■ *Research Paper*

How Process Philosophy Can Contribute to Strategic Management

Alexander Styhre*

Fenix Research Programme, Chalmers University of Technology, Gothenburg, Sweden

Process philosophy can contribute with alternative perspectives and views to traditional strategic management theory. The Western tradition of thinking, the metaphysics of Being as presence, based upon the binary separation between transcendental ideas and appearances in the real world, has been challenged by process philosophy, from Hellenic and classical philosophy through contemporary philosophy and modern physics. Process philosophy is increasingly relevant for strategic management as everyday strategic management practice has to deal with fluid, changing and complex realities. The aim of this paper is to discuss the notion of process philosophy as being a unifying label for theoretical models that emphasize change over stability, novelty over uniformity, and becoming over being. The contribution of process philosophy to strategic management theory is not primarily 'theoretical' but conceptual, and aims at providing alternative perspectives on the concept of strategy. Copyright © 2002 John Wiley & Sons, Ltd.

Keywords   process philosophy; strategic management; ontology/epistemology

INTRODUCTION

Strategic management has evolved from being concerned with formal decisions and managerial activities in stable, mechanistic and rule-governed structures (see Ansoff, 1965; Andrews, 1971; Hofer and Schendel, 1978), into studies on how strategic management could serve as a practical concept in a complex, elusive and continuously changing world (D'Aveni, 1994; Stacey, 1995; Brown and Eisenhardt, 1998;

Teece *et al.*, 1997). The 1990s strategic management theory emphasized internal resources, capabilities, assets and competencies such as corporate culture, reputation, knowledge and information technology as being the primary mover behind competitive advantage (e.g., resource-based view theory and knowledge management literature), and the external environment to organizations was depicted as being increasingly complex and complicated to manage (e.g., complexity theory). The growth in interest in what could be called non-linear models of strategic management is representative for the general belief in the need for new, more adequate models of how organizations create competitive advantage and value when

*Correspondence to: Alexander Styhre, Fenix Research Programme, Chalmers University of Technology, Aschebergsgatan 46, Vasaområdet Hus 3, S-412 96, Gothenburg, Sweden.
E-mail: Alexander.Styhre@fenix.chalmers.se

being conceptualized as open systems, subject to external influences and exchanges (cf. Pfeffer and Salancik, 1978). Complexity theory models of strategic management draw from non-linear models (Anderson, 1999; Morel and Ramanujam, 1999; Cillier, 1998). Complexity theory is a broad label for a number of theories, ideas and research programmes that are undertaken in scientific disciplines such as biology, mathematics, chemistry and physics (Rescher, 1996a). The ideas of complexity, derived from non-linear thinking, have contributed to the understanding of reality, but complexity theory is not a singular, individual theoretical contribution to science but is rather a branch of what we in this paper will refer to as *process philosophy* or *process thinking*. The growth of complexity theory is part of a general criticism on Western metaphysics—what Heidegger refers to as the tradition dominated by thinking of 'being as presence', that is, various forms of transcendental philosophy. The transcendental tradition has dominated Western thought at the expense of more fluid and evolving, process-based perspectives on the world. This paper aims at discussing the notion of process philosophy as representing an alternative ontological and epistemological posture, fundamentally removed from the Platonist tradition (Rescher, 1996b), which promises to enrich strategic management theory. The recent adoption of complexity theory could be seen as one body of scientific thought within the tradition of process thinking. As will be discussed, the departure from Newtonian physics represents a general criticism on Western metaphysics in the tradition of Plato, Descartes, Kant and Hegel (Hayden, 1998). The implications for strategic management are that some generic propositions must be put into question: a theoretical recognition of becoming over being, change over stability, and novelty over uniformity must be integrated into practices.

The paper is outlined as follows. First, we address some of the problems with traditional strategic management theory. Second, the notion of process philosophy and its key concepts are introduced. Next, the benefits from process thinking in strategic theory are pointed out, and finally some implications and conclusions are discussed.

THE PROBLEM WITH TRADITIONAL STRATEGIC MANAGEMENT

Traditional strategic management includes a number of research paradigms, perspectives, concepts and so forth, and comprises the whole spectra of rationalistic, linear strategy models to models of emergent strategies with unintended consequences and complexity theory models of strategy. Strategic management theory is thus a polyphonic and polysemic body of theory; there is not just *one* theory, but a multiplicity of theories. For instance, strategic management theory includes what is called processual models of strategy, developed by, for instance, Pettigrew and Mintzberg (Mintzberg and Quinn, 1991; Barney, 1997). These processual models should not be confused with the process philosophy perspective examined in this paper. The processual strategy model refers to a *practice*, a *pragmatics* in strategic management, in settings where linear strategy models do not work satisfyingly; the process philosophy perspective deals with the ontological and epistemological assumptions inherent to strategic management theory: it seeks to unconceal the ground, the ontology, of strategic management theory. Traditional models of strategy rarely problematize the ontological and epistemological assumptions that serve as its ground and point of departure.

Calori (1998) aims at problematizing the epistemological assumptions in strategic management theory. To Calori (1998, p. 290), 'strategic management is still a "grand narrative", an archetypical "modern" concept governed by deductive rationality, and researchers are still guided by the principles of "performativity". One of the major characteristics of (traditional) strategic management theory is its dependence on what Calori refers to as a 'binary logic'. The sole reliance of binary logic has, Calori (1998, p. 290) claims, far-reaching implications: 'Binary logic of the true and false leads to dualistic philosophies and religions that oppose good to evil, the mind to matter. As a corollary, such reasoning leads to consider decisions as a choice between (exclusive) alternative; the choice of the best (most logical) solution among a set of

possible solutions' (Calori, 1998, p. 290). Moreover, in strategic management, there is, Calori (1998, p. 299) argues, a 'bias towards thinking to the detriment of other forms of reason, a bias towards binary logic, and the failure to recognize feeling (moral and instinct) as a source of reason'.

In a case that supports Calori's arguments, Mair (1999) provides an analysis of a number of strategic studies of Honda Motors. Mair (1999) criticizes mainstream strategic management theory for subscribing to what he calls a 'reductionist epistemology' wherein 'empirical facts that are dubious' are reduced to well-known categories. Therefore, Mair claims that 'in observing Honda, the strategy thinkers have seen only what they want to see' (Mair, 1999, p. 36). Strategy analysts employed a binary logic, the distinguishing mark of modernist scientific thinking, to study how Honda approached the North American market. To Mair, this was problematic since 'Honda was said to illustrate and legitimate *either* learning *or* design, *either* industry analysis *or* resource-based approaches, *either* core capabilities *or* core competencies' (Mair, 1999, p. 39). As opposed to this view, Mair requests a new mode of thinking about strategic management:

> What is therefore required is an investigation of strategic management at Honda motors from a theoretical perspective which admits the possibility that strategic thinking at Honda is not constrained by a dualist philosophy requiring choice between learning and design, industry analysis and resource-based strategy, core capabilities and core competencies. (Mair, 1999, p. 39)

In contrast to previous studies of Honda, Mair (1999) claims that Honda demonstrates a 'dichotomy-reconciling strategic capability' (Mair, 1999, p. 26) where the dual opposites are released from their (assumed) antagonistic positions. The Honda case is of particular interest because it highlights the *restraining* effects from traditional, non-processual strategy thinking. Adopting taken-for-granted and well-known (i.e., historically successful) explanatory frameworks inhibits the strategy analysts from conceiving of

Honda's less orthodox approaches as being groundbreaking. Strategic thinking could be enhanced if a broader variety of perspectives could be nourished and encouraged.

Mair's case of Honda represents an empirical account on strategic management theory that does not assume a binary logic (e.g., good/bad, high/low, right/wrong), but aims at breaking up these categories in favour of alternative views. Mair's polemical tone indicates his inability to interpret the Honda case solely on the basis of the more traditional models. The paper represents one single case and it thus serves primarily as an illustration for what, in some cases, could be a problem for strategic management theorists and analysts, that is, the inability to look outside of the existing dichotomies, models and structures enacted within the dominant paradigm (Prahalad and Bettis, 1986). The contribution of process philosophy to strategic management theory is not theoretical (in terms of providing a new 'theory' or 'model' of strategy), but is conceptual or perhaps even 'perceptual' in terms of enabling a new way of thinking of strategic management. For instance, Honda's 'dichotomy-reconciling strategy capabilities' rest upon the idea of certain dichotomies inherent to strategic management; without the proclivity toward the construction of opposing capabilities (e.g., quality *versus* quantity, time *versus* cost), there would not be any dichotomies to reconcile. In a processual view on Honda's activities, there would be alternative ideas generated, derived from a different theoretical framework, a different 'gaze' on Honda. The process view does, as has been argued, belong to the ontological and epistemological realm of strategy and therefore operates on the paradigmatic level.

In this paper, the notion of *process* is central; process does not designate the sequential practices that constitutes strategic work (e.g., the series analysis, decision, implementation, evaluation), but is an ontological category that concerns what in classical philosophy is referred to as *Being*, the ontological constitution of the world. Process is thus not a methodological or primarily practical concept, but is used to capture the fluid, transient quality of Being that strategy practitioners and theorists have to deal

with. Process philosophy contributes to strategic management in two ways: (1) *Theory*: The application of process philosophy enables an analysis of the assumptions that are underlying to dominating strategy theories and models. Process philosophy opens up new views on theoretical and empirical problems through the introduction of new concepts, perspectives and models. (2) *Practice*: Strategic management is increasingly focused on dealing with various changes—changes in the market, changes in products, changes in competition. Process philosophy enables an analysis of these changes in terms of not being changes *between* two stable states, but as being the *normal* state, the state of perpetual change. Change is not, which is a widely held position, an extraordinary situation but is rather a generic characteristic of today's competitive environment. Process philosophy therefore provides opportunities for renewal of strategic management theory and practice.

Traditional strategy theory assumes, more or less explicitly, that Being is constituted by reasonably stable categories and entities. This taken-for-granted assumption provides analytical tools for dealing with clear-cut phenomena and unambiguous events. When the stability of Being is questioned, it is merely consisting of increased speed—a faster change between stable states—as in D'Aveni's (1994) notion of hypercompetition, not of a new conceptualization of strategy, nor of the market, nor of the world. Thus, hypercompetition is a stable structure under the influence of increased speed (cf. Virilio, 1991), rather than being a reconceptualization of strategic management *de profundis*. The process philosophy perspective can contribute to strategic management theory by providing a conceptual framework that does not rest on what Heidegger (1996) has called 'Being as presence', but recognizes the continuous change and production of novelty. Acknowledging the process view of Being does not mean abandoning traditional strategic management theory but opening up alternative ways of thinking about strategic management. Traditional strategic management theory serves its purpose perfectly well in certain industries and settings, but it does not always provide an adequate analytical framework. The aim of the paper is therefore to discuss the notion of process philosophy in relation to strategic management theory.

KEY CONCEPTS IN PROCESS PHILOSOPHY

When talking in terms of process philosophy, there are a number of notions that are always in use and that are put forth in opposition to other notions. There are thus a number of dichotomies inherent to process philosophy. For instance, we distinguish between being and becoming, stability and change, novelty and uniformity (Bergson, 1998). These dichotomies are used to illustrate how the process view aims at providing tools for an analysis of systems in continuous change. Being refers to stable existing structures, tangible or intangible, that constitute what the world is; becoming refers to the process of 'turning-into-something', to be in a perpetual process of reconstitution and change, not necessarily in quality, but in configuration. Bergson (1998, p. 304) talks of three forms of becoming in terms of movements in biology: *qualitative* movements (e.g., from green to yellow), *evolutionary* movements (e.g., from nymph to perfect insect) and *extensive* movements (e.g., eating or hunting). To put it in somewhat simplistic terms, the notion of becoming is to process philosophy what being is to transcendental thinking. Stability refers to the tempo-spatial constitution of an event, entity or process; change refers to the process of reconfiguration of an event, entity or process. Novelty refers to the quality of being a new tempo-spatial and qualitative entity, event or process; uniformity refers to the tempo-spatial homogeneity of an event, entity or process. These dichotomies are complicated to define in lexical terms, but are invoked to provide a conceptual framework that makes sense of the notion of process. Since our everyday thinking is immersed in transcendental thinking (we talk, for instance, of 'underlying values', 'shared objectives' and 'generic qualities', thus assuming a hierarchy of concepts and referents. See Derrida, 1981, p. 19); it is challenging to think in terms of processes where everything is fluid, evolving and unstable, since our intellect is

trained in dealing with stable categories (Bergson, 1998). Therefore, various dichotomies employed in this paper should be seen as conceptual tools that enable us to think outside of ready-made structures and common sense.

THE IDEAS OF PROCESS PHILOSOPHY

Hayden (1998) identify two traditions in Western philosophy:

> On one hand are those philosophies which contend that the world is but an imperfect and transient image of a more significant and eternal realm of transcendent essences, causes, and ideas. The tendency here is to devalue the world as it is experienced in favour of the notion of a metaphysical domain 'behind' or 'beyond' the world we live in...On the other hand is the tradition of philosophies which have a tendency to affirm that the empirical world is the only actual source of beliefs, ideals, meanings, and values made and transmitted in experience. These philosophies of immanence deny all appeals to transcendent causes, essences, and universal and unchanging principles. Instead they emphasize the way we construct, interpret, and change it in order to make new and different things, interpretations, and experiences possible (Hayden, 1998, pp. 37–38)

There are thus a transcendental tradition ('Being is presence') and an empiricist process tradition ('Being is becoming') in Western thinking.

In classical philosophy, from ancient Greek and onward, the question of Being has been a key philosophical problem. From the outset, the ontological constitution of the world has been subject to reflection. In Hellenic philosophy, it is possible to distinguish between philosophers who assumed stable and fixed categories (e.g., Plato and Aristotle), and those who postulated reality to be constituted by a multiplicity of fluid processes (e.g., Heraclitus, whose dictum *panta rei*, everything flows, has served as a general model for process philosophy). In modern philosophy, thinkers such as Henri Bergson and Alfred North Whitehead, and pragmatists such as Charles S. Pierce, William

James and John Dewey, have contributed to process philosophy. Process philosophy is thus a classic ontological and epistemological doctrine that is being invoked in various disciplines such as biology, economics and physics. Rescher (1996b, p. 2) writes that 'process metaphysics as a general approach holds that physical existence is at the bottom processual; that processes rather than things best represent the phenomena that we encounter in the natural world about us'. In addition, Rescher (1996b, p. 35) claims that process metaphysics is 'really less of a theory than a point of view taking the line that one must prioritize processes over things and activities over substances'. Lucas (1989) writes:

> Process philosophy is customarily delineated through the specification of a series of descriptive categories, stressing in particular the central metaphysical importance of time and change; the ontological primacy of events in place of an underlying and static substance; flux, becoming, novelty, and finite freedom or partial self-creativity; internal relatedness, organicism and holism; a doctrine of critical realism that emphasizes the phenomenological interconnections of subjects and objects, knower and known; and a doctrine of 'experience' understood as coextensive throughout the whole of nature rather than as inexplicably limited to an arbitrary narrow range of entities. (Lucas, 1989, p. 20)

The notion of process is central to process thinking. Rescher (1996b) defines process as a 'coordinated group of changes in the complexion of reality, an organized family of occurrences that are systematically linked to one another either causally or functionally. It is emphatically not necessarily a change in or of an individual thing, but can simply relate to some aspect of the general ''conditions of things'' (Rescher, 1996b, p. 38). The basic ideas in process philosophy could be formulated in two propositions: (1) 'In a dynamic world, *things* cannot do without *processes.* Since substantial things change, their nature must encompass some impetus to internal development'. (2) 'In a dynamic world, *processes* are more fundamental than *things.* Since substantial things emerge in and from the world's

course of changes, processes have priority over things' (Rescher, 1996b, p. 28). There are of course entities such as artefacts, human beings, animals, plants and so forth existing as *factum brutum* (Searle, 1969) in the everyday life world but, as Rescher argues, 'on closer inspection, the idea of discrete events dissolves into a manifold of processes which themselves dissolve into further processes' (Rescher, 1996b, p. 29). Process-oriented philosophy, the immanent, empirical tradition pursues a mode of thinking that emphasizes the horizontal connections in a 'flat' network of interrelated entities. The philosophy of transcendental categories has been referred to as foundationalism, Platonism or idealism. One of the major problems of what Luhmann (1990) calls the *transcendental tradition* is that of *difference* and *change* (Bell, 1998). For instance, Plato distinguishes between knowledge and opinion, reality and appearances; these distinctions are complicated to maintain without assuming underlying or transcendental categories that separate knowledge *per se* and opinions, visual, transient appearances from true realities. Process philosophy represents an alternative path on thinking on the problem of difference.

The French philosopher Henri Bergson is one of the most influential modern process thinkers. To Bergson, 'reality is mobility. Not things made, but things in the making, not self-maintaining states, but only changing states, exist' (Bergson, 1999, p. 49). In Bergson's philosophy, 'the universe is made up of modifications, disturbances, changes of tension and of energy, and nothing else' (Deleuze, 1988, p. 76). To Bergson, the evolutionary perspective is valid for all entities and events, physical as well as mental. In his philosophy, Bergson stresses the importance of change. In terms of biology, evolution is conceived of as a continuous movement: 'Life as *movement* alienates itself in the material *form* that it creates; by actualizing itself, by differentiating itself, it loses "contact with the rest of itself". Every species is thus an arrest of movement; it could be said that the living being turns on itself and *closes itself*' (Deleuze, 1988, p. 104). The other great modern process philosopher (Lucas, 1989, p. 6), Alfred North Whitehead, depicts

Descartes as the antipode *par excellence* to Bergsonian philosophy. Whitehead writes:

> On the whole, the history of philosophy supports Bergson's charge that the human intellect 'spatializes the universe': that is to say, that it tends to ignore fluency, and to analyse the world in terms of static categories. Indeed Bergson went and conceived this tendency as an inherent necessity of the intellect. I do not believe in this accusation; but I do hold that 'spatialization' is *the shortest route to a clear-cut philosophy expressed in reasonably familiar language.* Descartes gave an almost perfect example of such a system of thought. The difficulties of Cartesianism with its three clear-cut substances [God, the thinking substance, and the extended substance], and with its 'duration' and 'measured time' well in the background, illustrate the result of the subordination of fluency. (Whitehead, 1978, p. 209; emphasis added)

Descartes distinguishes the thinking mind from the physical human body. This distinction entails the 'ghost in the machinery' problem (Ryle, 1949); that is, how the soul (or in general the mental faculties such as perception, cognition, affects, imagination and so forth), is related to the physical human body. The Cartesian reduction is based upon transcendental thinking where the mind belongs to a more sophisticated, truer and more advanced realm than the earthly domain of corporeality. Whitehead (1978, p. 74) does not hesitate to call the Cartesian separation 'disastrous' inasmuch as it produces a duality between mind and body, thinking and emotions, and cognition and intuition. Spinoza's philosophy represents the counter position to the Cartesian doctrine (Spinoza, 1994). Rather than assuming an individual intellectual entity, *res cogitans*, and an individual corporal entity, *res extensa*, Spinoza formulates a parallelism wherein mind and body exist adjacently to one another. Rather than ranking entities and faculties hierarchically, Spinoza claims that they exist on a single plane. Deleuze (1990) says that 'Spinoza in practice overturns all this division, asserting a parity between the soul's passion and the body's, and between the body's action and the soul's'

(Deleuze, 1990, p. 331). He continues: 'If every substance is unlimited, we must recognize that each is in its genus or form infinitely perfect; there is thus *equality* between all forms or all genera of being: *no form is inferior to any other, none is superior*' (Deleuze, 1990, p. 69; emphasis added). Spinozist thought therefore belongs to the immanent, empiricist tradition wherein substances evolve, develop and change without dependence on transcendental principles and categories. Deleuze (1990, p. 134) concludes: 'Cartesian Method is regressive and analytic. Spinoza's Method is reflexive and synthetic'. Descartes breaks down entities into their components; Spinoza thinks in coherent systems. Descartes speaks about individual bodies as independent and enclosed; Spinoza speaks about the substance as immanence.

To Whitehead, the Cartesian doctrine has far-reaching effects. For instance, Newtonian physics postulates 'individually existent physical bodies' (Whitehead, 1978, p. 309). The world view dominating natural science since Newton—the 'Napoleon of science' to Whitehead—assumes reductionism, the possibility of reducing a system into individual components. Rather than the process-based, empiricist, immanent thought of philosophers such as Heraclitus, Spinoza and the Sophists, Platonic/Cartesian thinking has shaped the scientific worldview. Lucas (1989) draws from the quantum physics and the problem to reconcile relativity theory and quantum theory. Lucas (1989) writes: 'relativity theory implies that nature is uniform and continuous, like the geometry of space-time; quantum theory seems to entail that nature is non-uniform and characterized chiefly by radical discontinuity. Relativity theory ultimately promises at least a reasonable degree of completeness of description regarding the detail of the universe; quantum theory seeks to entail that completeness of description is unattainable in principle as well as in fact' (Lucas, 1989, p. 192). The British physicist David Bohn suggested a quantum theory based on *movement*. Bohm argued that 'our present conceptual muddles result from a continued reliance on the traditional Cartesian–Newtonian perspective according to which (1) discrete and independent

matters ''occupy'' distinct and separate regions and spacetimes and (2) interactions between spatially ''distant'' entities must be transmitted locally through the intervening and independent spatial regions' (Lucas, 1989, p. 192). To Bohm, following Heisenberg and Bohr's earlier findings, 'the ''underlying essential reality'' of nature is emptiness and movement' (Lucas, 1989, p. 199). In summary, Bohm's radical change in perspective entails a rejection of the Cartesian–Newtonian axiom of distinct and separated spatial entities and causal influences. Bohmian physics recognizes changes, movement and processes over stable physical entities.

Process philosophy has a long tradition in Western philosophy, from the Hellenic philosophy, through the seventeenth century and into the modern age. In comparison to transcendental doctrines such as Platonism, process philosophy had a less influential role for modern science, but today, for instance in physics, the process perspective is increasingly recognized. Therefore, to conclude, process philosophy remains a philosophical doctrine that can be successfully integrated into various scientific programmes.

THE CONTRIBUTION OF PROCESS THINKING TO STRATEGIC MANAGEMENT

What Rorty (1989) refers to as the Plato–Kant canon of philosophy conceives of transcendental realities preceding appearances and stable categories. Strategic management has demonstrated an evolution from being based on assumptions on (relative) stability and predictability (see Mintzberg, 1994) into being a polyphonic and polysemic body of diverse theories recognizing complicated and/or complex realities. The criticism on Western transcendental metaphysics in the Platonist tradition formulated in process philosophy serves as the ground for post-Newtonian theories of strategy. In recent strategic management there is an emphasis on the distribution of resources across industries, companies, departments, workgroups or individuals. In addition, resources employed by organizations to create competitive advantage is increasingly complex, ambiguous and multifaceted.

Taken together, strategic management deals with the distribution and allocation of resources, assets and capabilities across specific fields. As a consequence, the use of discrete categories, separated strata and hierarchically ordered cases does not sufficiently provide adequate epistemological and theoretical tools for dealing with fluid realities. In short, the puzzles and shortcomings inherited from the transcendental tradition limit strategic thinking and prevent certain ways of conceiving of organizations, for instance, in terms of being consisting of loosely coupled activities or temporal organizations such as projects. Therefore, process thinking provides fruitful opportunities for rethinking what strategy is and how firms compete in the market. In this perspective, the process philosophy perspective primarily challenges traditional strategic management theory in terms of recognizing an ontology of change and fluidity.

A common theme in recent strategic theory, in conceptual as well as empirical accounts, is the idea of distribution of resources. Traditionally, organization theory and strategic management have evolved from being mechanistic approaches to closed-system activities (see Mintzberg, 1994; Chandler, 1977) into being concerned with interconnected, fluid, and mutually dependent organizational formations. Rather than being in equilibrium, as we learn from Schumpeterian economics (Schumpeter, 1942), organizations that produce novelty, change and competitive advantage are in, or produce, states of disequlibrium (Nelson and Winter, 1982). The evolutionary theory of strategic management explicitly makes use of the themes in process philosophy and process thinking. Disequilibrium is normally produced in distributed systems such as networks (Powell, 1998; Simonin, 1999; Foss, 1999; Coombs and Ketchen, 1999), and through the use of actors or processes that connect and distribute resources and assets, for instance knowledge brokers (Hargadon and Sutton, 1997; Cockburn and Henderson, 1998). Powell (1998) argues that 'rather than seeking to monopolize the returns from innovative activity and forming exclusive relationships with only a narrow set of organizations, successful firms position themselves as the

hubs at the centre of overlapping networks, simulating rewarding research collaborations among the various organizations to which they are aligned, and profiting from having multiple projects in various stages of development' (Powell, 1998, p. 230). The distribution of resources and capabilities creates semi-stable configurations wherein competitive advantages and change are produced across a multiplicity of actors and processes. For instance, various contributions to the knowledge management literature (Savary, 1999; Spender, 1996; Blackler, 1995) suggest that knowledge is a complex notion that includes combinatory (Kogut and Zander, 1992), socially embedded (Choo, 1998) and tacit components (Nonaka and Takeushi, 1995; Nonaka, 1994). Then knowledge becomes not an enclosed, fixed and univocal entity, a singular body of know-how, but rather a set of relations between different entities and processes. Knowledge is rather to be conceptualized as a line, a trajectory or process, than a point, a fixed event or a discrete entity. The processual view is therefore useful when theorizing how knowledge could be managed.

One illustration of the process perspective in strategic management is the projectification of the firm. Organization structure remains one of the key areas in classic organization theory, first comprehensively addressed by Henri Fayol (see, for example, Fayol, 1997). Throughout the last century, various management writers have argued that organization structure must be related to the environnment (Chandler, 1962; Burns and Stalker, 1961; Pfeffer and Salancik, 1978). There is, in brief, a relationship between organization structure and its context. In recent management writing, the bureaucratic organization model (Crozier, 1964) has been under significant criticism. Bureaucracies are regarded as being not too flexible and inefficient (Du Gay, 2000). As a consequence, there is an emerging discouse on post-bureaucratic organizations (Heckscher and Donnellon, 1994; Garsten and Grey, 1997). The projectified organization is an organization based on temporal organizational configurations, continuously evolving as projects are being initiated and terminated (Lundin and Söderholm, 1995; Packendorff,

1995). Rather than thinking of the organization as being the totality of a number of entities such as departments, divisions, factories or sites, the organization is better depicted, the project management literature suggests, as a bundle of projects with different durations. The projectified organization is an organization model that is explicitly based on a process model of thinking. When thinking of organizations as being bundles of projects, we are able to capture the continuous movement of ongoing activities. While bureaucracies are manifest structures aimed at enabling for predictability and low cost per operation, the projectified organization is designed to be continuously moving and changing. The projectified organization is always embedded in the temporal horizon of the individual projects, while the bureaucratic form of organization is atemporal. When acknowledging the process philosophy view on strategic management and organization structure, it is possible to move the analysis beyond the favoured Cartesian–Newtonian ontological framework. Therefore, the benefits of process thinking may contribute to strategic management theory.

DISCUSSION

Deleuze and Guattari (1988) argue that Western thinking is 'striated'; thinking is 'enabled' by numerous adjacent categories from which our thinking evolves. These categories are ready-made and internalized and therefore restrain our thinking in terms of only promoting thinking that departs from what is previously thought (cf. Deleuze, 1988, p. 15). As opposed to striated space, Deleuze and Guattari suggest what they refer to as a 'smooth space' of thinking (Deleuze and Guattari, 1988, pp. 474–500), that is, open-ended thinking independent from fixed categories (Massumi, 1992). Process thinking emphasizes creativity and novelty at the expense of fixed categories and stability; reality is fundamentally conceived of in terms of fluid, evolving, creative processes. In strategic management theory, underlying, stable structures or laws are (in general) assumed. Although being a good heuristic, the assumption on stability does not

represent reality in an adequate or applicable manner in all cases. Huff (1992) and Weick (1995) argue that managerial cognitive 'maps' of reality do not have to provide an adequate picture of reality inasmuch as even the most inaccurate maps lead to actions that might help and guide managers in day-to-day activities. Nevertheless, heuristics provided by theory based upon the transcendental tradition rather serve to limit and restrain strategic management theory than to help to produce new insights. Process thinking is relevant to bodies of theory such as—to name a few—strategic management, organizational cognition, decision theory and institutional theory. The challenge of future theoretical developments is to create possibilities for new modes of thinking about organizational and strategic activities without necessarily enacting discrete categories, entities and domains.

Process philosophy underlines becoming, change and novelty before being, stability and uniformity. Process philosophy represents a new mode of thinking about strategic management; strategic management is increasingly 'networked', firms disperse, disintegrate and are reconfigured across the organizational field. Resources and capabilities become distributed and cannot be thought of in terms of 'internal' organizational assets, but rather as interrelated and cooperated configurative capabilities. For instance, notions such as e-businesses, virtual organizations, imaginary organizations and so forth cannot be sufficiently theorized and understood through the traditional production factors framework provided by neoclassical economics; both production process and new production factors (input) as well as products and services (output) are increasingly based on symbolic, semiotic or linguistic resources and qualities, or reside in the codes of computer programs and software applications (see, for instance, Virilio, 1997; Baudrillard, 1993; Castells, 1996): Contemporary management is increasingly set to deal with intangible assets and capabilities. A processual view on strategic management can provide a more applicable framework for understanding these challenges.

Strategic management is, like most scientific domains, characterized by the search for new

emergent paradigms, new trends in theoretical developments, and the perennial discussion of 'what theory is' (cf. Bettis, 1991; Prahalad and Hamel, 1994; Sutton and Staw, 1995; Zald, 1996; McKinley *et al.*, 1999). This ongoing discussion in social theory has led to an increased degree of *reflexivity* (see Chia, 1996; Holland, 1999); numerous ontological, epistemological and methodological assumptions have become subject to discussion and analysis. Nevertheless, there is a rather weak research tradition in process thinking in strategic management; post-linear, non-binary, processual theory acknowledging change, fluidity, novelty has not been established as a legitimate paradigm. The benefits from such a theory are substantial as it acknowledges certain aspects of strategic management that have been previously under-theorized, overlooked or even excluded. A processual view on strategic management promises at least a potential for new insights.

CONCLUSION

This paper aims at introducing the notion of process philosophy into strategic management theory. The dominating theoretical tradition in strategic management theory does rest upon the transcendental tradition in Western thinking. The process view, recognizing change and novelty, follows an alternative, empiricist path of thinking. Transcendental thinking does, in some respects, imply a certain perspective on strategic management in terms of assuming stable and unified categories, entities or processes. As a consequence, strategic management is limited to a specific set of problems and puzzles. Process thinking therefore promises to provide opportunities for new thinking on strategic management.

REFERENCES

Anderson P. 1999. Complexity theory and organization science. *Organization Science* **10**: 216–232.

Andrews KR. 1971. *The Concept of Corporate Strategy.* Dow Jones-Irwine: Homewood, IL.

Ansoff IH. 1965. *Corporate Strategy.* McGraw-Hill: New York.

Barney JB. 1997. *Gaining and Sustaining Competititve Advantage.* Addison-Wesley: San Francisco.

Baudrillard J. 1993. *Symbolic Exchange and Death.* Sage: London.

Bell JA. 1998. *The Problem of Difference.* Toronto University Press: Toronto.

Bergson H. 1998. *Creative Evolution.* Dover Publishing: Mineola.

Bergson H. 1999. *An Introduction to Metaphysics.* Hackett: Indianapolis.

Bettis RA. 1991. Strategic management and the straightjacket: an editorial essay. *Organizational Science* **2**: 315–319.

Blackler F. 1995. Knowledge, knowledge work and organizations: an overview and interpretation. *Organization Studies* **16**: 1021–1046.

Brown SL, Eisenhardt KM. 1998. *Competing on the Edge.* Harvard University Press: Boston, MA.

Burns T, Stalker GM. 1961. *The Management of Innovation.* Tavistock Publications: London.

Calori R. 1998. *Essai:* philosphizing on strategic mangement models. *Organziation Studies* **19**: 281–306.

Castells M. 1996. *The Information Age: Economy, Society and Culture, Vol. 1: The Rise of the Network Society.* Blackwell: Oxford.

Chandler AD. 1962. *Strategy and Structure.* MIT Press: Cambridge, MA.

Chandler AD. 1977. *The Visible Hand: The Managerial Revolution in American Business.* Harvard University Press: Cambridge, MA.

Chia R. 1996. The problem of reflexivity in organizational research: towards a postmodern science of organization. *Organizations* **3**: 31–59.

Choo CW. 1998. *The Knowing Organization.* Oxford University Press: Oxford.

Cillier P. 1998. *Complexity and Postmodernism.* Routledge: London.

Cockburn IM, Henderson RM. 1998. Absorptive capacity, coauthoring behavior, and the organization of research in drug recovery. *Journal of Industrial Economics* **46**: 157–182.

Coombs JG, Ketchen DJ. 1999. Explaining interfirm cooperation andperformance: toward a reconciliation of predictions from the resource-based view and organizational economics. *Strategic Management Journal* **20**: 867–999.

Crozier M. 1964. *The Bureaucratic Phenomena.* University of Chicago Press: Chicago.

D'Aveni RA. 1994. *Hypercompetition.* Free Press: New York.

Deleuze G. 1988. *Bergsonism.* Zone Books: New York.

Deleuze G. 1990. *Expressionism in Philosophy: Spinoza.* Zone Books: New York.

Deleuze G, Guattari F. 1988. *A Thousand Plateaus: Capitalism and Schizophrenia.* University of Minnesota Press: Minneapolis.

Derrida J. 1981. *Positions*. Athlone Press: London.

Du Gay P. 2000. *In Praise of Bureaucracy*. Sage: London.

Fayol H. 1997. General principles of management. In *Organization Therory: Selected Readings*, Pugh DS (ed.). Harmondsworth: Penguin.

Foss NJ. 1999. Networks capabilities, and competitive advantage. *Scandinavian Journal of Management* **15**: 1–15.

Garsten C, Grey C. 1997. How to become oneself: discourses of subjectivity in post-Bureaucratic organizations. *Organization* 4(2): 211–228.

Hargadon A, Sutton R. 1997. Technology brokering and innovation in a product development firm. *Administrative Science Quarterly* 42: 716–749.

Hayden P. 1998. *Multiplicity and Becoming: The Pluralist Empiricism of Gilles Deleuze*. Peter Lang: New York.

Heckscher C, Donnellon A (eds). 1994. *The Postbureaucratic Organization: New Perspectives on Organizational Change*. Sage: Thousand Oaks, CA.

Heidegger M. 1996. *Being and Time*. State University of New York Press: Albany

Hofer CW, Schendel D. 1978. *Strategy Formulation: Analytical Concepts*. West Publishing: St Paul, MN.

Holland R. 1999. Reflexivity. *Human Relations* **52**: 463–484.

Huff AS (ed.). 1992. *Mapping Strategic Thought*. Wiley: New York.

Kogut B, Zander U. 1992. Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science* 3: 383–397.

Lucas GR. 1989. *The Rehabilitation of Whitehead: An Analytic and Historical Assessment of Process Philosophy*. State of New York University Press: Albany.

Luhmann N. 1990. *Essays on Self-Reference*. Columbia University Press: New York.

Lundin RA, Söderholm A. 1995. A theory of the temporary organization. *Scandinavian Journal of Management* 11(4): 437–455.

Mair A. 1999. Learning from Honda. *Journal of Management Studies* 36: 25–44.

Massumi B. 1992. *The User's Guide to Capitalism and Schizophrenia: Deviations from Deleuze and Guattari*. MIT Press: Cambridge.

McKinley W, Mone MA, Moon G. 1999. Determinants and development of schools in organization theory. *Academy of Management Review* 24: 634–648.

Mintzberg H. 1994. *The Rise and Fall of Strategic Planning*. Prentice-Hall: Englewood Cliffs, NJ.

Mintzberg H, Quinn JB. 1991. *The Strategy Process*. Prentice-Hall: Englewood Cliffs, NJ.

Morel B, Ramanujam R. 1999. Through the looking glass of complexity: the dynamics of organizations as adaptive and evolving systems. *Organization Science* **10**: 278–293.

Nelson RR, Winter SG. 1982. *An Evolutionary Theory of the Economic Change*. Belknap: Cambridge, UK.

Nonaka I. 1994. A dynamic theory of organizational knowledge creation. *Organizational Science* **5**.

Nonaka I, Takeushi H. 1995. *The Knowledge-Creating Company*. Oxford University Press: Oxford.

Packendorff J. 1995. Inquiring into the temporary organization: new directions for project management research. *Scandinavian Journal of Management* **11**(4): 319–333.

Pfeffer J, Salancik GR. 1978. *The External Control of Organizations: A Resource Dependence Perspective*. Harper & Row: New York.

Powell WW. 1998. Learning from collaboration: knowledge and networks in the biotechnology and pharmaceutical industries. *California Management Review* 40: 228–240.

Prahalad CK, Hamel G. 1994. Strategy as a field of study: why search for a new paradigm? *Strategic Management Journal* **15**: 5–16.

Rescher N. 1996a. *Complexity: A Philosophical Overview*. Transaction Publishers: New Brunswick.

Rescher N. 1996b. *Process philosophy: An Introduction to Process Philosophy*. State University of New York Press: Albany.

Rorty R. 1989. *Contingency, Irony, and Solidarity*. Cambridge University Press: Cambridge, UK.

Ryle G. 1949. *The Concept of Mind*. Harmondsworth: Penguin.

Savary M. 1999. Knowledge management and competition in the consulting industry. *California Management Review* 41: 95–107.

Schumpeter JA. 1942. *Capitalism, Socialism, and Democracy*. Harper & Row: New York.

Searle JR. 1969. *Speech Acts: An Essay in the Philosophy of Language*. Cambridge University Press: Cambridge, UK.

Simonin BL. 1999. Ambiguity and the process of knowledge transfer in strategic alliances. *Strategic Management Journal* **20**: 595–623.

Spender JC. 1996. Making knowledge the basis of a dynamic theory of the firm. *Strategic Management Journal* **17**(Winter Special Issue): 45–62.

Spinoza B. 1994. *Ethics*. Penguin: London.

Stacey RD. 1995. The science of complexity: an alternative perspective for strategic change processes. *Strategic Management Journal* **16**: 477–495.

Sutton RI, Staw BM. 1995. What theory is *not*. *Administrative Science Quartely* **40**: 371–384.

Teece DJ, Pisano G, Shuen A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal* **18**: 509–533.

Virilio P. 1991. *The Aesthetics of Disappearance*. Semiotext(e): New York.

Virilio P. 1997. *Open Sky*. Verso: London.

Weick KE. 1995. *Sensemaking in Organizations*. Sage: London.

Whitehead AN. 1978. *Process and Reality*. Free Press: New York.

Zald MN. 1996. More fragmentation? Unfinished business in linking the social sciences and the humanities. *Administrative Science Quarterly* **40**: 251–261.