LOOKING INTO THE BLACK BOX OF STRATEGIC ACTIVITIES: AN ACTIVITY THEORETI CAL PERSPECTIVE

van Baalen, P.J.; Huysman, Marleen

Publication date
2003

LOOKING INTO THE BLACK BOX OF STRATEGIC ACTIVITIES:

AN ACTIVITY THEORETICAL PERSPECTIVE

Peter van Baalen,
Rotterdams School of Management, Erasmus University Rotterdam, PO Box 1738,
3000 DR Rotterdam, The Netherlands, pbaalen@fbk.eur.nl

And

Marleen Huysman,
Vrije Universiteit Amsterdam, The Netherlands, mhuysman@feweb.vu.nl

INTRODUCTION

Although recent organizational learning and strategic management theories share a common interest in studying knowledge processes within the firm, there is still an uneasy relationship between the two. Organizational learning theorists shy away from strategic thinking while strategists refrain from getting involved in the real life of learning. In this paper we suggest that having a common unit of analysis might help to bridge the gap between the two management disciplines. It is argued that, for several reasons, knowledge is not an adequate theoretical concept to close this gap. We alternatively propose to take the concept of *corporate acti*vity as the unit of analysis. Activities can mediate between strategic management theories as the resource-based- (RBV) and knowledge-based (KBV) views of the firm and core competence theories and recent organizational learning theories, like collective learning, communities of practice and activity theory. Porter's article *What is strategy?* (1996), serves as a linking pin between the two management disciplines.

We start our analysis with discussing the strengths and weaknesses of the RBV, KBV and core competence theories. We then will review Porter's contribution on strategic activities, followed by an elaboration on the activity concept from a activity theoretical perspective. We conclude with some remarks on how to proceed on the integration of different theoretical perspectives.

RESOURCE BASED VIEW OF THE FIRM AND CORECOMPETENCES

Theories of the firms have been with us for quite a long time. Foss and Mahnke (2000: 1) basically distinguish between the so called 'governance perspectives' (organizational economics) and 'competence perspectives' which have different disciplinary roots. The first category refer to theories like transactions cost economic, formal contract theory and the measurement cost approach while under the later perspective theories about core competencies, dynamic capabilities, evolutionary nature of organizational growth, resource- and knowledge based views can be classified. In this paper we will focus on the competence perspectives.

The Resource-based View of the Firm

In a short period of time the RBV has gained enormous popularity among scholars of strategic management. This perspective has its roots in Penrose's influential book on *The Theory of the Growth of the Firm* (1959), Schumpeter's *Capitalism, Socialism and Democracy* (1942), Cyert

1

and March (1963) *A Behavorial Theory of the Firm* and Nelson and Winter's *An Evolutionary Theory of Economic Change* (1982). The Resource Based View of the firm was first launched in the mid 1980s by Wernerfelt (1984). His work served as reminder for strategy scholars and practitioners who were strongly oriented on and inspired by Porter's external and industry-based perspectives, that the internal resources lie at the heart of the firm's competitive position (Priem and Butler, 2001). It redirected the strategic management scholars' attention from product market combinations to the bundle of assets lying unnoticed to top management and scholars within the firm. This new strategic awareness was simply based on the idea that one cannot make adequate strategic decisions upon diversification and new markets without considering the limits and constraints of the firms' internal resources and management problems.

Core Competences

Barney's early organizing framework (1991) is generally viewed as the theoretical foundation for the RBV. In this framework he argued that organizational resources that are valuable, rare, difficult to imitate and non-substitutable are the source of competitive advantage. Here a smooth transition can be made to the core competence theory of Hamel and Prahalad (1994) that was launched at the same time. A competence is defined as a bundle of skills and technologies rather than a single discrete skill or technology. It is viewed as the sum of learning across individual skills sets and individual organizational units (an organizational capability) that generate value in multiple markets (Ryall, 1998: 8). As Prahalad e.a. (2001) argue core competence only results when firm learn to harmonize multiple technologies along with customer knowledge, marketing intuition, and the skill to manage them all synergistically. This is what the authors have called "creative bundling" (Prahalad e.a., 2001: 243).

The attractiveness of the core competence perspective is that it has brought the organization within top management reach by emphasizing the active role the CEO can play in developing and allocating these resources (Ryall, 1998: 8). From a theoretical point of view RBV and core competence theories have contributed to new insights in the heterogeneity of the strategic resources as the basis of competitive advantage (Priem and Butler, 2001: 29; Dosi and Marengo, 2000: 81).

THE KNOWLEDGE BASED VIEW OF THE FIRM

The knowledge-based view of the firm does not differ substantially from resource-based view and core competence theories. Whereas the resource-based view originally saw a broad range of resources (brand names, in-house knowledge of technology, employment of skilled people, trade contracts, efficient procedures etc.) as basis corporate strategy (Wernerfelt, 1984: 172), the knowledge-based view focuses on a particular type of resources in these theories – *knowledge*. Of all resources knowledge is seen "as the most strategically important of the firms resources"(Grant, 1996: 110).

This focus had drawn strategic management theorists to epistemological questions about the nature of knowledge and to new coordinating mechanisms to manipulate this knowledge towards competitive excellence. Both aspects are interrelated. To say something about the coordination and organization (capability) of this knowledge resource one has to say something about the nature of knowledge.

The 'near tangible' view

The theoretical debate on the nature of the knowledge resource has appeared to be very problematic. We won't review here the extensive discussion in the management literature on the epistemology and ontology of knowledge (see Nonaka and Takeuchi, 1995) but will criticize the perception on knowledge as 'near tangible' by some influential management theorists. By 'near tangible' we mean that most researchers today acknowledge the complex distinction between explicit and tacit knowledge but still assume that these two different forms of knowledge can be converted to each other and as such can be managed (Nonaka, 1994, Nonaka and Takeuchi, 1995). The assumption that tacit knowledge can be converted, through social interaction, into explicit knowledge is basically the raison d'être for the rise of knowledge management as a separate management field that can be distinguished from organizational learning (Nonaka, 1994).

Winograd and Flores (1986: 73) argue that the problem with this view is that it suggests that knowledge, by means of externalisation, can be called upon for use in reasoning and which can be translated into language or other media. Articulation of the unspoken is a never-ending process as we must do it in a language and a background that itself reflects a pre-understanding. "Knowledge", as they put it, "is always a result of the interpreter, which depends on the entire

previous experience of the interpreter and on situatedness in a tradition." (Winograd and Flores, 1986: 75).

The distributed view

Following Polanyi (1998, orig. 1958) and Tsoukas (1996), we believe that tacit knowledge is a necessary component of all knowledge and as such cannot be converted into explicit knowledge and vice versa. Or as Tsoukas puts it, tacit knowledge neither is internalised explicit knowledge, nor is explicit knowledge externalised knowledge. They are complementary, in the sense that explicit knowledge is always grounded on a tacit component and vice versa (Tsoukas, 1996: 14). The author, elaborating on Hayek's early seminal views on the knowledge society, further criticizes the notion of knowledge as a given or something that is to be discovered (after which it can be managed). The organization is a distributed knowledge system and cannot be surveyed as a whole; it is lacking an "overseeing mind". Moreover the organization is facing a "radical uncertainty" not just in the sense of bounded rationality but, more fundamentally, as it does not know what it needs to know (Tsoukas, 1996: 18).

Hamel and Prahalad (1994: 203) similarly refer to the distributed nature of core competencies when they say that it is very unlikely that these reside in its entirety in a single individual or small team. From this point of view, the idea of knowledge as a 'near tangble' resource in a concentrated or integrated form appears to be a "synoptic delusion"(Hayek 1982, quoted in Tsoukas, 1996). "The locus of the agent's knowing how to follow a rule is not in his head but in practice, that is to say, his understanding is implicit in the activity in which he engages." (Tsoukas, 1996: 16). A firm's knowledge therefore is the indeterminate outcome of individuals attempting to manage the inevitable tensions between normative expectations, dispositions and local contexts.

Weaknesses of RBV-theories

Resource-based and knowledge-based views of the firm distinguish themselves from the transaction cost theory of the firm by not perceiving the firm as just a node of contractual relationships but as much as a repository of distinct productive (technological and organizational) knowledge, and as an entity that can learn on the basis of this knowledge (Foss, 1996: 470). We agree with KBV-theorists that this organizational resource predominantly explains why and how firms can realize competitive advantage and can diversify and innovate. However we disagree

4

with them on their notion of knowledge as a static repository or as a stock; something that *is* instead of something that is *created*. This also implies a shift from an individual to a social perspective – from representational to a patterned interactional view on knowledge. It arises from the individual's committed participation in mutually oriented patterns of behavior that are embedded in a socially shared background of concerns, actions, and beliefs (Winograd and Flores, 1986: 78). As we are unable to define concepts like knowledge, capabilities, and core competences adequately we cannot look into the black box of competitive strategy. We alternatively suggest taking the firm's activity as the unit of analysis. We first discuss the relevance of activity systems from a strategic point of view and then have a look into the dynamics of activities.

STRATEGIC ACTIVITY SYSTEMS

In his article *What is Strategy?* (1996) Michael Porter gives an interesting response to advocates of RBV-theories, i.c. core competence theories. According to him, these new dogmas are dangerous half-truths, and are leading more and more companies down (Porter, 1996: 61). The root of the problem is the failure to distinguish between operational effectiveness and strategy. For achieving competitive advantage both are essential and complementary. Operational effectiveness means performing similar activities better than rival companies whereas strategic positioning means performing different activities from rival firms or performing similar activities in different ways. Strategy then is defined as the creation of a unique and valuable position, involving a different set of activities (Porter, 1996: 68). This complementary role of strategic positioning has been largely ignored by the RBV-theorists. In their emphasis on routines and organizational capabilities they fail to see that these resources are the result of particular (strategic) choices in the past and that those resources only have meaning within the corporate strategic framework.

However Porter agrees with the RBV-theorists on the crucial notion that all differences between companies derive from the internal resources and capabilities of the firm. Instead of talking about knowledge and capabilities Porter calls these internal resources *activities*.

> *"Activities, then, are the basic units of competitive advantage."*

and

> *"The essence of strategy is choosing to perform activities different than rivals do."*

5

This strategic choice is not just constrained by the availability of the internal resources but also by the trade-offs between the internal activities. Trade-offs are essential in strategic positioning, as they make clear that choosing for one thing necessarily excludes choosing for another. They appear when activities are incompatible and (ideally) prevent companies to become everything to everyone.

As Porter argues strategic positioning is not just about determining which activities a firm will be carried out but primarily how the different activities are interrelated to one another. By combining these different corporate activities the firm is weaving a system of interrelated activities. This system of activities gravitates around a few so-called 'higher-order strategic themes' or core activities. Exhibit 1 shows this system of activities of the Swedish furniture company IKEA. The core activities are 'limited customer service', 'self-selection by customers', 'modular furniture design' and 'low manufacturing costs'. The other interlocking activities are supporting these four core activities upon which the strategic positioning is based. The way and the extend to which these activities are attuned and connected to each other determines the competitiveness and sustainability of the corporate strategy. In contrast to RBV-perspectives in which individual strengths, core competences and critical resources are viewed to explain competitive advantage, Porter emphasizes that competitive advantage grows out of the *entire system of activities* (Porter, 1996: 73). The better the fit between these different activities the harder it becomes to imitate and to substitute these activities.

The system view is important here as it bridges two levels of analysis: the functioning system and its components (Spender, 1996: 57). We cannot analyse adequately just one core or supporting activity without considering the system of activities as a whole.
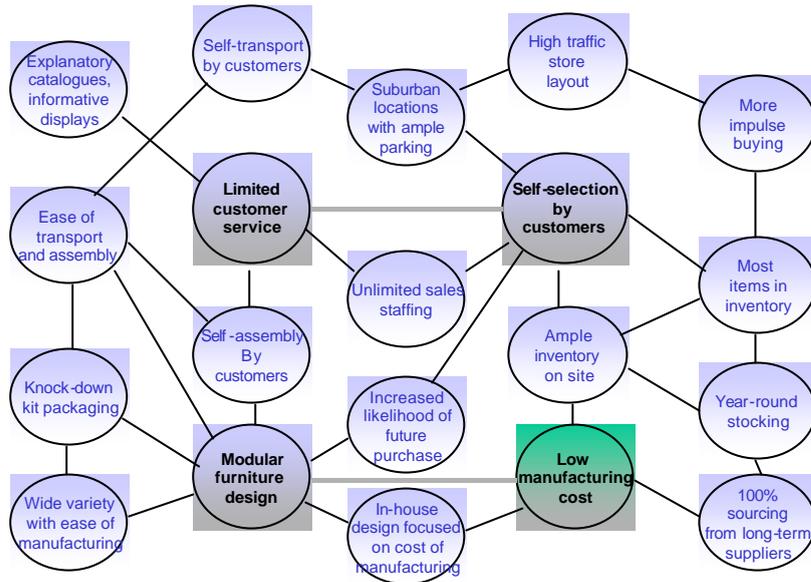
6

IKEA's activities

Exhibit 1 'Ikea's Activities

ACTIVITIY SYSTEMS

Porter elegantly relates activities to strategic positioning. However Porter is not very clear on what precisely is a activity is and how they work. He mainly sticks to the level of the system of activities, leaving he working of activities unexplored. We therefore will use Activity Theory, as developed by Engeström (1987, 1999) and employed by Blackler (1995, 2000) in organizational settings to describe some of the dynamics within activities. As Blacker (2000) argues activity theory provides means to analyse organisations as socially distributed, decentred and emergent knowledge systems.

Some core principles of Activity Theory

Activity Theory has its origins in the ideas of the Russian literature scholar and psychologist Lev Vygotski who attempted to find a solution to the crisis of psychology during the first decades of the 20th century. Should human consciousness be studied as an autonomous agent independent of and opposed to the material environment or should it be explained in terms of elementary nervous mechanisms, using the concept of reflect or stimulus-response connection (Miettinen, 1997: 2).

7

Vygotski found both conceptions unsatisfactorily and launched the concept of mediated action. A human being never interacts merely directly to the environment but cultural means or artefacts mediate the relation between human agent and objects. The basic types of means are signs and tools (language, theories, technical artefacts). As Miettinen (1997) explains, consciousness does not exist just inside the head of an individual but in the interaction – realized through material activity – between the individual and the objective forms of culture created by the labour of mankind. Mediation is one of the core principles in the activity theory. In principal it breaks down the Cartesian walls that isolate the individual mind form the culture and society (Engeström, 1999: 29).

Alexei Leont 'ev, a student of Vygotski, elaborated on the concept of mediation. He emphasized that consciousness and meaning are always formed in joint, collective activity, and thus is also socially mediated. Studying human mediated activity should therefore take an activity system as the unit of analysis. An activity system can be defined as a community of actors who have a common object of activity. An activity can be described as a process directed at solving vital problems (objects) emerging in the interaction of the subject with the world (Dunne, 1995: 6). One of Leon'tev's major contributions to the activity theory is his hierarchical distinction between the collective long-term *activity*, the individual or group short-term *action*, and the automatic routinized *operation*. The movement between these three levels is a core principle of the activity theory (Engeström, 2000: 307). Activities are directed towards an object that motivates activity. Activities can be seen as a concerted set of goal-directed actions that must be undertaken to fulfil the object. Actions are implemented through automatic operations. Operations do not have their own goals; rather they provide an adjustment of actions to current situations. The trust of this hierarchical distinction is we can only understand human behavior within the context of the activity in which the human being is engaged. This notion is frequently illustrated by the Leon'tev's story of the Beater and the Hunt.[1]

---

[1] A beater, for example, taking part in a primeval collective hunt, was stimulated by a need for food or, perhaps, a need for clothing, which the skin of the dead animal would meet for him. At what, however, was his activity aimed? It may have been directed, for example, at frightening a herd of animals and sending them toward other hunters, hiding in ambush. That, properly speaking, is what should be the result of the activity of this man. And the activity of this individual member of the hunt ends with that. The rest is completed by the other members. This result, i.e. the frightening of game, etc., understandably does not in itself, and may not, lead to satisfaction of the beater's need for

Engeström (1987, 1999) has presented a descriptive, triangular model, which focuses on the mediated between the minimum elements of the activity system. It features the processes through which both language and technobgies mediated between an individual (subject) and his object of activity, the processes through which social rules mediate the relationship between the subject and the community of actors, and through which the division of labor mediates the relationship between all actors involved and their shared object of activity (Blackler e.a., 1999: 7, Boer e.a., 2002: 4).

Figure 1 General model of an activity system

---
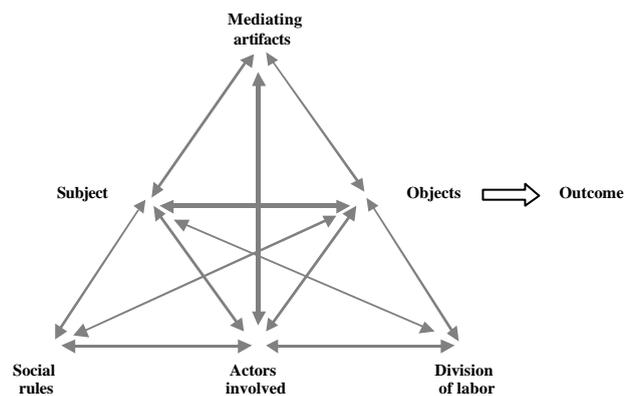
food, or skin of the animal. What the processes of this activity were directed to did not, consequently, coincide with what stimulated them, i.e. did not coincide with the motive of his activity; the two were divided from one another in this instance. Processes, the object and motive of which do not coincide with one another, we shall call "actions". We can say, for example, that the beater's activity is the hunt, and the frightening of the game his action (Leon'tev, 1980, 210, quoted in: Engeström and Miettinen, 1999: 4).

Breakdowns

The most important question is of course what makes an activity system run, what is the "engine of action" (Coleman, 2000: 18). Engeström and Miettinen (1999) emphasize that internal tensions and contradiction of the system are the motive force of change. Disturbances within the mediated relationships urge for new problems solving activities which, as a consequence of the interrelatedness of the minimum elements of the system, may cause disturbances in other relationships. According to Blackler e.a. (1999) activity systems therefore could be best understood as *disturbance producing systems*. Incoherencies and tensions within and between activity systems provide the motive for collective action and transformation. Different subjects, due to their different histories and positions in the division of labor, construct the object and other components of the activity system in different, often conflicting ways. As a consequence there is a permanent construction and (re-) negotiating within the activity system which triggers expansive learning and initiate concrete innovative actions (Engeström, 2000: 309). The activity system develops and transforms as a consequence of the attempt to find – temporarily – solutions for tensions and disturbances within the system.

Activities are dynamic systems in that they are subject to breakdowns and the finding of solutions to these breakdowns. Because of their systemic nature, neither monocausal and linear concepts of causation do apply to explain these phenomena, nor can these be explained by means of rhetorics of individual actors (as is the case in radical constructivism). The historical and cultural nature of individual actions succinctly hints at the constrains of these individual actions. Knowledge, artifacts and institutions are outcomes of collective behavior and thus cannot be reduced to sums of individual actions (Engeström and Miettinen, 1999: 10-11).

The important role of tensions and disturbances has been discussed in the organisational literature several times (Patriotta and Pettigrew, s.a.; Blackler, 1995). Winograd and Flores following Heidegger, have called them *breakdowns* by which they mean interrupted moments of our habitual, standard, comfortable 'being-in-the-world' (1986: 77). Breakdowns reveal the nature of activities; they make the activity system 'visible' for a short time. At these moments we can initiate action to solve disturbances within or between activity systems. The concept of breakdown differs from the concept of problem. Breakdowns inherently refer to the embedded structure of the activity system whereas problems refer to the interpretations of a individuals in

10

relation to his background. Management intervention then is essentially directed towards repairing breakdowns and, more strategically, towards anticipating future breakdowns. This view deviates from the perspectives in which knowledge is taken as the unit of analysis (RBV) in that knowledge cannot be broken down and made 'visible' like activities.

NETWORKS OF ACTIVITY SYSTEMS

As was emphasized in our discussion of Porter's view on strategy, activity systems cannot be considered in isolation from the other activity systems within the organization. Over time, activities evolve to more complex and interdependent systems, and objects of activity are becoming more abstract and emergent (Blackler, Crump, McDonald, 2000: 280). As a consequence, activity systems differentiate and subdivide into different smaller activities. From an organizational perspective, Blackler e.a. (2000) suggest organizations should not be analysed as a single activity systems but as networks of overlapping activity systems. These networks are composed of 'communities of activities'. The authors applied this idea of activity networks to study cooperation of three Strategy Development Groups in a high tech company. It appeared a helpful framework to demonstrate the flaws of the dominant control regime within the company and the multi-faced nature of the expertise. A similar argument has been made by Brown and Duguid (1991) when they propose to view the organization as a community of communities

Systemic dynamics

The issue of shifting perspective from activity system to network of activities as the unit of analysis, as Blackler e.a. (2000) suggest, has recently been addressed by other researchers as well. Engeström (2000) sympathizes with this idea of networks of activity systems but points at the need for research to the 'systemic' dynamics within these networks. Activity systems are analysed from a system theoretical perspective which implies that the connections between these activities should be studies from this perspective as well.

Taking this network as the unit of analysis is really bringing the activity at the same level of Porter's analysis of the system of activities. Within this system of corporate activities the role of strategy is creating fit among the company's activities. Porter suggests that first- (simple consistency), second- (reinforcing activities), and third-order (optimizing effort) fits can be employed to establish a "nest of tightly linked activities" (Porter, 1996: 73). The most valuable fit is strategy-specific as it enhances the uniqueness of the strategic position and amplifies trade-

11

offs. The more the company's positioning rests on second- and third order fits, the more sustainable will be the competitive advantage. These highly complicated fits are difficult to untangle and therefore hard to replicate by rival companies. This systemic view on corporate activities also reveals the potential weaknesses of the company's resources. Badly performing activities will degrade the performance of other activities as well.

Boundaries

Porter's systemic view on activity systems is highly insightful at an abstract level but does not provides us with insights of how to create strategic fits, how to govern networks, and the motivations of people engaged in the different activities, to cooperate and share practices with each other. Advanced co-ordination and information sharing mechanisms are needed to create and sustain a fit between activity systems. Porter implicitly assumes the presence of a super-ordinate goal within the whole system of activities that drives the organization to create these fits in relation to strategic positioning. On the basis of activity theory and theories on Communities of Practices one can raise some serious doubt about this assumption.[2] Activity systems evolve over time, they develop their own language, culture, tools, interpretative schemes and thus their own social boundaries. Like Brown and Duguid (1991) argue information within communities (in our case activity systems) travels fast and easily. Knowledge is readily available to the members of the activity systems. But within the functioning of the whole corporation information sharing between different activity systems becomes problematic. Information will be treated as a commodity and as a consequence information flows between activity systems will be subject to the bargaining power and exchange relationships between the activity systems. For this reason Wenger (1998, 2000) has emphasized the importance of boundaries, boundary objects, and brokering.[3] We agree with Blackler e.a., Brown and Duguid to stretch from the level of individual activity systems to the overarching level of networks of activities (like Porter in fact does) but

---

[2] Although Wenger (1998) points at the ontological differences between Activity theory and theories on Communities of Practice, both perspectives have much in common (see e.g. Blackler e.a., 2000)

[3] By boundary objects Wenger (1998: 105) refer to artefacts, documents, terms, concepts, and other forms of reification around which communities of practice can organize their interconnections. Brokering concerns the connections provided by people who can introduce elements of one practice into another. Limited space does not allow us to discuss these issues in further detail.

12

realise that this does not imply that the systemic dynamics, as we have discussed from a activity theoretical perspective, cannot just be amplified to this network level.

Back to Strategy: Internalisation and Externalisation

Activity theory provides detailed descriptive frameworks for studying the dynamics of and between organizational activities. Blackler's case studies, in which activity theory is applied to organizations, demonstrate that these alternative frameworks are helpful heuristics for studying underlying, interrelated organizational problems. However, what is still missing in these analyses is how activity systems can contribute innovation and corporate value creation.

Activity theory is essential a developmental theory about learning. It differentiates between two basic processes that are continuously active at every level of human activities: internalisation and externalisation. The first refers to the reproduction of culture, whereas the latter concerns the creation of new artifacts that make transformation possible (Engeström, 1999). The internalisation process focuses on socializing and training the novices to become competent members of the activity. This process is basically similar to what Lave and Wenger (1991) have described as legitimate peripheral participation. Learning is view as a process in which the novice moves from the periphery to the core of the activity system. This may lead to conservatism as it requires the novice to comply with the existing norms and values of the activity systems. Focusing on internalisation processes may lead to operational effectiveness, as suggested by Porter. The externalisation process concerns the finding of solutions which are not presently at hand within the activity system. It starts with proposing and implementing discrete individual innovations. When the disruption and contradictions of the activity become more demanding, people within the activity system become more self-reflective and will start adopting the discrete innovation. Externalisation, thus, stimulates knowledge creation and conducting the activity differently. So the processes of externalisation and internalisation work hand in hand but within different time frames. Studying these twin-processes of internalisation and externalisation, from a activity theoretical perspective, may shed new lights on the ways organisations can create resources of the firm's competitive, sustainable advantage.

CONCLUSIONS

In this paper we have tried to introduce a perspective on organizational strategy that is able to bridge the gap between internal organizational learning and strategy. We have explored the

13

possibilities of activity theory to do so. Such an activity theoretical perspective offers a potential alternative to the Resource Base Theory of the firm. We think an alternative to this dominant perspective is needed for at least three reasons.

In the mid 1980s resource-based view theories originated out of a growing concern about ignorance of the organizational resources and organizational capabilities in the dominant strategic management theories. The latter were preoccupied by an outside-in orientation. The strength of the RBV-theories is that they have brought the firm's internal resources back to the fore. However there are three important weaknesses in the RBV-theorizing. The first is that these theories have been unable to be clear on what exactly core competencies, knowledge, capabilities are. The second weakness is the rather static view of the knowledge resource and its separation from the organizational capabilities. If organizational capabilities are not knowledge, what else are they than? Following Tsoukas we have argued that there is not such a thing as knowledge (passive) that can be managed (active). Knowledge is essentially contextual, distributed, and embedded in processes of the firm's activities. The consequence of this alternative epistemology is the shifting away from knowledge to the activity and the activity system as the unit of analysis. The third weakness is the ignorance of strategic positioning in the RBV-theories. Originally the central tenet of strategic management was the match between environmental conditions and organizational capabilities, i.e. to the production and the demand (Priem and Butler 2001). RBV's have become too narrowly focussed on the firm's internal resources while paying scant attention to the strategic positioning and demand-side. In our discussion on Porter's view on strategy we showed how initial steps are made to integrate the RBV with the strategic positioning theorizing by focussing on activities. Porter however does not elaborate on what activities are and how they work.

We have tried in this paper to continue this discussion by introducing an 'activity theoretical' perspective on strategy. We believe that activity theory can help us bridging the gap between organizational learning and strategy. We are aware that in this paper we have only touched upon this possible new perspective. More research is needed to elaborate on this new combination of theories.

14

REFERENCES

- Barney, J.B. (1991), Firm resources and sustained competitive advaantage. In: *Journal of Management* 17, pp. 99-120
- Blackler, F. (1995), Knowledge, Knowledge work and Organizatio: an Overview and Interpretation, *Organization Studies*, 16/6, pp. 1021-1046
- Blackler, F., N. Crump and S. McDonald (1999), Managing Experts and Competing through Innovation: An Activity Theoretical Analysis, *Organization*, Vol. 6(1), pp. 5-31
- Blackler, F., N. Crump and S. McDonald (2000), Organzing Processes in Complex Activity Networks, *Organization*, Vol. 7(2), pp. 277-300
- Boer, N-I, P.J. van Baalen, and K. Kumar (2002*), An Activity Approach for Studying the Situatedness of Knowledge Sharing.* ERIM-research paper Rotterdam School of Management/Faculteit Bedrijfskunde/Erasmus University Rotterdam
- Brown J.S. and P. Duguid (1991), Organizational Learning and Communities of Practice: towards a unified view of working, learning, and innovation. In: *Organization Science*, Vol. 2, No. 1, pp. 40-57. Reprinted in: E.L. Lesser, M. A. Fontaine and J.A. Schluster (ed.) (2000), *Knowledge and Communities.* Boston e.a., Butterworth/Heinemann, pp. 99-122
- Dosi, G. and L. Marenco (2000), On the tangled discourse between Transaction Cost Economics and Competence-Based Views of the Firm. In: Foss, N. and V. Mahnke (ed.), *Competence, Governance, and Entrepreneurship. Advances in Economic Strategy Research.* Oxford, Oxford University Press, pp. 80-92
- Dunne, R. (1997), *Activity Theory*. wysiwyg://285/http://www.ex.ac.uk/telematics/maths/actar01.html
- Engeström Y. and R. Miettinen, Introduction. In: Y. Engeström, R. Miettinen and R.L. Punamäki (ed.), *Perspectives on Activity Theory.* Cambridge e.a. Cambridge University Press, pp. 1-16
- Engeström, Y. (2000), Comment on Blackler et al. Activity Theory and The Social Construction of Knowledge: A Story of Four Umpires, *Organization*, Vol. 7(2), pp. 301-310
- Engeström, Y., Activity Theory and individual and social transformation. In: Y. Engeström, R. Miettinen and R.L. Punamäki (ed.), *Perspectives on Activity Theory.* Cambridge e.a. Cambridge University Press, pp. 19-38
- Foss K. and N. Foss, (2000), The Knowledge-Based Approach and Organizational Economics: How much do they really differ? And how does it Matter? In: Foss, N. and V. Mahnke (ed.), *Competence, Governance, and Entrepreneurship. Advances in Economic Strategy Research.* Oxford, Oxford University Press, pp. 55-79
- Foss, N. and V. Mahnke (2000), Advancing Research on Competence, Governance, and Entrepreneurship. In: Foss, N. and V. Mahnke (ed.), *Competence, Governance, and Entrepreneurship. Advances in Economic Strategy Research.*Oxford, Oxford university Press, pp.1-20
- Foss, N.J. (1996), Knowledge-based Approaches to the Theory of the Firm: Some Critical Comments, Organization Science/Vol. 7, No. 5, September-October, pp.470-476
- Grant, R.M., Toward a Knowlegde-Based Theory of the Firm, *Strategic Management Journal*, Vol. 17 (Winter Special Issue), pp.109-122

- Hamel, G. and C.K. Prahalad(1994), *Competing for the Future. Breakthrough Strategies for Seizing Control of Your Industry and Creating the Markets of Tomorrow.* Boston/ Massachusetts, Harvard Business School Press, ,
- Lave, J. and E. Wenger, (1991), *Situated Learning: legitimate Peripheral Participation.* Cambridge. Cambridge university Press
- Miettinen, R. (July 1997), The Concept of Activity in the Analysis of hetergenous Networks in innovation Process. CSTT Workshop, Actor Network and After, http://communication.ucsd.edu/MCA/Paper/Reijo/Reijo.html
- Nonaka, I. (1994), A Dynamic Theory of Organizational Knowledge Creation. In: *Organization Science*, 5, pp. 14-37
- Nonaka, I. And H. Takeuchi (1995), *The knowledge-creating company: How Japanese companies create the dynamics of innovation.* New York, Oxford University Press
- Patriotta, G. and A. M. Pettigrew, *Studying knowing and doing.* University of Warwick and University of Bologna
- Polanyi, M. (1998, orig. 1958), Personal Knowledge: Towards a Post-Critical Philosophy. London. Routledge
- Porter, M. E., What is Strategy? In: *Harvard Business Review*, November-December 1996, pp. 61-78
- Prahalad, C.K., L. Fahey, and R. M. Randall (2001), Creating and Leveraging Core Competencies. In: L. Fahey and R. M. Randall (ed.), *The Portable MBA in Strategy*, New York, John Wiley & Sons, pp 236-252
- Priem, R.L. and J.E. Butler (2001), Is the Resource-Based "View" a useful Perspective for Strategic Management Research?, *Academy of Management Review*, Vol. 26, No. 1, pp. 22-40
- Ryall, M.D. (Oct. 1998), *When Competencies are not Core: Self-Confirming Theories and the Destruction of Firm Value.* Research paper W.E. Simon School. University of Rochester.
- Spender, J.C. (1996), Making Knowledge the basis of a dynamic Theory of The Firm, *Strategic Management Journal*, Vol. 17 (Winter Special Issue), pp. 45-62
- Tsoukas, H. (1996), The Firm as a Distributed Knowledge Systen: a Constructionist Approach, *Strategic Management Journal*, Vol. 17 (Winter Special Issue), 11-25
- Wenger, E., (1998), *Communities of Practice. Learning, Meaning, and Identity.* Cambridge University Press. Cambridge
- Wenger, E., (1999), Communities of Practice: the key to knowledge strategy. In: The *Journal of the Institute for Knowledge Management*, 1, pp. 48-63. Reprinted in: E.L. Lesser, M. A. Fontaine and J.A. Schluster (ed.) (2000), *Knowledge and Communities.* Boston e.a., Butterworth/Heinemann, pp. 3-20
- Wernerfelt, B. (1984), A resource-based view of the firm. In: *Strategic Management Journal* 5, pp. 171-180
- Winograd F. and F. Flores (1986), *Understanding Computers and Cognition: A new Foundation for Design.* New Jersey, Ablex Publishing Corporation