further, in performing practices in organisations agents need expert knowledge in their specific areas of expertise. A basic prerequisite for the functioning and the success of organisations is the existence of diverse expertise and diverse knowledge. On the one hand, knowledge can be seen as one of the most important resources of nowadays' organisations (Spender, 1994). On the other hand, diverse knowledge and the division of expertise enable the members in an organisation to accomplish diverse tasks through specialising in diverse areas and thus to contribute to organisational goals (Crossan, Lane & White, 1999). At the same time, a shared knowledge base is necessary in order to coordinate the contributions of individuals or subgroups in an organisation. But this shared knowledge base does not comprise the sharing of all idiosyncratic expert knowledge (Brauner & Becker, 2001) as it is often assumed in the literature on organisational learning and knowledge (e.g., Nonaka & Takeuchi, 1995). Mutual knowledge as described above (Giddens, 1976) provides the basis for interrelating the performance of practices.

However, to successfully coordinate disparate individuals and their contributions, agents also need to organize and coordinate their knowledge and to acquire knowledge about each other's knowledge. Knowledge about other people's knowledge, as well as the communicative processes that lead to that knowledge, have been described as transactive knowledge systems (Brauner, 2002, 2003; Moreland, 1999; Wegner, 1987, 1995). In the following, we will first describe the characteristics of transactive knowledge systems and then outline the consequences of these systems for organisations and for management as reflexive practice.

Knowledge and transactive knowledge

Transactive knowledge systems are ubiquitous in human society, in private life as well as in organisations. When agents communicate, pursue common goals, and get to know each other, they almost unavoidably acquire knowledge about their partners. (It would be avoidable to acquire knowledge about each other if an agent was inattentive, had no motivation, or no interest. In that case, however, the agent will not get to know a partner agent and cooperation in an organisation would be hardly possible.) Through the acquisition of knowledge about others, agents become cognitively interdependent. Cognitive interdependence means that each agent holds knowledge that the fellow agent does not hold, and vice versa; but at the same time they need the other agent's knowledge to accomplish their tasks, or to pursue their interests. They need to draw on their partner's knowledge to accomplish a goal, which can also be a common goal. A transactive knowledge system enables them to do so (Brauner, 2002, 2003; Moreland, 1999; Wegner, 1987, 1995).

A transactive knowledge system consists of two components: First, the knowledge that agents have stored in their individual memories about the knowledge of other agents; this knowledge is called metaknowledge; and second, the transactive, knowledge-relevant communication processes that take place between agents (Wegner, Giuliano, & Hertel, 1985; Wegner, Erber & Raymond, 1991). Transactive processes between agents serve various purposes. On the one hand, agents acquire their knowledge about other agents' knowledge through transactive communication processes. For instance, when a member of a work team explains the problem he or she is currently dealing with, this communication not only provides other agents with the information about the state of the task accomplishment, but also serves as a disclosure about the knowledge that the team member holds. On the other hand, once metaknowledge about others' knowledge exists and is stored in individuals' memories, it is also retrieved and used in communication processes. For instance, if a team member needs specific information on a subtask and is aware that a colleague will hold that respective knowledge, he or she will ask that colleague to provide the requested information. Transactive knowledge systems are thus generated, used, and enacted through communication processes.

In our example, Herr Claus, the management accountant, knows that Herr Schmidt, the sales manager, has specific information about the budgeting processes and specific sales-related costs. Herr Claus acquired this metaknowledge through the transactive communication processes during their work relationship, and he stores it in his own memory. If Herr Claus needs to access Herr Schmidt's knowledge in order to calculate budgets, he will be able to access Herr Schmidt's expertise through asking questions concerning the specific information that he needs. If Herr Schmidt actually can provide help with the problem, Herr Claus will update and confirm his metaknowledge about Herr Schmidt. If Herr Schmidt cannot provide that required information, Herr Claus will update his metaknowledge as well, but now notice that Herr Schmidt was not the right person to ask. He will then try to find a knowledgeable agent instead, and if he happens to have the same problem again, the next time he will address that other person right away without asking Herr Schmidt. Thus, acquisition of knowledge about other people's knowledge as well as access to other's knowledge are achieved through transactive processes.

Transactive knowledge systems provide a number of valuable characteristics to people working together in teams, groups, or organisations (Wegner, 1995). First, if team members share only a portion of knowledge, but have mainly unshared knowledge, they are likely to have a much broader knowledge base available than if they have entirely shared knowledge. A transactive knowledge system then helps them to coordinate their knowledge without occupying too much space in each person's memory. The group as a whole will thus possess less redundant knowledge and will be more likely to use restricted storage space more effectively. Also, the acquisition time for new knowledge will be reduced for the group as an entity because only one person needs to learn a specific information, and each person can focus on their area of expertise (Wegner, 1995).

Figure 1 shows a model of the social organization of shared and unshared knowledge as well as metaknowledge in social practice in groups and organizations. Shared knowledge is the basis of all activity in social systems and thus for social practices. Knowledge about common social practices is shared knowledge. Shared knowledge has also been termed common knowledge, or mutual knowledge (Giddens, 1976). Shared knowledge can be implicit as well as explicit. The unshared portions of knowledge that are stored in individual's memories can

also be explicit as well as implicit. However, access to individually stored knowledge is only feasible if knowledge about this knowledge is present in a social system. Thus, unshared metaknowledge allows agents to access unshared portions of knowledge in a social system. Shared metaknowledge provides mutual access to unshared, but explicit knowledge. Shared metaknowledge is also – as we will argue later - a prerequisite of meta-practices because it enables the agents to meaningfully relate their actions and monitor and control joint activities. Managing requires knowledge about the knowledge of the agents performing the practices which are controlled through meta-practices.

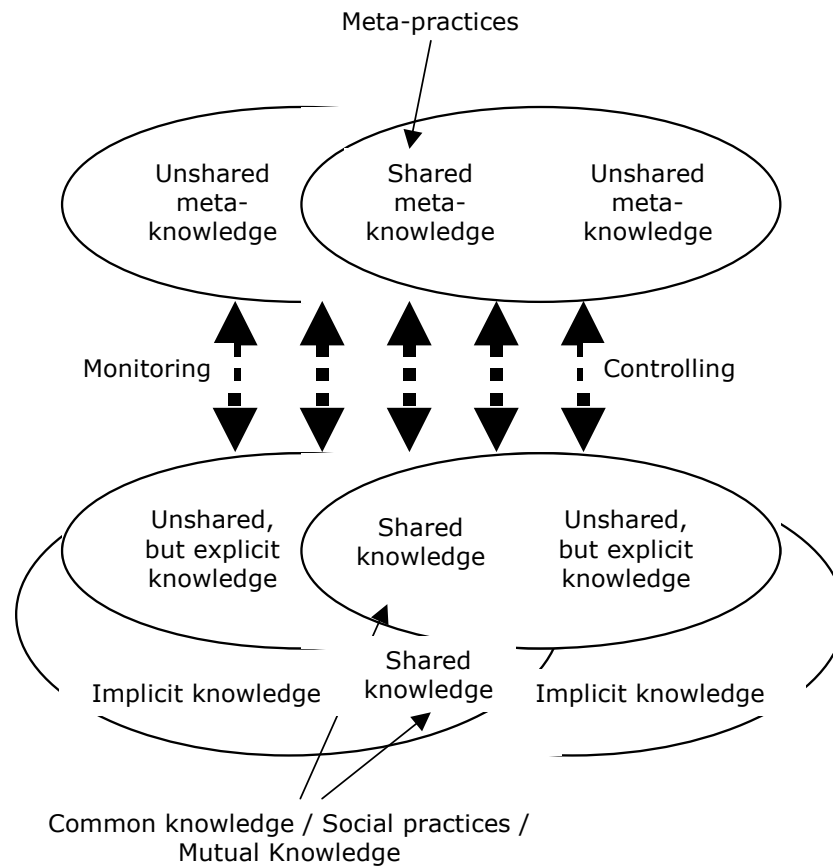


Figure 1. The relationship between shared and unshared knowledge and metaknowledge in social practice

However, transactive knowledge systems also bring along some risks and problems. Through knowing who knows what and by relying on other agents regarding their expertise, group members become interdependent. Their task achievement will depend on other agents and their cooperation. If that agent does not want to cooperate, or if he or she decides to leave the group, memory and information loss will result for the group as a whole (Anand, Manz & Glick, 1998; Moreland, 1999; Wegner, 1995). Finally, although the group will be more efficient with the acquisition of new knowledge, the acquisition of metaknowledge about the other agents in the group can take considerable time, particularly if the agents are not aware to what extent their subtasks depend on the knowledge and expertise of other agents (Moreland, 1999; Wegner 1995).

Despite these risks and problems, transactive knowledge systems are extremely useful for an organisation as well as inevitable with regard to their development (provided that the agents pay minimal attention to each other). Thus, a transactive knowledge system develops no matter whether the agents intend to have one or not (however, the intention not to have transactive knowledge is likely to prevent a transactive knowledge system from developing) (Brauner, 2002). As soon as interaction and communication, and thus transactive, knowledge-relevant processes, take place, transactive knowledge systems are generated and can be used for accessing a broader knowledge base than would be available for a single agent.

Knowledge representation in organisations

The social organisation of knowledge in groups and organisations can best be understood as a system of unshared knowledge and shared metaknowledge about other agents' knowledge on the one hand, and the transactive processes that lead to this metaknowledge and make socially distributed knowledge accessible, on the other hand (Brauner, 2002; Brauner & Becker, 2001). Organisational knowledge is then conceived of as mostly unshared knowledge stored in individual memories and connected through shared metaknowledge.

When agents work in an organisation they develop transactive knowledge systems within their relevant subgroups. As the development of transactive knowledge is based on actual communication processes, these subgroups can exist within formal organisational units or across their formal borders, depending on which knowledge each agent needs to accomplish his or her task. The more comprehensive and spanning a specific task is the more it will be important to an agent to ignore the formal segmentation of organisational units. This holds particularly true for all kinds of managerial tasks. The more comprehensive the range of practices controlled by a certain managerial task or practice the more important it is for the managing agent to reflect upon the relation of tasks in processes crossing the borders of formal organisational units and the specific stocks of knowledge applied in these tasks. These different stocks of knowledge may comprise specific task-related knowledge as well as knowledge about rules and resources – i.e. the structural features – of these units.

Communicative, transactive processes lead to the development of a transactive knowledge system in an organisation. Through socialisation processes new agents are assimilated to particular and specific organisational practices (cf. Schein, 1985). Thus, shared knowledge as well as shared metaknowledge are generated that are essential for the functioning of organisational processes. Transactive knowledge systems thus develop as clusters of shared metaknowledge. These clusters may have high or low density of metaknowledge. This means that agents in a transactive knowledge cluster have either very well developed transactive knowledge systems, or not so well developed transactive knowledge systems. Furthermore, in order to guarantee the functioning of knowledge exchange processes in the entire organisation and not just in isolated clusters, it is essential that transactive clusters are also interconnected. Again, interconnectedness can be of high or low density (Brauner & Becker, 2001). The higher the density of interconnectedness the more efficient will the flow of knowledge exchange be and the less vulnerable to memory and member loss will the organisation be. Figure 2 shows the model of organisational knowledge representation and the clusters of transactive knowledge practices. Transactive knowledge systems are thus organised in clusters of practices. It is worth noticing again that these clusters of practices will often differ from the formal structure of the organisation depending on cross-unit work processes or informal relations. Transactive knowledge systems, thus, constitute the social

organisation of unshared knowledge and shared metaknowledge through knowledge about other agents' knowledge. This metaknowledge enables agents to meaningfully interrelate their actions.

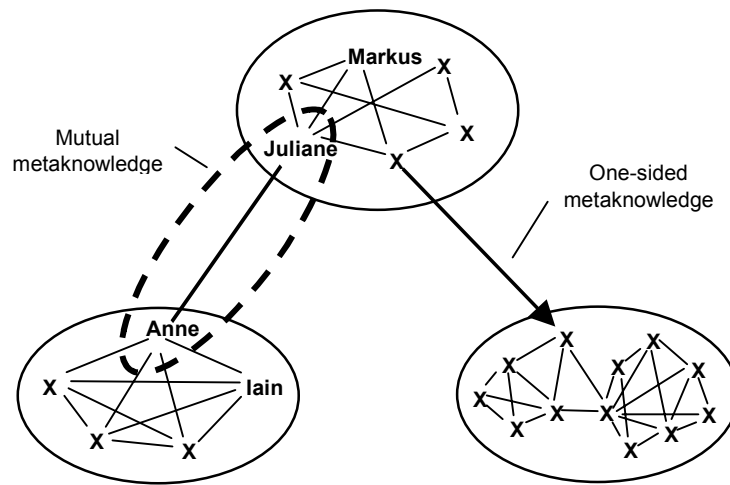


Figure 2. Transactive knowledge system and clusters of practices (Brauner, 2002, p. 154)

Transactive knowledge in management practices

In the previous chapter we have described management practices as reflexive meta-practices of monitoring, controlling, and organising organisational practices. Reflexive self-regulation (Giddens, 1984) as a key feature of organisations means that the reproduction of the organisation and its structures is reflexively controlled through management practices. In a structurationist view, structures exist as instantiated in action and as memory traces (Giddens, 1984), that is, knowledge. This implies that management practices themselves are reflexive in the sense that they are based on the agents' discursive reflection and systematic application of knowledge about organisational structures underlying management and other organisational practices.

The knowledge about organisational structures takes on two forms. On the one hand, it is object knowledge. Actors apply interpretative schemes as instantiations of rules of signification, norms as instantiations of rules of legitimation, and resources. They know how to interpret things, processes, and actions; they know which actions are legitimate, and which are not; and they know their own and other actors' resources. But to reflect upon the rules and resources as features of structures regulating organisational agency and practices requires another form of knowledge about structures. To interpret them as structural features implies to reflect that they are actually valid for most of the organisation's members, it implies in other words, to know that they form part of the other actors' knowledge bases. Thus, knowledge about structures is always metaknowledge.

Management practices, as opposed to other organisational practices, are characterised by the systematic and discursive application of metaknowledge about organisational structures (cf. Figure 1). Agents performing management practices, independently of their formal status as managers or non-managers, may not directly control other agents and their enactment of

organisational practices. Every agent has the capability to "act otherwise"; this capability - or power – constitutes his or her status as an agent and is the origin of the "dialectic of control" (Giddens, 1984). Managing agents try to control the activities of others via rules and resource allocations. To do this effectively, they must apply metaknowledge about what the controlled agents know, or at least what an agent in the respective position is assumed to normally know. In the introductory example of the budgeting event in a German brewery (Ahrens, 1999), Herr Claus, the management accountant, knows that the board acts according to a rule which designates proposals as legitimate only if they follow specific formal requirements. Through application of this bit of metaknowledge ("we need to ... properly represent them") he tries to influence the actions of the board towards the expense budgets of the sales department.

Organizing a budgeting process, as an example of management practices, involves knowledge and metaknowledge about the expertise and information that is needed for calculating the budget: the relevant planning techniques, the relevant data, where the data may be acquired, how reliable they are, and what strategies exist to confirm them. Knowing this, management accountants may plan the budgeting process, assign tasks to other management accountants and members of functional departments needed to cooperate in budgeting, provide relevant information on processes and so on. (cf. Horngren, Datar & Foster, 2003; Kaplan & Atkinson, 1998).

Organizing the budgeting process involves controlling the cooperation of the management accountants and other agents in decentralised functional units of the organisation as well. It thus is a means of control at a distance (Robson, 1992). To do this effectively, the responsible management accountants must not only rely on metaknowledge about expertise but also on metaknowledge about structures. The handling of budgetary slack may serve as an example. Budgetary slack is the phenomenon that expense and cost budgets are calculated too high, or revenue budgets too low, to lessen the pressure on the responsible persons. If people are rewarded on the basis of achieving budget targets they may have an incentive to provide the management accounting department with too pessimistic data. To control the emergence of budgetary slack, management accountants, first, need knowledge and metaknowledge about the budgeting process and the respective organisational unit the budget is referring to. Second, they need metaknowledge about rules and resources. These comprise, first, rules of signification. They concern the meaning or interpretation of budgets and budgetary slack. Normally, budgets form a common reference point or even a common language in organisations (Cooper, Hayes & Wolf, 1981). It is important for the management accountant to know whether budgetary slack is seen as a distortion of the "true" image of the organisation or whether it is seen as the expression of a common conflict of interests and perspectives as the basis for further negotiations. In the first case, he or she might argue in a discourse of true and false, in the second case he or she might more playfully refer to appropriateness and goals.

Second, rules of legitimation designate according to which standards people are rewarded on the one hand, and characterise certain behaviours as legitimate on the other hand. This is the core of the concept of responsibility accounting (Horngren et al., 2003). Thus, in an organisation a certain amount of budgetary slack may be seen as legitimate and may have only little influence on rewards, whereas in another organisation budgets are understood as written in stone and budget variance is immediately sanctioned. Management accountants must know this to influence budgeting practices. In the first case, they will probably be able

quite easily to enforce tight formal budgets in the budgeting process but they will have to reflect that budget discipline might be low. In the second case the rules of legitimation or the existing norms are likely to produce severe conflicts in the budgeting process.

Third, resources and resource allocations are important for the management accountant organising the budgeting process in two ways. On the one hand, it is important to know which resources functional managers can deploy in the budget negotiations. Particularly relevant is the control of data necessary for the budgeting process. Management accountants have to elaborate strategies to evaluate and control information. Knowledge about such strategies has been termed procedural metaknowledge (Brauner, 2002; Brauner & Becker, 2001). On the other hand, management accountants have to reflect that the allocation of budgets directly influence the functional managers' scope for action.

Management practices as reflexive meta-practices, thus, may only emerge on the basis of metaknowledge. While metaknowledge on task-related knowledge of other actors is ubiquitous in all action, the use of metaknowledge on structures is a characteristic feature of management practices.

Conceptualizing knowledge about structures as metaknowledge implies that it emerges like other forms of transactive knowledge in interaction and communication processes. The knowledge organisational actors – managers and non-managers – have about actual organisational structures is dependent on the respective cluster of practices they are involved in. Thus, structures and knowledge about structures may vary between these clusters. The extent of variation can only be determined empirically. This provides an important challenge for management, especially if the management tasks concern practices and processes between different clusters of practices and/or organisational sub-units: Agents performing management practices may have to reflect upon the diversity of structures and stocks of knowledge about structures. In this case, managers become something similar to Likert's (1967) positions of linking pins: bearers of metaknowledge connecting different clusters of practices. This may be true for non-managers also with respect to task-related knowledge.

Conclusion

We have characterised management practices as reflexive meta-practices of monitoring, controlling, and organising non-management practices in organisations. Management practices are in this view constitutive of organisations. The latter are understood as reflexively self-regulated social systems (Giddens, 1984). Management practices may be seen as reflexive structuration (Ortmann et al, 2000) in action. They constitute the reflexivity of organisations and are, thus, essential for their existence.

Managing is neither confined to formal management task, nor to agents who were formally assigned the roles of managers. Rather, meta-practices of organizing are ubiquitous in organisations. All organisational activities exhibit to some extent managing features. But we tend to speak of management practices in the narrower sense that the agents act in a discursively reflexive way. Managing involves, on the one hand, expertise in the respective functional area and, on the other hand, transactive knowledge, more specifically two kinds of metaknowledge: knowledge about other people's expertise and knowledge about their knowledge on organisational structures. Only the latter is characteristic for management

practices. This feature allows for a better understanding of the micro-practices underlying the process of reflexive structuration of organisations.

The constitutive role of transactive knowledge for management implies that an important part of knowledge relevant for managing emerges in processes of interaction and communication. This allows for an alternative, though not exclusive, perspective on knowledge from experience in management practice. It consists at least in part of transactive knowledge and its transactiveness accounts for some of the problems in teaching management. Management practice may not be taught theoretically because the necessary metaknowledge emerges in performing management practices. But learning to manage may be facilitated through teaching the significance of transactive knowledge for management. The transactiveness of metaknowledge may also be one reason for difficulties emerging when management practices, or also management fads (Abrahamson, 1996), are transferred from one organisation to another.

The role of transactive knowledge may also account for some of the problems management information systems face. Most of the information managers rely on is derived from personal communication (Mintzberg, 1973). It is based on managers' metaknowledge developed in daily interactions in their relevant clusters of transactive knowledge practices. Formal management information systems are often too inflexible and too little specific to substitute for personal contacts based on transactive knowledge. Furthermore, a relevant part of knowledge for management practices - metaknowledge about structures - cannot be represented in formal information systems.

The capability of controlling organisational activities through management practices is limited. The application of transactive knowledge about the agents whose activities shall be controlled does not automatically trigger the intended behaviour. While formal rules may be prescribed their application in performing practices in the end is dependent on the respective agents and their shared and idiosyncratic knowledge and resources.

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