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A KNOWLEDGE PERSPECTIVE ON HRM ACTIVITIES: WHAT MATTERS FOR HRM?

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A Knowledge Perspective on HRM Activities:

What Matters for HRM?

This study discusses the HRM literature and models from a knowledge perspective relying on the distinction between component and architectural knowledge. Given this distinction, it examines the influence of HRM activities on client orientation, felt responsibility, psychological attachment and cooperative attitude, four main characteristics of a learning organization.

During the last years, knowledge has become a major value in organizational life (von Krogh & Roos, 1996; Clegg & Palmer, 1996; Alvesson, 1995). Organizations are being adviced to evolve towards a learning organization and to consider human potential as one of the major levers to realise such an organization (Argyris & Schön, 1996; Brooking, 1996; Swieringa & Wierdsma, 1994). Employees are no longer implementers but become knowledge workers who act, think and take initiative in order to contribute to the organizing process (Drucker, 1993). This implies that management of knowledge means people management, the prime responsibility of Human Resource Management. The question then that arises is how HRM can contribute to such people management and stimulate the development of knowledge.

The purpose of this study is to discuss the ways in which HRM can matter for the creation of a learning organization. More specific, it examines how HRM activities are related to four concepts that reflect the nature of a learning organization: client orientation, felt responsibility, psychological attachment and cooperative attitude. In order to do so, we apply a knowledge framework on HRM. Through a knowledge conceptualization of HRM activities, we can examine the underlying assumptions of HRM in terms of types of knowledge and relate them to the way they stimulate a learning organization.

First, we discuss the distinction between component and architectural knowledge as used in the design and technical innovation literature. We then examine how these two types of knowledge are present in the HRM literature and models and what type of knowledge has primarily dominated the HR scene. After discussing the knowledge conceptualization of HRM, we turn to the learning organization literature and focus on the four concepts of client orientation, felt responsibility, psychological

attachment and cooperative attitude as main characteristics of a learning organization. Hypotheses are formulated of how HRM activities - in terms of component and architectural knowledge - influence these four characteristics.

THEORETICAL BACKGROUND

HRM from a Knowledge Perspective

Within the design and technical innovation literature, one makes since long the distinction between component knowledge and architectural knowledge (Alexander, 1964; Marples, 1961). Hua and colleagues (1992) refer to it using the terms of 'design knowledge' and 'domain knowledge.' A product can be usefully understood both as a whole - the architecture - as well as in its parts - the components. The former lays out how the latter will work together. Component knowledge is therefore defined as "the knowledge about each of the core design concepts and the way in which they are implemented in a particular component" while architectural knowledge exists of "knowledge about the ways in which the components are integrated and linked together into a coherent whole" (Henderson & Clark, 1990, p. 11).

Although the concepts of component knowledge and architectural knowledge are derived from a context of technological development and innovation, they have also relevance to more general problems of organizational transformation and learning organizations. In general, component knowledge can be defined as local, active, focused knowledge e.g. task-oriented knowledge or behavioral knowledge (Hærem, von Krogh & Roos, 1996) about parts of a larger problem. Component or domain knowlegde emerges as an organization learns enough about a particular task so that it can deal with it without needing the full range of knowledge about the internal workings (of other components) of the whole (Henderson, 1996). Architectural knowledge is knowledge about the ways these components interact and how they are

integrated into a whole. This type of knowledge is embedded in the organization, particularly its communication channels, information filters, and problem solving strategies (Henderson, 1996).

Attempts to create 'learning' organizations are attempts not only to create organizations that actively engage in the construction of component knowledge - that is the building of richer knowledge about particular aspects of a problem - but also and especially to create organizational forms and processes that can actively develop, maintain and innovate architectural knowledge. Research has shown that many of the major challenges of organizational transformation involves the reconfiguration of architectural knowledge (Henderson, 1996). It is found, for instance, that established firms experience very significant problems with organizational transformations that involve the reconfiguration of architectural knowledge (Henderson, 1996). The main reason lies in the fact that architectural knowledge is embedded in the organizational process, so that its obsolescence is difficult to observe and to correct. Therefore, it is essential that organizations in order to become not only 'successful' but also 'effectively real' (Luthans, 1988) have to develop levers to facilitate the understanding and changing of such architectural knowledge. A question then that arises is whether HR fulfils a role in the development, maintenance and innovation of architectural knowledge. We will now examine to what extent HRM stresses the development of component and architectural knowledge.

Component and Architectural knowledge within HRM

In the beginning of the eighties, HRM was raised to the status of a new full-blown management theory with practical implications. Attempts were made to conceptualize HRM as a proactive organization-wide approach in contrast to the

reactive fire-fighting and piecemeal approach of personnel management. Of the different approaches, the HRM cycle developed by Tichy and colleagues (1982) and the HRM framework of the Harvard school (Beer et al., 1984) are probably best known. Examining these two HRM models from a knowledge perspective indicates that the HRM domain is primarily concerned with the development of component knowledge, thereby legitimating and solidifying its presence within the organization. Attempts to create HRM forms and processes that can actively develop, maintain and innovate forms of architectural knowledge seem not (yet) an important part of the HRM agenda.

In the Tichy cycle, HRM consists of the activities of selection, appraisal, rewards and development. From this, research and practice are geared towards the construction of component knowledge with respect to selection methods, appraisal systems, reward systems and training & development activities (Bouwen, Janssens & Wouters, 1998). Given the overall goal to develop a strategic HRM, the component knowledge on these different HRM activities is developed in order to support the strategy of the company. For this reason, considerable consideration is given to the notions of internal and external fit. In the Tichy cycle, the different activities are coordinated with one another to let employees know in a consistent way what sort of behavior is desired and rewarded. In order to become strategic, this internal consistency is linked with the overall performance or strategy of the company. The notion of external fit has further led to the development of types of HRM approach in which the content of the component knowledge of the different HRM activities depends on the nature of the organization's strategy. For instance, a defender's or low cost strategy is best supported by hiring for the lowest regions, an internal promotion policy, training and development of specialists, slow career development and

remuneration based on loyalty (Miles & Snow, 1986). These considerations of internal and external fit reflect the idea that the HRM activities are particular elements, e.g. components, of a larger problem and that they are embedded in the architectural - strategic- knowledge which is seen as a given.

One could argue that the Harvard framework has been more aware about the role and the importance of architectural knowledge than the Tichy cycle. In describing the four different HRM policy areas, Beer and his colleagues (1984) have incorporated aspects of organizational functioning which surpass the traditional narrow delimitation of the HRM field. Besides the hrflow and reward systems - two areas which in fact correspond to the Tichy cycle - they include employee influence and work systems as HR areas since they too address choices related to the nature of the employment relationship. In addition, the Harvard model provides a more elaborated list of factors than only strategy that impact HRM choices. It suggests that the HRM policies are influenced and constrained by different stakeholder interests and by situational factors such as work force characteristics, management philosophy, task technology, laws and societal values. However, despite the more elaborated description of factors that give indications about the existing embedded architectural knowledge, no attempt is really made to gear HRM itself in the direction of actively developing, maintaining and innovating architectural knowledge.

Recent critical views on HRM and empirical studies give additional evidence for our argument that the HRM domain is primarily concerned with component knowledge. A first criticism refers to the logical inconsistency of HRM. Legge (1989) suggests that HRM suffers from inherent contradictions which become most clearly noticeable when one looks at daily practices where contradictory things are expected of employees. For instance, there is an emphasis on the individual in terms

of contribution to the work process, potential for development, and identity with the company. At the same time, HRM adopts policies which stress teamwork, quality circles, functional flexibility and cooperation (Legge, 1989). The contradiction becomes evident when companies install individualized reward systems to enhance individual motivation which might undermine cooperation among their employees. Such problems of contradiction refer to a lack or even an ignorance of architectural knowledge since these contradictions arise because no attention is given to the ways in which these different elements inter- and counteract.

A second criticism concerns the question whether there is in fact anything to HRM in reality or is it purely theoretical? The few empirical research seems to support the important place taken by rhetoric. For instance, Ogbona (1992) shows that every attempt by HRM to manage culture results in 'behavior compliance' and pretending, instead of serious changes of values and concepts. In addition, the HRM techniques used to increase quality and flexibility are presented in terms of empowerment, commitment, and autonomy, but in fact display elements of centralized control, peer scrutiny, and management by humiliation (Sewell & Wilkinson, 1992). These findings illustrate that many corporations have maintained assumptions about the need to control and limit the involvement of the (blue-collar) workforce while introducing new practices. However, innovations are unlikely to be successful unless they are backed up by fundamental changes in the firm's structure and governance, e.g. its' architectural knowledge (Kochan & McKersie, 1992). Such architectural assumptions need to change because they shape the ways in which problems are solved inside the organization but they are also difficult to change because they are embedded deeply in the structure of the corporation.

Third, the criticism which points to the overly rational top-down conception of strategic HRM confirms our argument that HRM takes the architectural knowledge as given. For instance, Hendry and Pettigrew (1990) point towards the deficiencies of HRM's thinking in relation to strategy which "has often been without regard to the actual behaviors of firms" (p. 32). They argue that the strategy-structure-HRM link is far from a simple causal relationship particularly since HRM can contribute to strategy through the development of culture, and that structural change can precede strategy. A similar concern is expressed by Legge (1995) when she argues how little the diversity in strategic thinking has been incorporated into the thinking about strategic HRM. The strategic HRM models (Miles & Snow, 1986; Beer et al., 1984) are primarily based on the rationally planned and top-down conception of the strategy idea. Other formulations in the strategy literature such as process, evolutionary, and system conceptions of strategy (Whittington, 1993) have found no entrance in the HRM domain. Adopting these other strategic conceptions however could put a different spin on HRM transforming it from an reactive implementer into a proactive developer. Consequently, architectural knowledge would not longer be seen as a given or something imposed but as an active lever to come to a better integration respecting the specific components of organizing (Weick, 1979).

From this knowledge perspective, we argue that HRM has been focused on the development of component knowledge taking the existing architectural knowledge as given. Research has been primarily focused on solving questions of content concerning the different components of selection, appraisal, rewards and development. Answers to such questions has resulted in systems, procedures and rules, all of which has supported the legitimacy of HRM within an organization. Research from a critical perspective, however, has focused on the implementation and

use of HRM practices and has illustrated HRM's lack of considering the architectural knowledge and assumptions within the organization. The importance of architectural knowledge is touched upon in the HRM areas of employee influence and work design leading to a broader definition of HRM responsibilities and activities. However, developing architectural knowledge concerning human actors in an organizing process itself seems to be a blind spot on the HRM's agenda.

HRM and its Matter for a Learning Organization

The idea of the learning organization originates from the creative tension (Senge, 1990) between the organizational scientists interested in testing concepts developed in organizational learning literature (e.g. Fiol & Lyles, 1985; Huber, 1991; Levitt & March, 1988) and the world of managerial practice trying to denote conceptually what they do in a knowledge-intensive organization (Quinn, 1992; Garratt, 1987). The concept of learning organization can be defined as "the quality of an organization that enables an organization as a social system to collect valid data and information in order to permanently correct errors and to plan and execute actions in which members are maximally involved so in-depth learning and long term effectiveness can be strived for" (Bouwen, 1992, p.67). While central notions in the ideal of the learning organization refer to organizational adaptability, avoidance of stability trap, propensity to experiment, comprehensive frameworks for the evaluation progress (Argyris & Schön, 1996), and the opening up of boundaries to stimulate the exchange of ideas (Garvin, 1993), they also include HRM issues such as the management of human potential and the creation of organizational settings as contexts for human development (Argyris & Schön, 1996). Within the field of HRM, this has been mainly interpreted in terms of developing human capabilities for questioning,

experimenting, adapting, and innovating. For example, Jones and Hendry (1992; 1994) stress the importance of a type of training and development where the focus is on managing personal change and self-assessment, becoming a coach, and learning everybody to go after the root causes of problems rather than assigning blame. Some authors (e.g. Ulrich, Jick, & Von Glinow, 1993), however, have emphasized the importance to go beyond training and development and to learn from experiments in which boundaries are crossed in terms of time and geography, hierarchy, functional units, and links in the supplier-firm-customer value chain.

The purpose of this study is to examine how different HRM practices including work systems, employee influence, hrflow and reward systems may impact client orientation, felt responsibility, psychological attachment and cooperative attitude. While client orientation refers to the outside focus of a learning organization, the three other concepts refer to internal characteristics.

Client orientation. One of the main characteristics of a learning organization is a strong market orientation (Slater & Narver, 1995; Sinkula, 1994). An emphasis on obtaining information about customers and competitors makes an organization better positioned "to anticipate the emerging needs of its customers and to respond by producing innovative new products and services" (Slater & Narver, 1994, p. 12). While some authors (e.g. Day, 1990) define market orientation as superior skills in understanding and satisfying customers, others argue that a true market orientation includes all stakeholders and constituencies that possess knowledge which has the potential to contribute to superior customer value (Slater & Narver, 1994). In this study, we focus specifically on the incorporation of customers into the organizational process and label the external focus of an organization client orientation. Customers are an excellent source to learn from since they can provide

up-to-date product information, insights into changing preferences, or immediate feedback about services and patterns of use (Garvin, 1993). Informing the customer and being informed by the customer through a continuous conversation enhances the experience of both parties (McGill, Slocum & Lei, 1992).

While authors from marketing literature initially stressed the importance of including clients and other stakeholders, they also added that "the cultural values of a market orientation are necessary, but not sufficient, for the creation of a learning organization" (Slater & Narver, 1995, p. 63). Several studies have showed that market and client orientation needs to be combined with internal characteristics of interfunctional teaming, strong norms for sharing of information, and reaching consensus on the meaning of the information (Day, 1994a, 1994b; Slater & Narver, 1994, Sinkula, 1994). Such organizational characteristics are expressions of an architectural knowledge which is able to integrate synergistically the different aspects, e.g. component knowledge, involved in the realization and maintenance of a market and customer orientation. In terms of HRM activities this refers to work systems and employee influence. While interfunctional teaming refers to a work system that is characterized by a broad and integrated design, sharing of information refers to forms of employee influence. Given the integratively and synergistically focus on both the organizational inside and outside, we expect that broad work design and employee influence will positively influence client orientation.

> Hypothesis 1: The working presence of architectural knowledge expressed in integrated and broadly defined work systems and employee influence will be positively related to client orientation.

Felt responsibility. One of the core elements of a learning organization is the idea of systems thinking (Kim, 1990; Senge, 1990) because through systems

thinking, one can see the interdependencies which are active. Felt responsibility in this study refers to employees' behaviors that indicate awareness of their role and position in the whole organization. It reflects in this sense the seeing of the interdependencies within work systems and the awareness of organization-wide accountability given the premise of employee influence. Systems thinking refers to viewing the organization as a network and taking into account the interrelationships between and across the organization and the external forces (McGill et al., 1992). Consequently, the organizational members have to be sensitive to the flow of information, power and trust that shapes how trade-offs are made. This idea of systems thinking contrasts sharply with fragmentation as a main dysfunction of organizations (Kofman & Senge, 1993). Due to specialization and departementalization, 'walls' or 'chimneys' are created that separate the different functions into independent and often warring fiefdoms. In order to overcome this dysfunction, "the memory of the whole or the awareness that the whole actually precedes parts" needs to be reactived (Kofman & Senge, 1993, p.6).

Ways to enhance system thinking seem to refer to HRM activities as expressions of architectural knowledge in terms of work systems and employee influence. Systems thinking can be stimulated through a work system that stress the integrativeness of the different activities combined by employee influence. These HRM practices elaborating on architectural knowledge are therefore expected to positively influence felt responsibility for the organization as a whole. This hypothesis is further supported by previous studies of organization theory in which participation and task interdependence were found to have a positive influence on felt responsibility (Hackman & Oldham, 1975; Salancik, 1977).

Hypothesis 2: The working presence of architectural knowledge expressed in integrated and broadly defined work systems and employee influence will be positively related to felt responsibility.

Psychological attachment.   Besides the more structural design, the notion of the learning organization refers also to relational characteristics. A first relational concept is the individual's psychological attachment to an organization - the psychological bond linking the individual and the organization (O'Reilly & Chatman, 1986; Mathieu & Zajac, 1990). Learning organizations are sometimes seen as communities of commitment in which managers must be sensitive to and concerned for human nature and be interested in (and capable of) repairing strained relationships (Kofman & Senge, 1993; McGill et al., 1992). Special attention is paid to a sense of ethics when dealing with employees, active corporate citizenship, a recognition of employee contributions inside and outside the workplace, and a willingness to take responsibility for relationships. The common element in these different behaviors seems to be respect for the individual as a complete person. Commitment to learning implies a vivid concern for human condition.

In terms of HRM practices, this type of respect can be stimulated and facilitated through work systems and employee influence, and hrflow. Work design which is characterized by broadly defined jobs, rotation across jobs, and broad employee participation can build commitment by direct attention to the integration of individual needs and organizational requirements (Walton, 1985). Because of the breadth of the tasks, employees are able to demonstrate their potential. The company considers that it employs a broad-gauge person with various capacities, rather than one with a specialized and limited-usage to the production process. Thus, the whole person becomes more important and is recognized as bringing in value. Employees

will therefore develop more emotional and affective ties towards their organization if this one shows respect for their various capacities through broadly defined jobs and the creation of opportunities for influence.

> Hypothesis 3: The working presence of architectural knowledge expressed in integrated and broadly defined work systems and employee influence will be positively related to psychological attachment.

Besides work systems and employee influence, hrflow is a specific HRM area through which organizations can show their respect for the individual as a person. Inflow and through-flow activities that emphasize general skill development are expected to positively influence a person's attachment to his/her organization. Both are typical HR-activities which require specific competences and skills, e.g. component knowledge.

> Hypothesis 4: The component knowledge incorporated in the hrflow criteria and the practices that substantiate a broad development of individual skills will be positively related to psychological attachment.

While the expected relationship between psychological attachment and work systems and hrflow is based on the importance of respect for the person as a whole, psychological attachment can also be enhanced by valuing a person's performance. Organizations can choose to reward effective performance based upon pay for performance systems (Lawler, 1981). The belief that a company pays its better performers more than it pays poorer performers may result in feelings of equity which will further enhance the tie between an individual and his/her organization. This reasoning is supported by previous commitment studies that show that attachment can occur as the result of individual-organizational transactions (Mathieu & Zajanc, 1990). These transactions reflect extrinsic task related factors such as development of organization specific skills, status, contribution to nonvested pension plans, or use of

organizational benefits (Meyer & Allen, 1984). Pay for performance may be another extrinsic related factor that will increase the ties between individual and organization.

> Hypothesis 5: Reward systems, as HR-specific component knowledge, emphasizing reward of performance are expected to be positively related to psychological attachment.

Cooperative attitude. Finally, we examine the potential influence of HRM activities on cooperative attitude. Cooperative attitude refers to the willingness of employees to cooperate with other people in the organization regardless to which other group, department or hierarchical level they belong. Such a cooperative attitude, expressed in a shared vision (Senge, 1990) is found to be essential in developing a learning organization. Given the nature of global and institutional problems, thinking alone is no longer adequate and individuals are being forced to develop their capacity to think together - to develop collaborative thought and coordinated action (Isaacs, 1993). Besides the degree of complexity, cooperation is also needed to overcome the problem of fragmentation in thought as our experience and knowledge is divided into numerous isolated bits that seem to have no connection to one another (Kofman & Senge, 1993). According to Isaacs (1993), such an environment where people are consciously participating in the creation of shared meaning can be created through dialogue. This discipline of dialogue is crucial to the learning organization as it holds promise as a mean for promoting collective thinking and communication, e.g. the development and maintenance of architectural knowledge.

HRM activities that seem to be able to develop a cooperative attitude among employees are work systems and hrflow. Broad work design grounded in architectural knowledge is expected to enhance a cooperative attitude. The reason for this relationship relies on social identity theory. In general, social identity theory argues

that the more strongly individuals identify with a particular group, the more they will like their own group more and the more they will want to differentiate their group from surrounding groups. As this affective in-group biases increases, individuals will assume a more cooperative attitude towards in-group members but a less cooperative and even a competitive attitude towards out-group members (Turner, 1982; Turner et al., 1987). Studies applying social identity theory to an organizational setting, indicate that the social categorization and identification processes are strongly influenced by the existing organizational structure (Kramer, 1991; Ashfort & Mael, 1989). Group identification is strongly related to the tasks that employees have to perform and with whom they have to interact. Therefore, work systems that show strong specialization and departmentalization are likely to highlight the existence of different groups in an organization. Such a division in different groups is expected to lead to subgroup identification, in-group bias and a less cooperative attitude towards other members of the organization. In contrast, work systems that emphasize cross-functional and cross-hierarchical interactions are likely to highlight perceived organizational coherence. The activation of organizational categorization and identification processes is expected to lead to a more cooperative attitude among all employees.

> Hypothesis 6: Integrated and broadly defined work systems, expressing architectural knowledge, will be positively related to cooperative attitude.

Besides work systems, the HRM area of hrflow is expected to positively influence cooperative attitude among all employees. Since cooperative attitude refers to an employee's willingness to help and cooperate with other employees, we expect that the person's ability to think and work together with others is an important skill in order to do so. The capability of a person to cooperate, his/her social intelligence (Walker & Foley, 1973) will influence his/her willingness to do so. Therefore, hrflow

activities such as selection and training and development in which these relational skills are assessed and developed are likely to develop a person's ability and therefore also his/her willingness to cooperate.

> Hypothesis 7: Hrflow activities that emphasize relational skill development of the individual as a HR specific component knowledge will be positively related to cooperative attitude.

METHOD

Sample

To test the hypotheses of these study, we developed a questionnaire and mailed it to 989 out of 11.000 alumni students of a business school located in Flanders, the northern part of Belgium. The selection of these 989 alumni was guided by different criteria. They have a minimum of 3 and a maximum of 35 years of experience, they all are working in the profit sector, in different industries, for large and small companies, and they represent a ratio of 25-75% female/male. Of the 989 questionnaires sent, 299 were returned for a response rate of 30 percent.

The average respondent was approximately 38 years old with 74% male and 26% female. They represented rather higher level positions with 37% in middle management and 39% in top management positions. Men were more represented in the highest positions and in the activity domains of logistics and R&D. Women represented half and more of the respondents in marketing, finance, accounting and personnel. 16 personnel managers filled out the survey, all other respondents were line or other staff managers.

Measures

The concepts that had to be measured were HRM activities, client orientation, felt responsibility, psychological attachment and cooperative attitude. The items used to assess the last four concepts are presented in Appendix 1.

HRM Activities.   Items that measure HRM activities were constructed based on the Harvard HRM model with the four HRM areas e.g. employee influence, hrflow, reward systems and work systems (Beer et al., 1984). For each of the four areas, different activities were formulated in such a way that they reflect different conceptualizations of the HRM activity. For instance, employee influence was measured by items referring to the degree of responsibility, accountability, and delegation. The inflow activity was operationalized by items reflecting an emphasis on technical knowledge, relational skills, broad profile, or potential and development capability. Operationalizations for the other HRM activities happened in a similar way. In order to assess the dimensionalility of the HRM items in terms of component and architectural knowledge, principal component analysis with varimax rotation was done. The results of this analysis are discussed in the result section.

Client Orientation.   New items were constructed to measure the degree to which clients are important due to their active involvement in problem solving and product development ($\alpha = .75$).

Felt responsibility   This concept refers to behaviors indicating organization-wide accountability and was measured by new items ($\alpha = .80$).

Psychological Attachment.   This concept refers to the psychological bond linking the individual and the organization. The scale was developed in a study on a reconceptualization of commitment (Janssens, Van Beselaere & Kaes, 1997) and consists of items from existing commitment scales (Mowday, Steers & Porter, 1979; Allen & Meyer, 1990) and newly constructed items ($\alpha = .93$).

Cooperative attitude. New items were constructed to measure the personal intention to cooperate with other colleagues in the organization, regardless of the group to which a person belongs ($\alpha = .88$).

Analysis

As previously mentioned, principal component analysis with varimax rotation (Hair et al., 1995; Dunteman, 1989; Kim & Mueller, 1978) was done on the HRM items in order to interpret the communalities among the different HRM activities in terms of component and architectural knowledge. Scales were formed and internal consistency of the scales was assessed by calculating the Cronbach alpha coefficient.

The relationship between these HRM scales and the concepts of client orientation, felt responsibility, psychological attachment and cooperative attitude was analyzed by using multiple regression analysis (Lewis-Beck, 1980; Berry & Feldman, 1985). It examines whether each HRM scale contributes significantly to the prediction of a concept after excising the effects of the other HRM scales (Kerlinger & Pedhazur, 1973).

RESULTS

HRM from a Knowledge Perspective

The principal component analysis with varimax rotation suggested four factors. These four factors explained 50% of the variance in the item-set. Table 1 presents the rotated factor loadings of the set of items. While the two first factors express forms of architectural knowledge, the two latter ones represent component knowledge.

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Insert Table 1 about here

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The items that loaded on factor 1 reflect HRM activities that stimulate knowledge for systems (α = .81). This factor consists of five items designed to measure the HR area of work systems and three items designed to measure training and development. The items of work system refer to job rotation, providing additional information, consultation among departments, and the use of multidisciplinary project groups. The training and development activities refer to the importance of social skills and problem solving techniques. These set of HRM activities reflect a dynamic way of organizing through which knowledge for the system is stimulated. The integrative nature of this factor underlines its' founding in architectural knowledge of HRM as it does not concern a strict exclusive HRM activity.

Factor 2 consists of five items designed to measure work systems and employee influence. This factor reflect HRM activities that stimulate knowledge for function (α = .73). The items refer to a strong division of labor as well as restricted responsibility and accountability. They reflect the ideas of scientific management in which knowledge within the organization is restricted and reflected in the function. Whereas in the first factor the architectural knowledge is of a more dynamic and interactive nature, here it is concreted in the function, and therefore in the structure of the organization.

The items of Factor 3 consist of inflow and outflow activities (α = .70). They reflect an inflow approach in which selection is based on a broad profile, relational skills and potential development. Outflow activities are oriented towards establishing continuity by providing a transition period. These HRM activities reflect a knowledge perspective that emphasizes knowledge of the individual. This knowledge concerns the assessment of skills and competences of individual human actors within the

organization. These inflow and outflow activities are traditionally a core activity of HRM and present a component knowledge.

Factor 4 consists of items designed to measure reward systems that reflect performance related pay (α = .75). These items reflect a knowledge perspective in which <u>knowledge of the performance</u> is being emphasized. This knowledge concerns the assessment of performances and outputs of individuals and teams, a component knowledge of HRM.

The correlations between these four factors are presented in Table 2. While factor 1 reflect the development of architectural knowledge in such a way that the involved human actors themselves can optimize the organizational functioning, factor 2 represents architectural knowledge as a blueprint which leaves the human actors involved little or no room to act. The strong negative correlation (r = -0.48) between them suggests that they represent two opposites along the architectural knowledge's continuum. For the first type of architectural knowledge, different levers are provided to the human actors involved so they can change the organizational functioning and interaction themselves. For the second type of architectural knowledge, the organisation will function properly if every element of the organisation itself is well ordered and defined. The human actors are merely the executioner of the organized plan. Both factors seem to be quite opposite since the degree of emphasis on knowledge for function defines the importance of the interfunctional and cross departmental initiatives.

The two types of component knowledge, knowledge of the individual and knowledge of performance, correlate positively with factor 1 (r=0.48 and r=0.44). This suggests that architectural knowledge for HRM as knowledge for systems is complemented by HR specific component knowledge. Knowledge of individual and

performance seem to be tools and instruments that support a dynamic way of organizing. In contrast, the negative correlation between these two types of component knowledge and factor 2 (r=-0.41 and r=-0.25) seems to indicate that architectural knowledge which is concreted in the function, does not need HR specific component knowledge. In the case of architectural knowledge as knowledge for function, the core-element is not the human actor but the function. As a consequence, no tools or instruments for the (better) management of the human resources are required but bureaucratic and structural ones.

Insert Table 2 about here

HRM and its Matter for a Learning Organization

Table 3 presents the results of the multiple regression analysis of the four HRM scales on client orientation, felt responsibility, psychological attachment and cooperative attitude.

Insert Table 3 about here

The results show that client orientation is positively influenced by knowledge for system and negatively by knowledge for function (F=13.06; Adj. R^2=.14). This confirms our hypothesis 1 proposing that actively involving clients in the organizing process is related to knowledge about the ways in which the different organizational parts are integrated and linked together into a coherent whole. The more there is architectural knowledge about the internal way of functioning and interacting, the more clients will be integrated into the organization. In contrast, if HRM activities are strongly focused on distinct and isolated aspects of the organization e.g. the different

separate functions within the organization, client orientation will be low. Consequently, the use of architectural knowledge as knowledge for system has positively influences the client orientation of an organisation whereas the use of knowledge for function had an unpropitious effect on this orientation.

The results also confirm our hypothesis 2. Felt responsibility is positively influenced by knowledge for system and strongly negatively by knowledge for function (F=34.39; Adj. R^2=.31). Organization-wide accountability is less found in organization in which the employees have well-defined jobs and lack influence. In contrast, HRM activities that emphasize the development of architectural knowledge through job rotation, offering information, setting up cross-functional project groups, and teaching problem solving skills, seem to increase the felt responsibility for organization-wide problems. In sum, the use of architectural knowledge as knowledge for system positively influenced the felt responsibility within an organisation whereas the use of knowledge for function had a detrimental effect on it.

The results further show that psychological attachment is negatively influenced by knowledge for function and positively by knowledge of the individual (F=30.89; Adj. R^2=.29). The psychological bond between individual and organization is negatively impacted by HR activities that stress the function with limited responsibility. This finding confirms hypothesis 3 indirectly. While we proposed a positive impact of integrated and broadly defined work systems and employee influence on psychological attachment, the results show the negative impact of architectural knowledge as knowledge for function. Since these types of architectural knowledge are strongly negatively related, the findings support the importance of the work system and employee influence. However, it seems not to be the presence of broadly defined work systems and employee influence that increase psychological

attachment but rather the presence of narrowly defined jobs with few responsibilities that hinders the development of psychological attachment.

In addition, psychological attachment is positively impacted by inflow activities in which selection is oriented towards a broad profile, relational skills, and potential to develop. This finding confirms hypothesis 4. The individual does develop more psychological attachment when during inflow and out-flow activities respect is shown for the potential and abilities of the individual as a person. Therefore, psychological attachment can be stimulated by a HR specific component knowledge e.g. knowledge of the individual.

Hypothesis 5 which proposes a relationship between pyschological attachment and knowledge of performance is not confirmed. The results points into the hypothesized direction but it is not significant. Psychological attachment is not significantly increased by valuing performances. This finding suggests that pay for performance systems are rather instrumental tools that have no strong effect on a relational and emotional concept as psychological attachment.

A similar patterns of results is found with respect to cooperative attitude. Cooperative attitude is negatively influenced by knowledge for function and positively by knowledge of the individual (F=27.96; Adj. R^2=.27). Individuals will have less intention to work together with colleagues from other groups if their work is organized in such ways that they have well-defined and limited responsibilities. As in the case with hypothesis 3, hypothesis 6 is indirectly confirmed. It seems not to be the presence of broadly defined work systems and employee influence that increase cooperative attitude but rather the presence of knowledge of function that hinders the development of cooperative attitude.

Finally, the results confirm hypothesis 7. A cooperative attitude increases if inflow activities are oriented towards recruiting people with broad skills and potential and outflow activities stress continuity. An individual develops a cooperative attitude when during in- and outflow activities respect is shown for the potential and abilities of the individual as a person. Consequently, cooperative attitude can be stimulated by a HR specific component knowledge e.g. knowledge of individual.

Overall, the results show that the development of architectural knowledge through job rotation, offering information, setting up cross-functional project groups, and teaching problem solving techniques, has a positive impact on both client orientation and organization-wide felt responsibility. The importance of developing knowledge about the interactions and interdependencies within the organization is further supported by the findings with respect to knowledge for function. Knowledge for function or HRM activities that stress well-defined jobs with few employee influence have a negative impact on all four concepts that characterize a learning organization. In addition, the component knowledge of HRM in terms of knowledge of the individual contributes to the development of psychological attachment and cooperative attitude. In- and outflow activities through which individuals are considered to be an important source of knowledge seem to stimulate these two relational notions of a learning organization. The results also show that knowledge of performance is unrelated to all four concepts. No conclusion with respect to the relevance of this component knowledge in itself, however, can be made. Future research may focus on the contexts in which knowledge of performance can have an important contribution.

DISCUSSION AND CONCLUSION

This study has examined HRM from a knowledge perspective. This conceptualization allowed us to interpret HRM activities in terms of component and architectural knowledge and to examine their relationship with client orientation, felt responsibility, psychological attachment and cooperative attitude, four main characteristics of a learning organization.

The results of the factor analysis on HRM activities have showed that the distinction between component and architectural knowledge is relevant to understand HRM. Two factors represent two types of component knowledge: knowledge of individual and knowledge of performance. Knowledge of the individual refers to in- and outflow activities, traditionally a core activity of HRM. Knowledge of performance represents reward activities in which performance related pay is stressed, a more recent focus within the HRM domain. The two other factors represent two types of architectural knowledge. Knowledge for system or the type of architectural knowledge in which the human actors themselves can change the organizational functioning, is supported by work systems choices such as job rotation, providing additional information, consultation among departments and project groups, and by training activities in which social and problem solving skills are being stressed. In contrast, knowledge for function represent a type of architectural knowledge in which human actors are merely executioners of the organized plan. This knowledge is supported by HRM through well-defined work systems and limited employee influence.

In examining the relationship between these four types of HRM knowledge and the four characteristics of a learning organization, the results have showed a major negative effect of knowledge for function on all four concepts. In contrast, knowledge

of the individual was found to have a positive impact on psychological attachment and cooperative attitude. These findings suggest that HRM should consider the human actor rather than the function as the central focus of its domain. The times of scientific management from which the central position of the function in HRM thinking has originated, seem to be over. In addition, knowledge for system was found to positively impact client orientation and felt responsibility. These findings suggest that HRM activities in terms of work system choices and training and development can contribute significantly to non-HRM outcomes.

Finally, the application of this knowledge framework has showed an alternative view on HRM theory and practice which allows us to argue what seems to matter for HRM and its contribution to an organization. First, HRM needs to continue to develop its component knowledge. Given the results of this study, building richer knowledge of the individual and performance are two core activities of HRM. Second, HRM needs to be aware of and contribute to the architectural knowledge of the organization. When implementing HRM systems and instruments, HRM's role can not be restricted to designing HRM systems and instruments, they should also be involved in implementing them. In doing so, they need to be aware of the architectural assumptions in which their component knowledge will be used. HRM can contribute to the type of architectural knowledge by the choices made in work systems, employee influence, and training and development. HRM's responsibilities can therefore not only be restricted to specific HRM activities but should also cover the broader domain of work organization. Finally, HRM should also start to develop a richer understanding of alternative organizational mechanisms that make organizations much more capable of explicitly managing architectural knowledge. At present, HRM is geared towards developing component knowledge and contributing

to a given architectural knowledge. There has been no place yet for HRM to develop their own ways of managing architectural knowledge. Taking up such a new role would mean to develop knowledge on managing interactions of different components and ways to reassess the relevance and obsolescence of the existing interactions. We would argue that the way to start developing such knowledge is based on HRM's core knowledge e.g. knowledge of human actors. HRM would learn about human actors in interaction with each other, crossing organizational, departmental, and professional boundaries. Knowledge about how to cooperate across such boundaries, how to deal with identity creation and threats, or how to resolve conflicts among human actors with different interests become then major HRM concerns.

TABLE 1
Varimax Rotated Loadings for HRM Activities

Items	F1	F2	F3	F4
1. Job rotation is an essential part of the careers of most employees.	**.65**	-.04	.03	.17
2. People receive more information than strictly needed for their job.	**.49**	-.39	.19	-.01
3. When organization-wide problems arise, the different departments consult with each other.	**.56**	-.15	.29	-.09
4. When project groups are set up, they consist of people coming from different departments.	**.53**	-.11	.26	.04
5. Besides technical training, one offers also programs oriented towards improving social skills.	**.64**	-.12	.14	.36
6. People are being taught different problem solving techniques.	**.79**	-.09	.02	.28
7. People learn how to identify problems and find tailor-made solutions.	**.73**	-.24	.03	.16
8. In this company, all persons restrict themselves to their job and know nothing or little about other people's work.	-.23	**.55**	-.19	.17
9. It is management who makes decisions and employees are restricted to implementing these decisions.	-.27	**.51**	-.18	-.14
10. Employees have a well-defined job without accountability and responsibility.	-.13	**.80**	-.07	-.13
11. Employees need to do different types of jobs, however without real accountability and responsibility.	.06	**.76**	-.05	-.11
12. Accountability is delegated to the lowest possible level.	.20	**-.61**	.15	.10
13. Besides technical knowledge, selection also focuses on relational skills.	.20	-.29	**.64**	.05
14. Candidates are being selected based on a broad profile.	.20	-.10	**.77**	.08
15. Candidates are being selected based on their potential and development capabilities.	.32	-.26	**.61**	.10
16. When somebody leaves the company, one looks for new candidates with a broad profile.	.02	-.01	**.69**	.08
17. When somebody leaves the company, one provides a transition period in order to ensure continuity.	.00	-.07	**.36**	.18
18. Part of the salary is based on the performance of the team to one belongs.	.16	-.15	.14	**.65**
19. Salary is partly coupled to the performance (salesfigures, operational targets...).	.12	-.01	.11	**.86**
20. Salary is coupled to the performance as well as to the way the results have been achieved.	.23	-.10	.17	**.76**
Eigenvalues	3.32	2.62	2.34	2.15

TABLE 2

Descriptive Statistics and Pearson Correlation Coefficients

Factors/concepts	Mean	SD	Alpha	1	2	3	4	5	6	7	8
1. Knowledge for system	3.24	.79	.81	1.00	-.48	.48	.44	.36	.37	.38	.35
2. Knowledge for function	2.55	.76	.73		1.00	-.41	-.25	-.29	-.55	-.46	-.48
3. Knowledge of individual	3.56	.62	.70			1.00	.32	.16	.33	.43	.38
4. Knowledge of performance	2.81	1.10	.75				1.00	.14	.15	.25	.15
5. Client orientation	3.42	.96	.75					1.00	.24	.27	.23
6. Felt responsibility	3.50	.88	.80						1.00	.59	.62
7. Psychological attachment	4.02	.82	.93							1.00	.62
8. Cooperative attitude	3.62	.85	.88								1.00

All correlation coefficients are significant at p<.001 level.

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TABLE 3
Results of the Multiple Regression Analysis

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HRM activities	Client Orientation		Felt Responsibility		Psychological Attachment		Cooperative Attitude	
	beta	t-value	beta	t-value	beta	t-value	beta	t-value
Knowledge for system	.38	4.59***	.14	1.99*	.09	1.32	.11	1.66
Knowledge for function	-.21	-2.61**	-.53	-8.07***	-.33	-5.31***	-.40	-6.18***
Knowledge of individual	-.07	.010	.14	1.79	.33	4.36***	.26	3.34**
Knowledge of performance	-.02	.05	-.04	-.88	.05	1.15	-.03	-.76
F	13.06***		34.39***		30.89***		27.96***	
R^2	.15		.32		.30		.28	
Adjusted R^2	.14		.31		.29		.27	

* $p<.05$
** $p<.01$
*** $p<.0001$

Appendix 1: Measures

Client orientation

Clients are considered to be important since they can give us indications about problems with products or services.

Clients are considered to be important since problem solving happens together with them.

Clients are considered to be important since they are an active partner in product or service development.

Felt Responsibility

Problems are left to other groups.*

Employees have the attitude that the next in line will solve the problems.*

Employees take their responsibility when they foresee problems for other groups.

Psychological Attachment (based on OCQ from Mowday, Steers & Porter, 1979; ACS from Allen & Meyer, 1990)

I am glad I belong to this organization.

It feels good to be a member of this organization.

I am proud to tell others that I am a part of this organization. (OCQ)

I am extremely glad that I chose this organization to work for over others I was considering at the time I joined. (OCQ)

Deciding to work for this organization was a definitive mistake on my part.* (OCQ)

I feel a strong sense of belonging to my organization. (ACS).

Cooperative Attitude

I am always willing to help employees in this organization, regardless to which group they belong.

In this organization, I will always cooperate with others in order to obtain a good result.

I will always help others with their work, regardless to which group they belong.

* Items are reversely scored.

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