

A SaP based framework for researching the practice of dynamic capability

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**A SaP based framework for researching the practice of dynamic capability**

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#### Summary

This paper responds to a call for the development of detailed understanding of how dynamic capability is used in practice through the application of a Strategy as Practice (SaP) perspective (Regnér, 2008; Ambrosini and Bowman, 2009). Drawing on the Dynamic Capabilities (DC) and SaP perspective literatures, we present a conceptual framework for researching dynamic capability practice - what people actually do in relation to dynamic capability. This conceptual framework integrates focal SaP perspective concepts – practitioners, practices, praxis, activities and intermediate outcomes – with a DC perspective focus on intermediate resource base outcomes. We argue that the conceptual framework might be used as a basis for new empirical studies as well as the synthesis of extant findings from each perspective to develop understanding of dynamic capability practice. We also suggest that the conceptual framework may contribute to addressing further developmental calls from within the SaP and DC perspective literatures.

## **Introduction**

As an extension of the resource based view (RBV), the Dynamic Capabilities (DC) perspective offers insights as to how, in pursuit of survival and growth, organisations might manage their resource base in reaction to environmental shifts or in the creation and exploitation of favourable market change (Teece et al, 1997; Helfat et al, 2007). As indicated by a growing number of publications and conference tracks, the DC perspective represents a high profile development in the strategic management community of interest to both academics and practitioners (Easterby-Smith et al, 2009). However, Regnér (2008) and Ambrosini and Bowman (2009) argue that without finer-grained understanding of how dynamic capability is realised in practice, the perspective may be subject to the same criticisms of vague, tautological reasoning and limited practical relevance levelled at the resource based view (Eisenhardt and Martin, 2000; Priem and Butler, 2001).

The strategy-as-practice (SaP) perspective has emerged from endeavours to apply a “practice turn” to the field of strategy (Chia, 2004; Johnson et al, 2008). In doing so, a SaP perspective addresses the micro-detail of ‘strategizing’ - the ongoing process of making and managing strategy as a situated, social activity (Whittington et al, 2006) - as an enabler to making strategy theory relevant to the realities of modern business life. Both Regnér (2008) and Ambrosini and Bowman (2009) propose that the Strategy as Practice (SaP) perspective might usefully augment the DC perspective, enabling practitioner-relevant, robust theory building about the micro detail of dynamic capability in practice.

Drawing on a SaP perspective, it is against a need to better understand the detail of how dynamic capability might be used in practice that this paper’s intended contribution is directed. Specifically, we aim to develop a conceptual framework for use as a point of departure for researching what people actually do when using dynamic capability, which we refer to forthwith as ‘dynamic capability practice’. We base our framework on potential points of intersection between the DC and SaP perspectives identified from literature where detailed understanding of practice might be defensibly developed through the application of a SaP perspective to dynamic capability theory building. Our intention is that this framework could be used as a basis for future empirical research designs seeking to explicate different elements of the micro-detail of how dynamic capability is actually used in practice.

To construct such a framework, firstly we explicate from literature our interpretations of the foci and assumptions associated with the DC and SaP perspectives. Subsequently, we present a conceptual framework for researching dynamic capability practice based on identified points of intersection and complementarity between the two perspectives. We then reflect on how the framework might be used and the benefits it may yield before concluding with the nomination of a research agenda for deployment of the framework, tempered by acknowledgment of the limitations of our interpretations of the literature.

## **Bringing alternative perspectives together from literature**

Based on their AOMR editorial experience, Okhuysen and Bonardi (2011) advise that the proximity of the focal phenomena and degree of compatibility of underlying assumptions are two important dimensions to address when combining theoretical perspectives. As such, we

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commence our study by reviewing the DC and SaP literatures separately in order to identify and describe our interpretations of the focal phenomena and assumptions associated with each perspective as a precursor to proposing a framework for researching dynamic capability practice. We also highlight development opportunities for the DC and SaP perspectives as nominated by authors in the individual streams of literature. Our aim in doing so is to identify aspects of the DC perspective, and also the SaP perspective, where significant gains might be realized through combination with an alternative theoretical perspective (Whetten, 1989, Holweg and Pil, 2008), thus informing our discussion of how the conceptual framework developed might most usefully be applied.

Macpherson and Jones (2010) suggest that despite the many prescriptive procedures available for systematic literature review in management studies, there should be a degree of flexibility to match the approach taken to the local circumstances of the review. In this study, we believe there to be most value in developing deep insights as to where the SaP and DC perspectives might be used in combination in a robust and relevant way. As such, we opt against a full structured literature review (Tranfield et al, 2003) in favour of a ‘snowball approach’ (Greenhalgh and Peacock, 2005) bounded by and intended to develop deep insights into the foci, assumptions and developmental areas expressed in each perspective’s literature.

We commence with our interpretation of the views expressed in the DC perspective literature.

### **Theoretical Background - Dynamic Capabilities (DC) Perspective**

Dynamic capabilities have become a topic of increasing interest to academics and practitioners alike, propelled to the forefront of agendas by perceived relevance to the hypercompetitive modern business world (Ambrosini and Bowman, 2009; Easterby-Smith et al, 2009). Teece et al (1997) propose a “dynamic capabilities” perspective of strategic management which emphasises the importance of an organisation’s capacity to develop, deploy and protect combinations of competences and resources over time. In alignment with this view, many organisational phenomena with elements of strategic change and purposeful adaptation have been described as examples of dynamic capability e.g. alliancing and acquisition capabilities (Zollo and Winter, 2002; Eisenhardt and Martin, 2000), absorptive capacity (Zahra and George, 2002; Wheeler, 2002), continuous improvement culture (Ambrosini et al, 2009; Anand et al, 2009), organisational learning (Teece et al, 1997; Zollo and Winter, 2002) and strategic decision making processes (Eisenhardt and Martin, 2000; Helfat et al, 2007).

In the decade or so following Teece et al’s (1997) seminal publication, a profusion of interpretations of the central concepts from authors from divergent backgrounds resulted in terminological confusion and a lack of foundational theoretical clarity and focus, impeding advancement of the embryonic perspective (Winter, 2003; Schreyögg and Kliesch-Eberl, 2007, Barreto, 2010). To address this issue, a group of eminent authors in the field proposed a ‘unifying’ definition of dynamic capability as “the capacity of an organisation to purposefully create, extend or modify its resource base” (Helfat et al 2007, p4). This definition is nominated for widespread adoption on the basis that it is “precise enough to be meaningful yet broad enough to allow scholars to learn more about the nature and origins of dynamic capabilities through investigation” from their own perspective (Easterby-Smith et al, 2009, pS3).

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Recognising the stated need for greater conceptual alignment in the community seeking to develop the dynamic capabilities perspective, we adopt Helfat et al's (2007) high level definition for our study. As such, in the following text we aim to explicate concepts and boundaries from the literature in relation to Helfat et al's (2007) definition of dynamic capability.

The dynamic capabilities perspective is frequently described as an extension of the resource based view (RBV) as they share an argument that resource combinations and capabilities are key to defining an organisation's competitive potential (Easterby-Smith and Prieto, 2008; Ambrosini and Bowman, 2009). However, whilst the RBV addresses the leverage of VRIN (and later VRIO) resources, the dynamic capabilities perspective places emphasis on understanding organisational capacity to opportunistically renew and manage resource combinations and capabilities over time (Barney, 1991, 2002; Teece et al, 1997). As such, dynamic capability represents the capacity to deliver intermediate resource base change outcomes rather than direct organisational performance effects and the notion that dynamic capability is a necessary but insufficient condition for competitive advantage is a key underlying assumption in the literature (Teece et al, 1997; Eisenhardt and Martin, 2000; Wheeler, 2002; Helfat and Peteraf, 2003; Zahra et al, 2006, Helfat et al, 2007).

One central concern of the dynamic capabilities perspective is uncovering knowledge about mechanisms of purposeful organisational adaptation and how they might develop valuable resource combinations and capabilities over time (Teece et al, 1997; Eisenhardt and Martin, 2000; Makadok, 2001; Helfat et al, 2007). Mechanisms of dynamic capability are generally considered to emerge from combinations of organisational resources and capabilities (Collis, 1994; Helfat et al, 2007; Danneels, 2008; Ambrosini et al, 2009). However, there are varied views in the literature as to how dynamic capability, as a higher order concept, might be constructed (Schreyögg and Kliesch-Eberl, 2007). Teece et al (1997), Eisenhardt and Martin (2000) and Helfat et al (2007) argue that dynamic capabilities emerge from processes<sup>1</sup>; Witcher et al (2008), Easterby-Smith et al (2009) and Athreye et al (2009) refer to dynamic capability as a higher order capability; King and Tucci (2002), Zollo and Winter (2002) and Winter (2003) refer to a dynamic capability as being grounded in routines.

Alternatively, authors such as Schreyögg and Kliesch Eberl (2007), Pandza and Thorpe (2009) and Ambrosini and Bowman (2009) suggest that whilst dynamic capability may have a patterned element, described variably by different authors as routines/ behavioural orientations/ rules/ procedures etc, in practice it may incorporate inherently unpatterned components relating to the perceptions, characteristics and limitations of the actors involved with an organisation. Relatedly, the degree to which dynamic capability is patterned or unpatterned will be influenced by organisational and institutional context (Teece et al, 1997; Ambrosini and Bowman, 2009).

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<sup>1</sup> Our reading of the literature suggests that views tend to align with a definition of processes as "collections of activities that, taken together, produce outputs" (Benner and Tushman, 2003, p240); a definition of capabilities as the potential to do certain things (but does not necessarily reflect that which is done) (Easterby-Smith and Prieto, 2008, p237) and routines as "behaviour that is learned, highly patterned, repetitious or quasi-repetitious" (Winter 2003, p991)

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Despite varying views of dynamic capability componentry, there is wide agreement in the literature that managers are the key proponents of dynamic capability through the provision of resource deployment, coordination and orchestration activities (Mahoney 1995, Teece et al 1997, Eisenhardt and Martin 2000, Teece, 2007; Helfat et al 2007; Ambrosini et al 2009). Whilst dynamic capability tends to be researched in terms of organisational level phenomena (Regnér, 2008), managerial perception and cognition – grounded in the characteristics of individual managers- are also argued to have a major impact on how dynamic capability is manifest in an organisation (Adner and Helfat, 2003; Lavie, 2006; Teece, 2007; Helfat et al, 2007).

Relatedly, the outcomes achieved when using dynamic capability are not guaranteed (Winter, 2003). Through the influence of fallible managers, dynamic capability might be deployed incorrectly, incompletely, at the wrong time or to the organisation's disadvantage – even potentially destroying valuable extant capabilities (Zahra et al, 2006; Ambrosini et al, 2009; Ambrosini and Bowman, 2009). Equally, dynamic capability effects might be mitigated by external circumstances (Eisenhardt and Martin, 2000; Winter, 2003; Pandza and Thorpe, 2009). Dynamic capability may therefore be considered a situated phenomenon (Ambrosini and Bowman, 2009) where the outcomes realized might not be the same as the nominal capacity for resource base change (Helfat et al, 2007).

The idea that dynamic capabilities are a situated phenomenon is further emphasised by strong notions of path-dependence and contextual influence in the literature. Teece et al (1997) emphasise the impact of previous developmental paths and historical activity on what an organisation can do in the present through its current resource position and available processes. The literature further suggests that factors such as the accumulation of resources over time, historical capability development, organisational learning and positioning of organisations in networks and institutional contexts are influential on dynamic capability (Zahra and George, 2002; Zollo and Winter, 2002; Moller and Svahn, 2006; Helfat et al, 2007; Smart et al, 2007).

We note several broad developmental areas from the DC perspective literature. It is widely argued that for dynamic capacity to remain a topic of relevance and importance to academics and practitioners alike, the DC perspective community must broaden its scope of research approach to better address micro-issues, investigate institutional impacts and embrace longitudinal studies (Helfat et al, 2007; Pablo et al, 2007; Danneels, 2008; Regnér, 2008; Williams and Lee, 2008; Easterby-Smith et al, 2009; Ambrosini and Bowman, 2009; Lichtenthaler 2009; Sirmon and Hitt, 2009). Furthermore, Wang and Ahmad (2007), Augier and Teece (2008), Lichtenthaler and Lichtenthaler (2009) and Agarwal and Selen (2009) suggest that a focus of future research activity should be the development of more complex, multi-dimensional models which might better integrate aspects of the extant literature. It is suggested that this end might be met through testing existing findings from alternative research approaches (Capron and Mitchell, 2009; Ellonen et al, 2009; Lichtenthaler, 2009) or through multi-method, systematic studies (Marsh and Stock, 2006; O'Connor, 2008).

Building on Helfat et al's (2007) definition, our review of the literature suggests that the DC perspective focuses on building explanation of the capacity for strategic resource base change over time in an organisation. This capacity is path dependent, emerging from lower order strategic management mechanisms – argued to be comprised of different elements (with varying

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degrees of patterning) by different authors. Dynamic capability might also be investigated from or between multiple levels of analysis. No direct link between dynamic capability and competitive advantage is inferred and possession of dynamic capability does not guarantee that successful resource base change outcomes will be achieved. Dynamic capability can be regarded as a situated phenomenon influenced by managerial activity as enacted in historical organisational and institutional contexts. There is potential value perceived in a dynamic capabilities perspective for academics and practitioners seeking to better understand how an organisation might survive and grow in a turbulent environment. However, to unlock this potential and improve practical relevance, the DC perspective community is challenged to develop a more diverse yet better integrated research approach.

To enable the proposition of a conceptual framework for researching dynamic capability practice, we now present our review of the SaP perspective literature, in which we seek to outline foci, assumptions and developmental areas.

### ***Theoretical Background - Strategy as Practice (SaP) perspective***

SaP is a “nascent and emerging field” (Jarzabkowski and Spee, 2009, p91) which, through applying a practice turn to the field of strategy, adopts a position that “Strategy is something that people do... Strategy is an activity” rather than “something organisations have” (Johnson et al, 2008, p3). From this position, the principle focus for the strategy as practice perspective is the complex stream of human activity – known as strategizing - associated with the “doing of strategy” (Jarzabkowski et al, 2007, p8). Grounded in action-oriented social theory (such as Giddens’s (1984) structuration theory), a SaP perspective recognises the situatedness of strategy-related activity in the messy and opaque social structures of organisational and institutional life (Jarzabkowski, 2005). Consequently, to date SaP studies with elements of empirical enquiry are nearly exclusively grounded in qualitative methods (Johnson et al, 2008) and emphasise the importance of understanding failure as well as success of strategic activity in achieving its intended purpose (Maitlis and Lawrence, 2003).

Chia (2004, p29) argues that SaP provides “a valuable alternative to the hitherto dominant institutional and resource-based approaches to strategy research” being concerned as it is with the “precarious and fluid” micro-details of strategy making. Johnson et al (2003, 2008) and Whittington et al (2003) suggest that being grounded in epistemic pragmatism, SaP represents a useful perspective to strategy academics concerned with creating research outputs of practical relevance. On this basis, Regnér (2008) and Ambrosini and Bowman (2009) advocate the SaP perspective as a potentially valuable augmenting theoretical lens by which to develop practitioner relevant understanding of the micro-detail of dynamic capability practice.

In terms of focal concepts associated with a SaP perspective, there appear to be a number of recurring terms in the literature which might form part of a framework for researching dynamic capability practice - namely activity, practitioners, practices, practice, praxis and strategizing. In preparation for the identification of points of intersection with the DC perspective, our interpretation of these focal concepts and related assumptions underpinning the SaP perspective are outlined below.

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In the SaP literature, **activity** describes that which is done through the actions of individuals or groups of individuals (Jarzabkowski, 2005). At an individual level, managerial activities can be considered to represent the “day-to-day stuff of management ... what managers do and what they manage” (Johnson et al, 2003, p15). Activities can also be understood at an organisational level as collective action and interaction – for example, Jarzabkowski (2005) and Johnson et al (2008) argue that strategy can be considered to be a broad organisational activity, involving a large number of people at all different levels. Activity is a key concern to SaP perspective academics - Johnson et al (2008, p7) comment that a SaP perspective “invites us to see strategies and strategizing as human action, as doing.”

Relatedly, in the SaP literature the term **practitioners** refers to the individuals or classes of individuals who actually ‘do’ strategy (Jarzabkowski and Whittington, 2008, Jarzabkowski and Spee, 2009). From a SaP perspective, practitioners need not be senior managers but rather can be any individual in, or related to, an organisation that draws upon practices to act in a strategically relevant way (Jarzabkowski and Spee, 2009). This can include ‘external’ individuals such as consultants and academics engaging with an organisation (Paroutis and Pettigrew, 2007). Arguably, defining a practitioner as any individual engaging in strategic activity is a key point of distinction between a SaP perspective and alternative, senior manager-centric strategy perspectives (Johnson et al, 2008).

**Practices** are described in the SaP literature as the established, shared ways of working within an organisation- “the habits, artefacts and socially-defined modes of acting through which the stream of strategic activity is constructed” (Jarzabkowski, 2003, p24). Practices can be conceived of as “tools” for practitioners to use when thinking or acting in a strategic way (Jarzabkowski et al, 2007; Paroutis and Pettigrew, 2007; Jarzabkowski and Whittington, 2008); for example strategy workshopping, strategic project management and creating strategic artefacts (Whittington et al, 2006). Historically and socially situated, practices provide continuity for an organisation in 'how things are done' whilst mediating contestations in an organisation as it changes and adapts (Jarzabkowski and Spee, 2009).

The term **praxis** is defined as the “embedded construction of situated activity” (Jarzabkowski, 2005, p22). Praxis reflects the notion that at any given time, what practitioners do is influenced by their interpretation of the social structural context in which they act (Jarzabkowski et al, 2007). As practitioners can change their perceptions and relatedly their actions over time, praxis is also described as “the flow of activity in which strategy is accomplished” (Jarzabkowski and Spee, 2009, p7). By considering the construction of everyday activities according to context by individuals, praxis can account “for non-routinised behaviour and the synthesis of new behaviour from old behaviours” (Johnson et al 2008, p27).

Praxis describes the relationship between practitioner activity and the situation specific societal, institutional and organisational structural conditioning in which it occurs (Johnson et al, 2008). In building understanding of praxis from a SaP perspective, Jarzabkowski and Spee (2009) suggest that it is useful to isolate different levels of praxis. From a SaP perspective strategy **practice** refers to the social structure emerging from and conditioning how strategy is enacted in an organisation (Johnson et al, 2008). According to Jarzabkowski (2003, p 24) “practice embraces the interactions and interpretations from which strategic activity emerges over time”.



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The above focal concepts can be related and integrated through the central SaP perspective concept of **strategizing**. “As the construction of the flow of activity through the actions and interactions of multiple actors and the practices that they draw upon” (Jarzabkowski et al, 2007, p8), strategizing may be considered to represent a complex interplay of the praxis of individuals and groups over time. Therefore, strategizing is argued to exist at “the nexus between practice, practices and practitioners” (Jarzabkowski et al, 2007, p12).

In clarifying the how the focal object of SaP research should be applied, Jarzabkowski (2005, p12) argues that common sense should be used in identifying strategically relevant activity to research, nominating a focus on activities “intended to have outcomes that will be consequential for the organisation as a whole - its profitability or survival.” However, Chia, (2004), Chia and Holt (2006) and Chia and McKay (2007) – drawing on the work of social theorists such as Bourdieu, Dreyfus and Heidigger- criticise the pre-occupation in SaP literature with cognate activity (labelled ‘building mode’ activity), suggesting that much strategic activity is carried out in a far less cognate, non-deliberate manner (labelled ‘dwelling mode’ activity). Chia and Holt (2006) argue that such habitual dwelling mode activity can be implicitly purposive and influential on “building mode” activities and thus aspects of unconscious, patterned behaviour should play a more prominent role in any application of the SaP perspective.

The literature makes further suggestions for development of the SaP perspective. Johnson et al (2008) and Jarzabkowski and Spee (2009) suggest that there is a need to understand strategizing and its components at and between individual, organisational and institutional levels. Johnson et al (2003) and Jarzabkowski and Spee (2009) also suggest that there is a need for future SaP research to develop understanding of how practitioner activity contributes to the construction and attainment of substantive intermediate strategic outcomes and through comparative study, explain how differing practitioner approaches might contribute to variations in outcome achieved. Jarzabkowski and Spee (2009, p91) further suggest that SaP might usefully draw on upon “other, complementary fields of study to better illuminate SaP phenomena and SaP questions”.

In summary, SaP is an emerging perspective with a focus on what people actually do in the making and managing of strategy. There are a number of central concepts outlined in the SaP literature - activity is that which is done; practitioners are the individuals or classes of individuals who carry out strategic activity; practices are the ways of working in an organisation which practitioners can draw on when acting strategically; praxis is the ongoing, situated construction of activity by practitioners; practice is the social structure representing the shared beliefs about how strategy should be done and strategizing refers to the ongoing stream of strategically relevant human activity in an organisation. These concepts may be explored individually or in combination, and at a variety of levels of analysis in order to uncover knowledge which might develop the SaP perspective. SaP literature tends to focus on cognate activities and may benefit from developing understanding of the less cognate aspects of human activity in strategizing. Future SaP research may benefit from a keener focus on outcomes and integration with complementary perspectives to provide further insights into the SaP phenomena.

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Having outlined our interpretations of the DC and SaP perspective literatures, we now discuss how aspects of the SaP perspective might be used in combination with the DC perspective to develop a framework for researching dynamic capability practice.

### **Augmenting the DC perspective with a SaP perspective**

Regnér (2008) proposes that together the DC and SaP perspectives provide a basis for a more comprehensive, multi-level and dynamic view of strategy than is achievable by each perspective on its own. Certainly, there is an explicit call in the literature for a SaP perspective to assist the development of fine-grained understanding of the mechanisms which underpin dynamic capability (Jarzabkowski, 2005; Johnson et al, 2008; Regnér, 2008; Ambrosini and Bowman, 2009).

Given the foci and assumptions of each perspective uncovered from reviewing the separate literatures, how might the DC and SaP perspectives be brought together to create a conceptual framework for researching dynamic capability practice? The following discussion nominates six relevant points of intersection – by which we mean workable alignment of the foci and assumptions between the perspectives – which we subsequently draw on to propose a conceptual framework for researching dynamic capability practice.

The first point of intersection relates to a shared focus on intermediate resource base outcomes. The SaP perspective has a clear focus on developing understanding of how strategic human activity influences the attainment of intermediate outcomes (Johnson et al, 2003) and we adopt Helfat et al's (2007) definition of dynamic capability which emphasises a focus on the capacity for achieving intermediate resource base outcomes. In terms of related assumptions, both perspectives align with the notion that purposeful human activity will not always achieve intended intermediate outcomes and therefore there is value in better understanding unsuccessful as well as successful of outcomes realised through strategic activity (Maitlis and Lawrence, 2003; Ambrosini and Bowman, 2009). Therefore, we suggest that a SaP perspective might augment the DC perspective through a focus on successful and unsuccessful intermediate resource base outcomes.

### ***Intersection 1 – Successful and unsuccessful intermediate resource base outcomes***

Whilst the granularity of research approach deployed in practice tends to limit DC perspective studies to organisational level analysis (Regnér, 2008), the DC perspective community also espouses a need for low levels of granularity as part of the community's efforts to build research outputs of practical relevance (Ambrosini and Bowman, 2009). The SaP perspective actively promotes a focus on developing understanding of daily organisational life when researching strategy based on detail focussed evidence (Johnson et al, 2008). As such, the methods and research designs of SaP perspectives rooted in the interrogation of the fine-grained, micro-detail of strategizing<sup>2</sup> might usefully augment the DC perspective. Again, the focus of the DC perspective implies that the methods or research designs will necessarily be directed towards

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<sup>2</sup> this does not preclude the use of quantitative approaches as sufficient volumes of fine-grained data can be “rolled up” into complementary medium and even coarse grained analysis better suited to production via quantitative methods (e.g. Salvato, 2009)

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intermediate resource base outcome related strategizing. Therefore, we suggest that a SaP perspective might augment the DC perspective in providing methods to interrogate fine-grained, micro detail of strategic activity directed towards achieving intermediate resource base outcomes.

### ***Intersection 2 – Fine-grained, micro detail of strategic activity directed towards achieving intermediate resource base outcomes.***

With an intermediate resource base outcome focus, a DC perspective identifies managers as the key proponents of dynamic capability given their resource allocation powers (Mahoney, 1995; Teece, 2007). From a DC perspective, the personal traits of those with resource allocation power (e.g. their cognition, experience, relationships etc.) are considered to have influence on collective dynamic capability at an organisational level (Adner and Helfat, 2003; McKelvie and Davidsson, 2009). We believe this represents a point of intersection with the SaP perspective focal concept of practitioners – any individuals or class of individuals who act strategically (Jarzabkowski and Spee, 2009). The practitioners concept may be applied very broadly from a SaP perspective and the DC perspective constrains this point of intersection to those who can “do” resource allocation as part of delivering resource base outcomes. We suggest that a SaP perspective might augment the DC perspective through a focus on practitioners with strategic resource allocation powers.

### ***Intersection 3 –Practitioners with strategic resource allocation powers***

The DC perspective literature to date has explored the role of organisational mechanisms, such as routines, capabilities and processes, in shaping activity intended to deliver intermediate resource base outcomes (Schreyögg and Kliesch-Eberl, 2007). There is also widespread agreement in the literature that to meet the definitional requirements of dynamic capability, these mechanisms must have some level of patterning, otherwise no “capacity” to act can exist (Teece et al, 1997; Eisenhardt and Martin, 2000; Winter, 2003). Equally, the DC perspective literature has increasingly embraced the need to incorporate notions of agency and creativity alongside patterned aspects of organisational mechanisms to explain the development of dynamic capability over time (although how such ‘quasi-patterned’ mechanisms might operate in practice is underdeveloped in the DC literature) (Azadegan et al, 2008; Pandza and Thorpe, 2009). The SaP perspective offers potential assistance in this matter through the concept of practices– “habits, artefacts and socially-defined modes of acting” - as mediators of established ways of working and new approaches developed through the creativity and agency of practitioners (Jarzabkowski, 2003; Regnér, 2008). SaP “practices” studies to date (e.g. Whittington et al, 2006; Sillince and Mueller, 2007) show how patterned, established ways of working used to deliver intermediate outcomes can gradually change over time as unpatterned agential and creative components of activity construction by practitioners influence what they do. We suggest that a SaP perspective might augment the DC perspective through the concept of ‘practices’ as a means by which to explore the influence of the quasi-patterned ways of working over time on the delivery of intermediate resource base outcomes.

### ***Intersection 4 – Influence of quasi-patterned ways of working directed towards delivering intermediate resource base outcomes***

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From the DC perspective an organisation's current resource position, accumulated over time through historical paths of activity, acts as a constraint on that which can be achieved in the present (Teece et al, 1997). The SaP perspective, through assumptions relating to the concept of praxis, also presents organisational context as an inertial constraint on activity construction by practitioners (Johnson et al, 2008). From a SaP perspective, organisational social structures reflecting factors such as culture and norms can represent influential constraints on that which is done in the present (Jarzabkowski, 2005). Arguably, the DC perspective holds a broader view at this point of intersection, acknowledging inertial social structures such as culture and norms as constraining intangible resources (Grant 2008) but also explicitly considering extant organisational physical resource limitations – materialistic constraints such as available cash and equipment- on current activity (Teece et al, 1997; Helfat et al, 2007). However, the DC perspective literature is unclear as to how such intangible constraining resources accumulate over time (Barreto, 2010). In developing a framework for researching dynamic capability practice – or what people actually do relating to dynamic capability - we argue that the notion of praxis at an organisational level from a SaP perspective could augment a DC perspective in building an understanding of how current intangible resource “position” shapes dynamic capability in an organisation,. We suggest that, through the concept of praxis, a SaP perspective might augment the DC perspective in developing understanding of the influence of organisational resource position on the construction of strategic activity directed towards achieving intermediate resource base outcomes.

### ***Intersection 5 – Influence of organisational resource position on the construction of strategic activity directed towards achieving intermediate resource base outcomes***

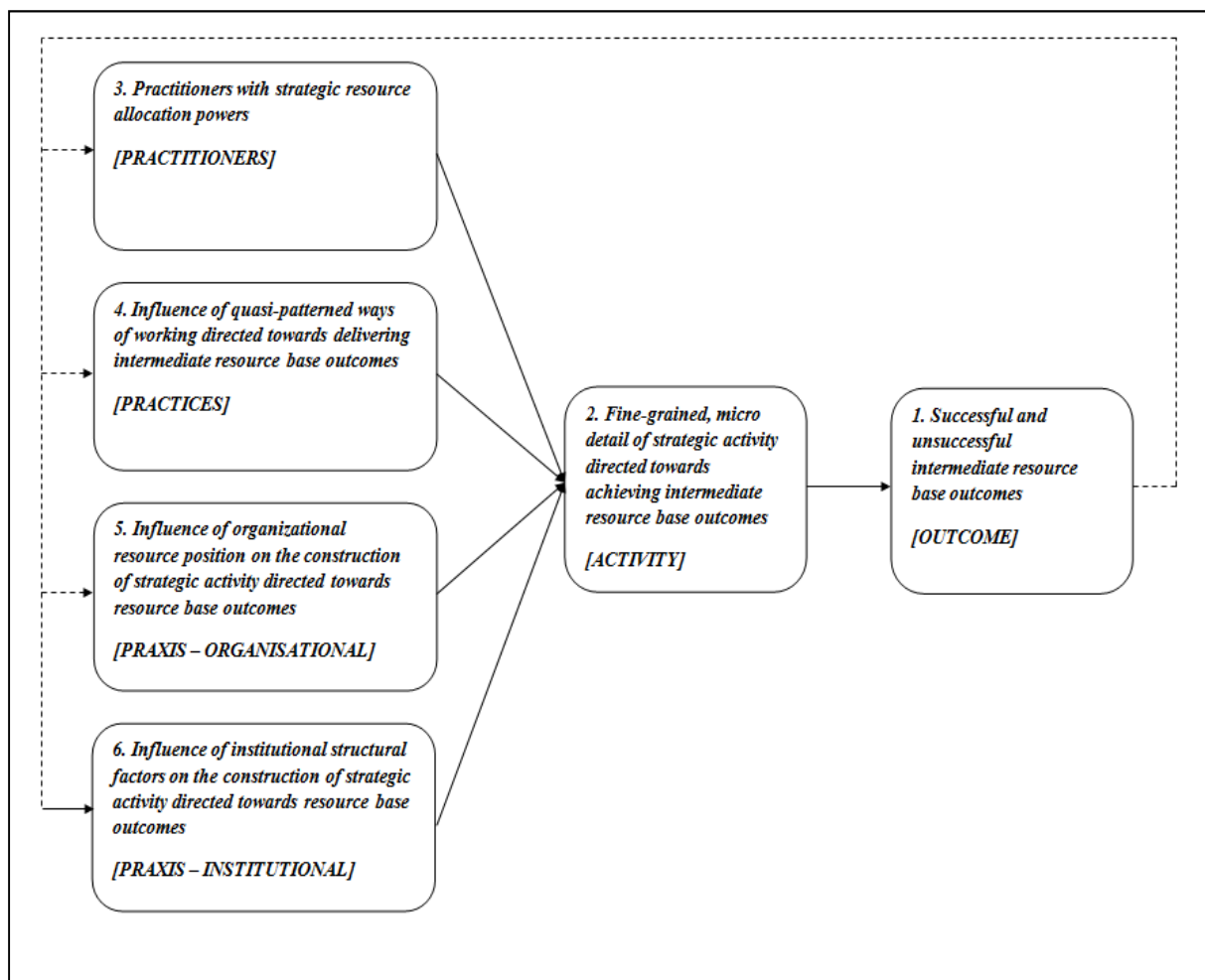
The sixth and final point of intersection we identify relates to the influence of the institutional context on dynamic capability practice. From a DC perspective, institutional factors (such as regulation, national culture, workforce education etc.) are considered to impact capacity for achieving intermediate resource base outcomes (Teece et al, 1997). From a SaP perspective, the institutional context is considered to be complex and multi-stranded (e.g. social factors relating to the region of operation, national governmental impacts, industrial sector of organisation etc.) (Johnson et al, 2008). From both perspectives, the institutional context is considered to present an influential set of constraining factors which impacts the realised actions of individuals and organisations (Regnér, 2008) and DC and SaP perspective authors advocate further research to isolate and better understand different aspects of institutional influences (Malik and Kotabe, 2009, Jarzabkowski and Spee, 2009). Suggestions as to how this might be robustly achieved from a DC perspective are limited whereas through the application of the concept of praxis at an institutional level, insights into the influence of different institutional factors on practitioner activity construction might be generated from a SaP perspective (e.g. Whittington et al, 2003). In light of the previous points of intersection, we thus suggest that a SaP perspective might augment the DC perspective in developing understanding of the influence of institutional factors on the construction of strategic activity directed towards resource base outcomes.

### ***Intersection 6 – Influence of institutional structural factors on the construction of strategic activity directed towards resource base outcomes***

**A conceptual framework for researching dynamic capability practice**

Based on the six points of intersection identified between the two perspectives, Figure 1 presents a conceptual framework which might be used as a point of departure for researching dynamic capability practice.

The six points of intersection identified in the previous section are represented in the corresponding numbered boxes in figure 1. To operationalise the framework we add SaP key foci labels in square brackets and suggest relationships between the different points of intersection, which we now explain.



**Figure 1 – Conceptual Framework for Researching Dynamic Capability Practice**

Activity (2) is linked into outcome (1), consistent with the stated intent of a SaP perspective to understand the relationship between the detail of strategic activity and intermediate outcomes achieved (Johnson et al, 2003; Jarzabkowski and Spee, 2009). Activity (2) is influenced by the

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remaining 'elements' of practitioners (3), practices (4), praxis at an organisational level (5) and praxis at an institutional level (6). To use the framework to shape a research design for examining dynamic capability practice, any of the elements (3), (4), (5) or (6) could be combined with elements (1) and (2) to create a bounded inquiry which contributes to knowledge of dynamic capability practice. Also, research designs could incorporate combinations of practitioners (3), practices (4) and levels of praxis (5,6) with activity(2) and outcome(1) to increase explanatory potential of findings. Extending this suggestion, we argue that the each combination of practitioners, practices, praxis (org) and praxis (inst) with activity and outcome requires addressing in order to develop holistically the community's knowledge of dynamic capability practice.

The inclusion of relationships from intermediate resource base outcomes (1) to each of practitioners (3), practices (4), org level praxis (5) and institutional level praxis (6) is intended to represent path dependence from a DC perspective and the continuous nature of strategizing from a SaP perspective. Such relationships are shown with a dotted line as a reminder that the outcome feeds forward to future cycles of activity. Relatedly, we identify a need when building understanding of dynamic capability practice to examine how outcomes achieved through strategic activity subsequently influence future cycles of activity through practitioners, practices and different levels of praxis. As a consequence, this framework should be interpreted as requiring the use of longitudinal methods.

The conceptual framework in figure 1 shows a clear imprint of the SaP perspective in terms of the conceptual elements nominated (shown in square brackets) and the relationships between these elements. However, the framework is bounded to produce findings of relevance to a DC perspective, consistent with Helfat et al's (2007) definition, through a consistent focus of each of the elements on intermediate resource base outcomes and those with the power to influence them. As such, figure 1 represents a conceptual framework which might be used as a point of departure for designing research to explore the micro-detail of dynamic capability practice.

### **Applying the framework**

From a DC perspective, there is a clear imperative to better understand the micro-detail of the activity purposefully driving strategic intermediate resource base outcomes. The conceptual framework presented in figure 1 provides a means by which to leverage a SaP perspective in pursuit of this aim. Furthermore, by considering contextual influences and inter-temporal effects as well as the activity of practitioners and outcomes achieved, further calls within the DC literature – such as better understanding institutional influences on dynamic capability in practice (Williams and Lee, 2008) or changes over time to managerial practices (Danneels, 2008) - are also addressed.

A key criticism of the dynamic capability literature is that whilst it is a tantalising prospect for industrial colleagues, at present it is lacking in guidance and outputs of relevance to practitioners (Winter, 2003; Barreto, 2010). Studies based on the framework in figure 1 could usefully address this criticism in two key ways. Firstly, novel empirical research findings might be generated through studies drawing on figure 1 as a conceptual framework for theory building. When conducted using multiple points of intersection and appropriate related techniques, such theory building could address the call from DC perspective literature to conduct multi-method,

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systematic studies (Marsh and Stock, 2006; O'Connor, 2008). And given the internal focus of each point of intersection on intermediate resource base outcomes, studies answering the call to test existing DC perspective findings from alternative research approaches might be enabled by the framework in figure 1 (Capron and Mitchell, 2009; Ellonen et al, 2009; Lichtenthaler, 2009). With its grounding in epistemic pragmatism (Johnson et al, 2008), the influence of a SaP perspective on figure 1 means that using the framework as a point of departure for new empirical research will require the selection of methods which have the potential to create outputs of value to the practitioner as well as academic community.

Secondly, the framework in figure 1 might be used as a scaffold for conceptual concatenation of extant empirical studies' findings between the perspectives. For example, extant SaP perspective studies examining sensemaking and sensegiving practices, such as Balogun and Johnson (2005), and Rouleau (2005), offer analytically generalisable findings about the quasi-patterned ways of working used by managers to shape their own and others' schemata during strategic change. The framework in figure 1 could provide a means by which to apply such SaP practices findings to the strategic activity and outcome data presented in DC empirical studies, such as McCormack and Iansiti's (2009) study of Microsoft or Rosenbloom's (2000) longitudinal analysis of NCR. Such analysis against any of the elements in figure 1 might leverage new knowledge about dynamic capability practice from extant empirical studies.

There are also potential benefits for the SaP perspective community in drawing on the conceptual framework in figure 1. Regnér (2008, p584) suggests that with its general interest in strategic human activity, SaP perspective studies frequently try to "explain too much"- the boundaries introduced through combination with a DC perspective sharpen the activity and outcome focus of SaP empirical enquiry consistent with Johnson et al's (2003, 2008) and Jarzabkowski and Spee's (2009) recommendations for improved impact of theory building. Also, by focusing attention on particular practitioners (with resource allocation powers) and particular outcomes (intermediate resource base outcomes), analytically generalisable insights might be yielded by SaP studies (as in the example above) which could be related to broader strategic management literature through the DC perspective. This could open up new avenues of influence for the SaP perspective. Furthermore, if it is accepted that a SaP perspective needs to recognise and address 'less-cognate' influences on strategic activity (Chia and Holt, 2006), different aspects of the framework could address such concerns through better understanding the role of quasi-patterned ways of working, the influence of organisational and institutional context and also the inherent impact of characteristics of managers on the form and outcome of strategic activity. These insights might also form the basis of valuable, bounded advice for practitioners.

### **Limitations**

We acknowledge that there are potential limitations to the suggestions presented in this paper. Firstly, given the subjective nature of the perspectives reviewed (Winter, 2003; Johnson et al, 2008) and the inherent hermeneutic element of social science (Sayer, 2000), it is wholly possible that equally valid, alternative suggestions, arguments and frameworks for researching dynamic capability practice might be offered by different authors. We have tried to address this matter by adopting widely accepted, broad definitions from the perspectives' literatures (Helfat et al, 2007, Johnson et al, 2008, Easterby-Smith et al, 2009) and explicating our argumentation relating to

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the points of intersection which underpin our conceptual framework. We also intend that our framework as presented in figure 1 should represent an initial set of propositions which could and should be developed, expanded and refined by further authors through experimentation and critical review.

Furthermore, we elected to use a snowball technique rather than structured literature review in building our arguments. Some readers may consider our use of such a technique as limiting the breadth of our reading, advocating instead the adoption of a broad full structured method for reviewing the literature. We recognise that this potential limitation was inevitably introduced by our research design choice (which was based on our interpretation of greater benefit of developing depth in particular aspects of the literature). We would welcome insights and outputs from colleagues who may wish to address the same issue through alternative methods.

### Conclusion

In brief, we believe that this study makes two main contributions to knowledge. Firstly, we propose a novel, bounded conceptual framework for researching the detail of dynamic capability practice. This framework revises and extends aspects of Regnér (2008) and Ambrosini and Bowman's (2009) arguments, and makes a contribution towards meeting the challenge of better understanding dynamic capability practice by providing a point of departure for future research activities seeking to explore what people actually do in relation to dynamic capability.

Secondly, we suggest means by which both SaP and DC perspective academics can address further development calls from their respective communities through applying an augmenting, alternative perspective. We show that a DC perspective may deepen the explanatory potential of any strategizing findings through a link into a wide and growing body of alternative strategic management literature; and linking SaP findings to the high interest prospect of dynamic capability may help the SaP community open new avenues through which to promote its analytically generalisable, practitioner relevant outputs.

We argued initially that the DC and SaP perspectives have separately enjoyed a rise to prominence with practitioners and academics in recent times. We hope that our conceptual framework and related argumentation promoting research of the detail of dynamic capability practice might assist colleagues in continuing the development of robust theory and practically relevant outputs for the DC and SaP perspectives individually and in combination.

### References

- ADNER, R. & HELFAT, C., E. 2003. Corporate effects and dynamic managerial capabilities. *Strategic Management Journal*, 24, 1011-1025.
- AGARWAL, R. & SELEN, W. 2009. Dynamic Capability Building in Service Value Networks for Achieving Service Innovation. *Decision Sciences*, 40, 431-475.
- AMBROSINI, V. & BOWMAN, C. 2009. What are dynamic capabilities and are they a useful construct in strategic management? *International Journal of Management Reviews*, 11, 29-49.



A SaP based framework for researching the practice of dynamic capability

- AMBROSINI, V., BOWMAN, C. & COLLIER, N. 2009. Dynamic Capabilities: An Exploration of How Firms Renew their Resource Base. *British Journal of Management*, 20, 9-24.
- ANAND, G., WARD, P., TATIKONDA, M. & SCHILLING, D. 2009. Dynamic capabilities through continuous improvement infrastructure. *Journal of Operations Management*, 27, 444-461.
- ATHREYE, S., KALE, D. & RAMANI, S. 2009. Experimentation with strategy and the evolution of dynamic capability in the Indian pharmaceutical sector. *Industrial and Corporate Change*, 18, 729-759.
- AUGIER, M. & TEECE, D., J. 2008. Strategy as Evolution with Design: The Foundations of Dynamic Capabilities and the Role of Managers in the Economic System. *Organization Studies*, 29, 1185-1208.
- AZADEGAN, A., BUSH, D. & DOOLEY, K., J. 2008. Design creativity: static or dynamic capability? *International Journal of Operations & Production Management*, 28, 636.
- BALOGUN, J. and JOHNSON, G. (2005). "From Intended Strategies to Unintended Outcomes: The Impact of Change Recipient Sensemaking." *Organization Studies* 26(11): 1573.
- BARNEY, J. 1991. Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17, 99-120.
- BARNEY, J.B. 2002. *Gaining and Sustaining Competitive Advantage*, Prentice Hall.
- BARRETO, I. 2010. Dynamic Capabilities: A Review of Past Research and an Agenda for the Future. *Journal of Management*, 36, 256.
- BENNER, M., J. & TUSHMAN, M., L. 2003. Exploitation, exploration, and process management: The productivity dilemma revisited. *Academy of Management Review*, 28, pp. 238-256.
- CAPRON, L. & MITCHELL, W. 2009. Selection Capability: How Capability Gaps and Internal Social Frictions Affect Internal and External Strategic Renewal. *Organization Science*, 20, 294-312.
- CHIA, R. 2004. Strategy-as-practice: reflections on the research agenda. *European Management Review*, 1, 29.
- CHIA, R. & HOLT, R. 2006. Strategy as Practical Coping: A Heideggerian Perspective. *Organization Studies*, 27, 635.
- CHIA, R. & MACKAY, B. 2007. Post-processual challenges for the emerging strategy-as-practice perspective: Discovering strategy in the logic of practice. *Human Relations*, 60, 217.
- COLLIS, D. J. 1994. Research note: How valuable are organizational capabilities? *Strategic Management Journal*, 15, pp. 143-152.

A SaP based framework for researching the practice of dynamic capability

- DANNEELS, E. 2008. Organizational antecedents of second-order competences. *Strategic Management Journal*, 29, 519.
- EASTERBY-SMITH, M., LYLES, M., A. & PETERAF, M., A. 2009. Dynamic Capabilities: Current Debates and Future Directions. *British Journal of Management*, 20, S1- S8.
- EASTERBY-SMITH, M. & PRIETO, I., M. 2008. Dynamic Capabilities and Knowledge Management: an Integrative Role for Learning? *British Journal of Management*, 19, 235–249.
- EISENHARDT, K. M. & MARTIN, J. A. 2000. Dynamic capabilities: What are they? *Strategic Management Journal*, 21, 1105.
- ELLONEN, H., WIKSTRÖM, P. & JANTUNEN, A. 2009. Linking dynamic-capability portfolios and innovation outcomes. *Technovation*, 29, 753–762.
- GIDDENS, A. 1984. *The Constitution of Society. Outline of the Theory of Structuration*, Cambridge, Cambridge University Press.
- GRANT, R.M. 2008 *Contemporary Strategy Analysis*, Oxford, Blackwell Publishing
- GREENHALGH, T. & PEACOCK, R. 2005. Effectiveness and efficiency of search methods in systematic reviews of complex evidence: audit of primary sources. *British Medical Journal*, 331, 1064-1065
- HELFAT, C., E. & PETERAF, M., A. 2003. The dynamic resource-based view: Capability lifecycles. *Strategic Management Journal*, 24, 997-1010.
- HELFAT, C. E., FINKLESTEIN, S., MITCHELL, W., PETERAF, M. A., SINGH, H., TEECE, D. J. & WINTER, S., G. 2007. *Dynamic Capabilities: Understanding Strategic Change in Organisations*, Oxford, Blackwell Publishing.
- HOLWEG, M. & PIL, F. K. 2008. Theoretical perspectives on the coordination of supply chains. *Journal of Operations Management*, 26, 389.
- JARZABKOWSKI, P. (2003). "Strategic practices: An activity theory perspective on continuity and change." *Journal of Management Studies* 40(1): 23
- JARZABKOWSKI, P. 2005. *Strategy as Practice - an activity based approach*, London, Sage Publications.
- JARZABKOWSKI, P., BALOGUN, J. et al. (2007). "Strategizing: The challenges of a practice perspective." *Human Relations* 60(1): 5
- JARZABKOWSKI, P. and SPEE, A. (2009). "Strategy-as-practice: A review and future directions for the field." *International Journal of Management Reviews* 11(1): 69.
- JARZABKOWSKI, P. and WHITTINGTON, R. (2008). "A Strategy-as-Practice Approach to Strategy Research and Education." *Journal of Management Inquiry* 17(4): 282

A SaP based framework for researching the practice of dynamic capability

- JOHNSON, G., MELIN, L. & WHITTINGTON, R. 2003. Guest editor's introduction: Micro strategy and strategizing: Towards an activity-based view. *Journal of Management Studies*, 40, 3.
- JOHNSON, G., LANGLEY, A., MELIN, L. & WHITTINGTON, R. 2008. *Strategy as Practice-Research Directions and Resources*, Cambridge, Cambridge University Press.
- KING, A., A. & TUCCI, C., L. 2002. Incumbent entry into new market niches: The role of experience and managerial choice in the creation of dynamic capabilities. *Management Science*, 48, 171-186.
- LAVIE, D. 2006. Capability reconfiguration: an analysis of incumbent responses to technological change. *Academy of Management Review*, 31, 153.
- LICHTENTHALER, U. 2009. Absorptive capacity, environmental turbulence, and the complementarity of organisational learning processes. *Academy of Management Journal*, 52, 822-846.
- LICHTENTHALER, U. & LICHTENTHALER, E. 2009. A Capability-Based Framework for Open Innovation: Complementing Absorptive Capacity. *Journal of Management Studies*, 46, 1315-1338.
- MACCORMACK, A. & IANSITI, M. 2009. Intellectual Property, Architecture, and the Management of Technological Transitions: Evidence from Microsoft Corporation. *Journal of Product Innovation Management*, 26, 248.
- MACPHERSON, A. & JONES, O. 2010. Editorial: Strategies for the Development of International Journal of Management Reviews. *International Journal of Management Reviews*, 12, pp. 107-113.
- MAHONEY, J. T. 1995. The management of resources and the resource of management. *Journal of Business Research*, 33, 91.
- MAITLIS, S. & LAWRENCE, T., B. 2003. Orchestral manoeuvres in the dark: Understanding failure in organizational strategizing. *Journal of Management Studies*, 40, 109.
- MAKADOK, R. 2001. Toward a synthesis of the resource-based and dynamic-capability views of rent creation. *Strategic Management Journal*, 22, 387-401.
- MALIK, O. & KOTABE, M. 2009. Dynamic Capabilities, Government Policies, and Performance in Firms from Emerging Economies: Evidence from India and Pakistan. *Journal of Management Studies*, 46, 421.
- MARSH, S. J. & STOCK, G. N. 2006. Creating Dynamic Capability: The Role of Intertemporal Integration, Knowledge Retention, and Interpretation. *Journal of Product Innovation Management*, 23, 422.
- MCKELVIE, A. & DAVIDSSON, P. 2009. From Resource Base to Dynamic Capabilities: an Investigation of New Firms. *British Journal of Management*, 20, 63-80.

- MÖLLER, K. & SVAHN, S. 2006. Role of Knowledge in Value Creation in Business Nets. *Journal of Management Studies*, 43, 985-1007.
- O'CONNOR, G. 2008. Major Innovation as a Dynamic Capability: A Systems Approach. *Journal of Product Innovation Management*, 25, 313-330.
- OKHUYSEN, O. & BONARDI, J-P. 2011. Editors' comments: the challenges of building theory by combining lenses. *Academy of Management Review*, 36 (1), 6-11
- PABLO, A., L. , REAY, T., DEWALD, J., R. & CASEBEER, A., L. 2007. Identifying, Enabling and Managing Dynamic Capabilities in the Public Sector. *Journal of Management Studies*, 44, 687-708.
- PANDZA, K. & THORPE, R. 2009. Creative Search and Strategic Sense-making: Missing Dimensions in the Concept of Dynamic Capabilities. *British Journal of Management*, 20, S118 - S131.
- PAROUTIS, S. and PETTIGREW, A. (2007). "Strategizing in the multi-business firm: Strategy teams at multiple levels and over time." *Human Relations* 60(1): 99
- PRIEM, R., L. & BUTLER, J., E. 2001. Is the resource-based "view" a useful perspective for strategic management research? *Academy of Management Review*, 26, 22-40.
- REGNÉR, P. 2008. Strategy-as-practice and dynamic capabilities: Steps towards a dynamic view of strategy. *Human Relations*, 61, 565-588.
- ROSENBLOOM, R., S. 2000. Leadership, capabilities, and technological change: The transformation of NCR in the electronic era. *Strategic Management Journal*, 21, pp. 1083-1103.
- ROULEAU, L. (2005). "Micro-Practices of Strategic Sensemaking and Sensegiving: How Middle Managers Interpret and Sell Change Every Day." *Journal of Management Studies* 42(7): 1413.
- SALVATO, C. 2009. Capabilities Unveiled: The Role of Ordinary Activities in the Evolution of Product Development Processes. *Organization Science*, 20, pp. 384-409.
- SAYER, A. 2000. *Realism and Social Science*, London, Sage.
- SCHREYÖGG, G. & KLIESCH-EBERL, M. 2007. How dynamic can organizational capabilities be? Towards a dual-process model of capability dynamization. *Strategic Management Journal*, 28, 913-933.
- SILLINCE, J. & MUELLER, F. 2007. Switching Strategic Perspective: The Reframing of Accounts of Responsibility. *Organization Studies*, 28, 155.
- SIRMON, D. G. & HITT, M. A. 2009. Contingencies within dynamic managerial capabilities: interdependent effects of resource investment and deployment on firm performance. *Strategic Management Journal*, 30, 1375-1394.

- SMART, P., BESSANT, J. & GUPTA, A. 2007. Towards technological rules for designing innovation networks: a dynamic capabilities view. *International Journal of Operations & Production Management*, 27, 1069-1092.
- TEECE, D. J. 2007. Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28, 1319-1350.
- TEECE, D. J., PISANO, G. & SHUEN, A. 1997. Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, 18, 509-533.
- TRANFIELD, D., DENYER, D. & SMART, P. 2003. Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14, pp. 207-222.
- WANG, C. L. & AHMED, P. K. 2007. Dynamic capabilities: A review and research agenda. *International Journal of Management Reviews*, 9, 31-51.
- WHEELER, B., C. 2002. NEBIC: A dynamic capabilities theory for assessing Net-enablement. *Information Systems Research*, 13, 125-146.
- WHETTEN, D. A. 1989. What Constitutes A Theoretical Contribution? *Academy of Management Review*, 14, pp. 490-495.
- WHITTINGTON, R., JARZABKOWSKI, P., MAYER, M., MOUNOUD, E., NAHAPIET, J. & ROULEAU, L. 2003. Taking strategy seriously: Responsibility and reform for an important social practice. *Journal of Management Inquiry*, 12, 396.
- WHITTINGTON, R., MOLLOY, E., MAYER, M. & SMITH, A. 2006. Practices of Strategising/Organising: Broadening Strategy Work and Skills. *Long Range Planning*, 39, 615.
- WILLIAMS, C. & LEE, S. H. 2009. Exploring the internal and external venturing of large R&D-intensive firms. *R & D Management*, 39, 231-246.
- WINTER, S. G. 2003. Understanding dynamic capabilities. *Strategic Management Journal*, 24, 991-995.
- WITCHER, B., J. , CHAU, V. S. & HARDING, P. 2008. Dynamic capabilities: top executive audits and hoshin kanri at Nissan South Africa. *International Journal of Operations & Production Management*, 28, 540-561.
- ZAHRA, S., A. & GEORGE, G. 2002. Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27, 185-203.
- ZAHRA, S., A. , SAPIENZA, H., J. & DAVIDSSON, P. 2006. Entrepreneurship and Dynamic Capabilities: A Review, Model and Research Agenda. *Journal of Management Studies*, 43, 917-955.
- ZOLLO, M. & WINTER, S. G. 2002. Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 13, 339-351.