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Resilience Capacity and Strategic Agility: Prerequisites for Thriving in a Dynamic Environment

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Resilience Capacity and Strategic Agility: Prerequisites for Thriving in a Dynamic Environment

An organization's resilience capacity captures its ability to take situation-specific, robust, and transformative actions when confronted with unexpected and powerful events that have the potential to jeopardize an organization's long-term survival. Strategic agility is a complex, varied construct that can take multiple forms but captures an organization's ability to develop and quickly apply flexible, nimble and dynamic capabilities. These organizational attributes share common roots and are built from complementary resources, skills, and competencies. Together strategic agility and resilience capacity enable firms to prepare for changing conditions, restore their vitality after traumatic jolts, and become even more proficient as a result of the experience. Resilience capacity helps firms navigate among different forms of strategic agility and respond effectively to changing conditions. In this chapter, we explain why organizational resilience capacity can be viewed as an antecedent to strategic agility, and as a moderator of the relationship between a firm's dynamic activities and subsequent performance.

Every Boy Scout and Girl Scout has learned the motto “Be Prepared.” For organizations, being prepared means that a firm or agency is equipped to deal with unforeseen adversity and it is ready to capitalize on unexpected opportunities. In turbulent, surprising, continuously evolving marketplace environments only well-prepared, flexible, agile, and relentlessly dynamic organizations will thrive. Unstable environments create frequent challenges. Often these events are viewed negatively, but as Sutcliffe and Vogus (2003) explain, resilient organizations are able to maintain positive adjustments under disruptive conditions. Resilience capacity provides the basis for restoration after a severe jolt and can offer an opportunity for an organization to undergo a positive transformation as a result of overcoming an exceptionally challenging experience. Similarly, strategic agility enables a firm to initiate and apply flexible, nimble, and dynamic competitive moves in order to respond positively to changes imposed by others and to initiate shifts in strategy to create new marketplace realities (McCann, 2004).

Strategic agility and resilience capacity share common roots and are built, in part, from complementary capabilities and assets. Moreover, both presume change and surprise can be sources of opportunity. However, they are distinct constructs that are designed to respond to different environmental conditions. Strategic agility is needed to address change that is continuous and relentless while resilience capacity is needed to respond to change that is severely disruptive and surprising (Deevy, 1995; Hamel & Valikangas, 2003; Jamrog, McCann, Lee, Morrison, Selsky, & Vickers, 2006; McCann, 2004). Often firms experience both types of change and, thus, resilience capacity and strategic agility are complementary capabilities that enable organizations to deal with the tumultuous environments in which they operate.

In this chapter we explain how resilience capacity can enable a firm to more fully realize the benefits that disruptive opportunities present and thereby capitalize more fully on its strategic

agility. We examine the different forms that strategic agility can take and explain how these different forms lead to different types of outcomes. Sustained success depends on a firm's ability to choose the best form of agility for existing strategic purposes and on recognizing the need to change forms as conditions evolve. We argue that resilience capacity contributes to both these decisions.

Resilience capacity is a multidimensional, organizational attribute that enables a firm to effectively absorb, respond to and potentially capitalize on disruptive surprises (Hamel & Valikangas, 2003; Lengnick-Hall & Beck, 2005; McCann, 2004). It provides a foundation of insight, flexibility, and hardiness that makes it possible for a firm to bounce back and often create new ways to flourish when faced with uncertainty and adversity stemming from a discontinuous jolt within its ecosystem. Resilience capacity is embedded in a set of organizational routines and processes by which a firm conceptually orients itself, acts decisively to move forward, and establishes a setting of diversity and adjustable integration that enables it to overcome the potentially debilitating consequences of a disruptive shock (Lengnick-Hall & Beck, 2005). We define resilience capacity as the organizational ability and confidence to act decisively and effectively in response to conditions that are uncertain, surprising, and sufficiently disruptive that they have the potential to jeopardize long-term survival. Resilience capacity is associated with an ability to solve current problems while preserving flexibility. Resilience capacity offers the *potential* for enhancing the organization's capability set as a direct consequence of the response activities. Modest levels of resilience capacity enable a firm to recover from disruptions and resume normal operations, and high levels of resilience capacity can enable a firm to undergo a robust transformation and thereby thrive in part as a result the adverse events. Recovery is defined as bouncing back or rebounding from environmental

disruptions and resuming established levels of performance. Robust transformation, in contrast, is defined as capitalizing on environmental disruptions in ways that create new options and capabilities. Thus organizational resilience represents a continuum of response ranging from survival to recovery to beneficial transformation. The higher the level of resilience capacity the more reasonable it is to expect that an organization will achieve a position toward the robust transformation end of the continuum.

Strategic agility has been defined as “the ability to quickly recognize and seize opportunities, change direction, and avoid collisions” (McCann, 2004: 47), as the ability to “produce the right products at the right place at the right time at the right price” (Roth, 1996: 30), or as “moving quickly, decisively, and effectively in anticipating, initiating and taking advantage of change” (Jamrog et al., 2006: 5). It captures an organization’s ability to manage and adjust to continuous change and so is tied to the frequency and tempo of environmental shifts and indicates a firm’s nimbleness and quickness. Strategic agility prepares organizations to embrace relentless change by generating a range of resource and capability alternatives; developing skills at aligning, realigning and mobilizing resources; taking resolute action; and removing barriers to change (Brown & Eisenhardt, 1997; D’Aveni, 1994). Since both resilience capacity and strategic agility underscore a firm’s need for deliberate and positive activities in the face of changing conditions, there is a strong connection between these two organizational characteristics. However, there are also important distinctions between the two. [Table 1](#) highlights some of the important differences between resilience capacity and strategic agility. One goal of this chapter is to offer a more in-depth understanding of these two constructs and of the interactions between them that enable organizations to thrive in dynamic environments.

Insert Table 1 about here

We begin with an in-depth discussion of resilience capacity and the component capabilities that comprise this construct. This is followed by an examination of strategic agility. The next section explores the ways in which resilience capacity goes beyond enabling an organization to restore its performance after a crisis, and assists a firm in preparing for continuous change by enhancing organizational agility and helping a firm navigate among the various forms of agility. We conclude with a discussion of research and managerial implications.

BUILDING RESILIENCE CAPACITY

Resilience capacity is a multidimensional set of routines, resources, behaviors, capabilities, and mental models that leads to organizational resilience. As indicated previously, organizational resilience is a firm's ability to bounce back and often create new ways to flourish when faced with disruptive conditions. Resilient organizations are able to absorb the impact of environmental disruptions (Meyer, 1982). They are able to withstand anything that comes along and, depending on their resilience capacity, potentially become more hardy and capable as a consequence of effectively responding to disrupting shocks (Lengnick-Hall & Beck, 2005). While resilient organizations are nimble, flexible and agile; not all agile organizations are resilient (Hamel & Valikangas, 2003; Jamrog et al., 2006; McCann, 2004). The primary distinction is the nature of the environmental shifts each organizational capability is designed to address. Organizational resilience capacity prepares organizations to effectively manage disruptive, unexpected and potentially debilitating change by ensuring the means needed for

recovery and renewal are available; absorbing shocks and complexity; broadly accessing resources; crafting creative alternatives; and executing transformational change (McCann, 2004).

Achieving Resilience Capacity

An organization's resilience capacity is created from interactions among specific cognitive, behavioral, and contextual factors (Lengnick-Hall & Beck, 2005). The mental processes and conceptual orientation known as *cognitive resilience* enables an organization to notice, interpret, analyze, and formulate responses to unfamiliar evolving situations. Cognitive resilience contributes to the generation and selection of action alternatives and to a firm's decisiveness in initiating activities. *Behavioral resilience*, the honed and rehearsed actions that become part of a firm's innate reaction to disruptive conditions, drives the development of particular routines, resource configurations, and interaction patterns that implement the firm's response. These behaviors are designed to both create and capitalize on a firm's flexibility. *Contextual resilience* describes the network of interactions and resources that provide the backdrop for a firm's response to disruptive conditions. Contextual resilience combines interpersonal relationships that provide a foundation for rapid responses to emerging conditions and a network of potential resource donors that enlarges the range of viable options and resource combinations that a firm can consider under disruptive conditions. These three dimensions (cognitive resilience, behavioral resilience, and contextual resilience) play distinct but complementary roles in generating organizational responses to disruption.

These three dimensions of resilience capacity work both independently and interactively to recognize and respond to disruptive change. Synergistic and mutually reinforcing interactions among all three dimensions likely offer the greatest potential for constructing unique, competitively superior resource-development capabilities, an appropriately varied range of

competencies and the ability to effectively use these assets. The following sections detail the characteristics associated with each resilience capacity dimension. Subsequent discussion then links the three components of resilience capacity to the creation of particular variations in strategic agility and to the selection and implementation of an effective agility portfolio.

Cognitive Resilience

The first dimension of resilience capacity - *cognitive resilience* - is an organizational capability that enables a firm to notice shifts, interpret unfamiliar situations, analyze options, and figure out how to respond to conditions that are disruptive, uncertain, surprising and have the potential to jeopardize the organization's long-term survival (Lengnick-Hall & Beck, 2005). Multiple factors contribute to the creation of cognitive resilience but two of the most important elements are a strong identity and constructive sensemaking.

Organizational identity. Firms can foster a positive, constructive conceptual orientation through a strong sense of purpose, authentic core values, a genuine vision, and a deliberate use of language (Collins & Porras, 1994). For example, the ways in which organizations frame and label environmental issues (e.g., as a problem or an opportunity) influence the types of responses that are generated (Dutton & Jackson, 1987). The labels used to describe an issue affect subsequent behaviors in terms of risk, commitment, engagement, and persistence. Strong core values coupled with a sense of purpose and identity encourage an organization to frame conditions in ways that enable problem solving and action rather than in ways that lead to either threat rigidity or dysfunctional escalation of commitment.

Sensemaking. Cognitively resilient firms are adept at sensemaking in order to interpret and provide meaning to unprecedented, situation-specific events and conditions (Thomas, Clark, & Gioia, 1993; Weick, 1995). Collective sensemaking relies on the language of the organization

(i.e., its words, images, and stories) to construct meaning, describe situations, and imply both meaning and emotion. A prevailing vocabulary that implies capability, influence, competence, consistent core values, and a clear sense of direction, sets the stage for constructive sensemaking.

Weick (1993) defines wisdom as an attitude taken towards events or conditions that blends caution and confidence in such a way that expertise leads to understanding at the same time that skepticism leads to curiosity and the search for new information. Wisdom relies on knowledge gained through past experience but it does not stop there. Wisdom is the recognition that each situation contains unique features that may be quite subtle but that can be incredibly powerful in shaping consequences, relationships and actions. Therefore, attitudes that promote wisdom contribute to sensemaking and complement other cognitive elements. To achieve wisdom, firms must actively balance contradictory forces. In other words, constructive sensemaking relies on reciprocal information seeking and meaning ascription.

Outcomes from cognitive resilience. The mindset that enables a firm to move forward with flexibility is often an intricate blend of expertise, opportunism, creativity, and decisiveness despite uncertainty. If a firm is too bound by conventional answers or precedent, it will have great difficulty conceiving a bold new path. If a firm disregards real constraints it will forge infeasible solutions. Cognitive resilience requires a solid grasp on reality and a relentless desire to question fundamental assumptions that may no longer apply. In addition, alertness or mindfulness that prompts an organization to continuously consider and refine its expectations and perspectives on current functioning enables a firm to more adeptly manage environmental complexities. Cognitive resilience depends on an ability to conceptualize solutions that are both novel and appropriate (Amabile, 1988). In summary, cognitive resilience includes the mental capabilities and the conceptual orientation that provide the intellectual basis for resilience.

Behavioral Resilience

Behavioral resilience comprises the established behaviors and routines that enable a firm to learn more about a situation, implement new routines, and fully use its resources under conditions that are disruptive, uncertain, surprising, and have the potential to jeopardize the organization's long-term survival. These actions and activities allow organization members to respond collaboratively to environmental threats and challenges in ways that facilitate a stronger and more competent firm (Lengnick-Hall & Beck, 2003). Routines and activities that comprise behavioral resilience are developed through a combination of practiced resourcefulness and counterintuitive action juxtaposed with useful habits and behavioral preparedness. In this way, behavioral resilience results from a dynamic tension between behaviors that foster creativity and unconventional actions and familiar and well-rehearsed routines that keep a firm grounded and to provide the platform for inventiveness. Combined these behaviors create centrifugal forces (influences that make ideas, knowledge and information available for creative action) and centripetal forces (influences that direct inputs and processes toward actionable solutions) that enable a firm to learn more about a situation and to fully use its own resources under conditions that are uncertain and surprising (Sheremata, 2000).

Resourcefulness. Learned resourcefulness is the accumulation of established and practiced behaviors for innovative problem solving that result in heightened levels of ingenuity, inventiveness, and bricolage (the imaginative use of materials for previously unintended purposes). As organizations develop and reinforce routines that proliferate ideas, manage conflict to cope with several new ideas at the same time, facilitate change, and initiate novel activities (Kirton, 1976), individuals and organizations become adept at engaging in disciplined creativity leading to unconventional, yet robust, responses to unprecedented challenges

(Lengnick-Hall & Lengnick-Hall, 2003; Mallak, 1998a; Weick, 1993). Resourceful behaviors typically combine innovation and decisiveness to capitalize on an immediate situation.

Organizations that develop and rehearse behavioral routines that promote resourcefulness and creativity are able to take whatever resources and opportunities are at hand to move the firm forward. Coutu (2002) described these behaviors as ‘ritualized ingenuity’. This can lead to timing advantages including the ability to capitalize on rapid response opportunities, to do more with less, and to use all of a firm’s assets to full advantage.

As organizations attempt and succeed at bold, innovative moves, they develop both expertise and confidence. The expertise builds the behavioral repertoire and the confidence builds cognitive resilience. Specific skills and competencies that lead to learned resourcefulness improve with experience and practice (Eisenhardt & Tabrizi, 1995; Senge, Roberts, Ross, Smith, & Kleiner, 1994). For example, divergent thinking skills can be honed through brainstorming, devil’s advocacy techniques, and dialogue. Similarly, problem solving techniques that rely on frequent iterations serve as catalysts for new ideas and increase the odds of success simply because there are more options available for consideration. These behaviors can become familiar as they are applied routinely to solve problems.

Counterintuitive moves. In a study of hospitals dealing with the sudden and unprecedented jolt of striking physicians, Meyer (1982) found that resilient hospitals chose a variety of different paths but one commonality was that the resilient choices were counterintuitive given each of the hospital’s normal operating habits. For example, Meyer found that the hospital which typically adopted an entrepreneurial prospector strategy responded to the disruption by centralizing authority, reducing staff and containing costs. Therefore, it appears that a second behavioral pattern contributing to resilience is the ability to follow a dramatically

different course of action from that which is the norm for the organization. One way to expand the number of available options is to design a range of strategy assortments that evolve over time and capitalize on uncertainty (Beinhocker, 1999). Behaviors that initiate counterintuitive actions and allow firms to change direction can be practiced to develop increased organizational agility. The more frequently an organization engages in actions that challenge the prevailing status quo, the more adept it is likely to become at quickly and effectively developing a counterintuitive and varied action repertoire.

Useful habits. Third, in direct contrast to learned resourcefulness and counterintuitive action, behavioral resilience also depends on useful, practical habits especially repetitive, well-rehearsed routines that provide the first response to any unexpected threat. Useful habits emerge from genuine organizational values. A cohesive sense of what a company believes (the core values that contribute to cognitive resilience), is the foundation for developing day-to-day behaviors that translate intended strategies into actions. If an organization develops values that lead to habits of investigation rather than assumption, routines of collaboration rather than antagonism, and traditions of flexibility rather than rigidity, it is more likely to intuitively behave in ways that open the system and generate resilient responses.

Preparedness. Fourth, behavioral preparedness helps bridge the gap between the divergent forces of learned resourcefulness and counterintuitive action and the convergent forces of useful habits. Behavioral preparedness is taking actions and making investments before they are needed to ensure that an organization is able to benefit from situations that emerge. Behavioral preparedness is the activity-based foundation for informed opportunism (Waterman, 1987). Behavioral preparedness also means that an organization deliberately unlearns obsolete information or dysfunctional heuristics (Crossan, Lane, & White, 1999; Hammonds, 2002). It is

just as important for organizations to quickly discard behaviors that result in inappropriate constraints as it is for them to develop new competencies. Behavioral preparedness enables an organization to act in response to opportunities that other firms without their competencies might forego. Firms that have not developed the necessary behaviors before they are needed jeopardize behavioral resilience because they are unable to capitalize on unanticipated changes in technology, ideas, or market conditions.

Outcomes from behavioral resilience. Behavioral resilience translates the thoughts and perceptions identified through cognitive resilience into tangible actions and responses. This leads to two important outcomes. First, a combination of learned resourcefulness and counterintuitive actions generates a complex and varied inventory of potential strategic actions that can be drawn upon in emerging situations. Resourcefulness and mobile resources combine to create a reservoir of options that expand the range of possible future behaviors (Ferrier, Smith, & Grimm, 1999). Second, a combination of useful habits and behavioral preparedness creates a foundation of rehearsed and habitual expert routines that ensure an organization's initial and intuitive action response to any situation will create options rather than constraints.

Drawing an example from the military, patrolling is the most basic, standard, and over-learned routine of the infantry (Simons, 1997). Patrolling is crucial for conducting surveillance or for setting up an ambush or a diversion. In addition, patrolling alerts team leaders to potential deficiencies of individual soldiers and enables the team to rehearse coordination until it becomes ordinary and consistent. These convergent routines can operate as simple rules that create a behavioral gyroscope for guiding organizational actions in uncertain circumstances.

Contextual Resilience

Contextual resilience provides a setting to nurture attitudes and facilitate behaviors that promote a collaborative response to environmental complexities (Lengnick-Hall & Beck, 2003). Contextual resilience is the combination of interpersonal connections, resource stocks, and supply lines that provides the foundation for quick action under emerging conditions that are disruptive, uncertain, surprising, and have the potential to jeopardize the organization's long-term survival. Factors that contribute to contextual resilience include deep social capital, broad resource networks, and deference to expertise.

Deep social capital. First, deep social capital evolves from respectful interactions within an organizational community (Ireland, Hitt, & Vaidyanath, 2002). Respectful interactions are defined as face-to-face, on-going dialogues rooted in trust, honesty and self-respect (Weick, 1993). Respectful interaction builds informed and disclosure-oriented intimacy and is a key factor enabling the collaborative sensemaking component of cognitive resilience.

Deep social capital offers a number of important contextual benefits (Adler & Kwon, 2000). It facilitates growth in intellectual capital since people are more likely and more able to share tacit information. It lends itself to resource exchange since groups come to recognize their interdependence. Social capital also promotes cross-functional collaboration since people appreciate perspectives that are different from their own. Deep social capital is a foundation for exchanges that endure beyond immediate transactions and grow into mutually beneficial, multifaceted, long-term partnerships. Finally, deep social capital can enable an organization to build bridges that cross conventional internal and external boundaries and forge a network of support and resources.

Broad resource networks. Second, access to broad resource networks is a key element in creating contextual resilience. Resilient individuals are distinguished by their ability to forge relationships with others who could share key resources (Werner & Smith, 2001). Likewise, resilient firms are able to utilize relationships with supplier contacts, loyal customers, and strategic alliance partners to secure needed resources to support adaptive initiatives. Resources gained through a firm's network of organizational relationships generate contextual resilience in several ways. The ability to obtain resources externally tends to ensure some measure of continuous slack. Continuous slack has been found to be more significant than resource abundance in increasing innovation and resourcefulness (Judge, Fryxell, & Dooley, 1997) and thus contributes to developing an action inventory. In addition, external resources are likely to extend the range of feasible actions and promote an assortment of alternative applications of these resources. This, in turn, stimulates innovation and challenges prevailing assumptions in ways that can cultivate wisdom. External resources also ensure that bonds with various environmental agents are maintained, thereby reinforcing social capital beyond the firm's boundaries.

Deference to expertise. Deference to expertise is the third factor associated with contextual resilience (Weick & Sutcliffe, 2001). Resilient organizations are not typically hierarchical. Instead, they rely on self-organization, dispersed influence, individual and group accountability, and similar factors that create a 'holographic' structure (Morgan, 1997). In holographic structures, each part is a fractional replica of the whole organization. Holographic structures contain systematic redundancy in both information processing and crucial skills to enhance flexibility. They use the minimum specifications possible to ensure collaboration, but leave freedom for experimentation and self-organization. Thus, holographic structures are

designed to learn and to change their behaviors based on new insights and information. In addition to relying on these structural designs, resilient organizations share decision-making widely (Mallak, 1998b). Each organization member has both the discretion and the responsibility for ensuring attainment of organizational interests. Overall, this shared responsibility coupled with interdependence creates a setting that facilitates cognitive and behavioral resilience.

Outcomes from contextual resilience. Contextual resilience establishes the operational platform to facilitate resilient behaviors and attitudes. While contextual resilience is not sufficient to create resilience capacity, it is an integral ingredient enabling the kinds of behaviors and mental models that lead to organizational resilience. Moreover, contextual resilience provides the necessary medium for brewing the other two dimensions of resilience capacity. Without the conduit of relationships, processes, and intangible assets that generate contextual resilience, there would be few ways to synthesize resilient cognitions and behaviors into an enterprise-wide capability.

In summary, cognitive resilience, behavioral resilience, and contextual resilience work together to create an organizational capability that has important implications for the development of strategic agility. Before discussing these implications, however, it is important to examine key aspects of strategic agility.

PERSPECTIVES ON STRATEGIC AGILITY

Strategic agility means that an organization can take quick, decisive, and effective actions and that it can trigger, anticipate, and take advantage of change (Doz & Kosonen, 2007; Jamrog et al., 2006). Firms demonstrating strong agility are able to maintain their strategic supremacy despite market fluctuations (D'Aveni, 1999; Thomas, 1996). A high level of strategic agility

means that a firm is able to demonstrate a consistent capacity for concentrating resources on key strategic issues, accumulating new resources efficiently and effectively, complementing and combining resources in new ways, and redeploying resources for new uses (Hamel & Prahalad, 1993). In many ways, strategic agility captures a firm's prowess for developing and learning complex problem-defining and problem-solving heuristics (Lei, Hitt, & Bettis, 1996).

The competitive dynamics literature argues that agility is correlated with a number of factors such as response speed, fast directional changes, number of strategic moves taken in a time period, variety in strategic moves undertaken, a firm's ability to initiate new action sequences, and similar indicators of a broad action repertoire coupled with decisiveness (Ferrier, 2001; Ferrier et al., 1999; Grimm, Lee, & Smith, 2006). Much of what we know about how to achieve strategic agility is drawn from our understanding of organizational change (Brown & Eisenhardt, 1997; Goldman, Nagel, & Preiss, 1995; Rindova & Kotha, 2001), exploration and exploitation (Benner & Tushman, 2003; March, 1991; O'Reilly & Tushman, 2004), and dynamic capabilities (Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997; Winter, 2003).

However, strategic agility can be realized through different component routines, resources, and competencies depending on the conditions and outcomes that a firm is striving to achieve. In other words, the elements of strategic agility that appear crucial in an extremely turbulent and unpredictable market appear to be different than the components of agility that are essential in a more moderately dynamic marketplace characterized by punctuated equilibrium. Moreover, agility that is designed to augment and capitalize on existing sources of competitive advantage is quite different than agility that is designed to result in discontinuous and radically different sources of advantage. A firm with a rich and varied agility repertoire is able to develop

resources and competencies that allow effective responses to a range of market and strategic conditions. We discuss the origins of these differences next.

Strategic Agility and Market Turbulence

The level of market turbulence determines the *pattern* of routines, capabilities, and resource deployments that is likely to be most effective. In environments that are only moderately unsettled, and characterized by punctuated equilibrium, agility is best achieved by patterns that are “complicated, detailed, analytic processes that rely extensively on existing knowledge and linear execution to produce predictable outcomes” (Eisenhardt & Martin, 2000: 1106). Because a firm has a baseline understanding of external conditions, it is able to emphasize *complexity reduction* and focus its analysis on anticipating and understanding the nature, direction, and consequences of the changes that are taking place. Complexity reduction is described as an organizational approach that relies on specialization, abstraction, and codification to devise a single best representation of the environment to which a firm can then adapt in a systematic way (Boisot & Child, 1999). On the other hand, high-velocity, exceptionally turbulent markets require patterns of activity that are much more emergent and fluid. According to Eisenhardt and Martin (2000) agility is best achieved in highly turbulent environments by patterns of behavior that are “simple, experiential, unstable processes that rely on quickly created new knowledge and iterative execution to produce adaptive, but unpredictable outcomes” (page 1106). Routines and capabilities for tumultuous markets are designed to *absorb complexity*. Complexity absorption extends the range of environmental contingencies that can be handled by simultaneously considering a variety of sometimes conflicting representations of the environment and by maintaining a broad repertoire of potential actions that could be applied conditionally to meet particular needs (Boisot & Child, 1999).

Strategic Agility and Prevailing Sources of Advantage

We argue that another crucial difference for the design of activities to achieve strategic agility is whether routines are intended to create new resources and competencies that build on the firm's current configuration, or whether they are intended to create new action patterns that disregard current strengths and work to redefine market value. If a firm determines that superior performance will result from its ability to develop, use, and protect its platform competencies and resources, then its strategy will emphasize *sustaining technologies* and business strategies relying on complementary shifts (Christensen, 1997). Under these conditions, agility will be directed toward a competence-enhancing strategic intent (D'Aveni, 1999; Hamel & Prahalad, 1994). If on the other hand, a firm determines that superior performance comes from rapidly and repeatedly disrupting the current market situation to create unprecedented and unconventional sources of value, then *disruptive technologies* will underpin its strategic activities (Christensen, 1997; D'Aveni, 1999; Grimm et al., 2006). Under these latter conditions agility will be directed toward a competence-destroying strategic agenda.

Four Forms of Strategic Agility

Thus, as illustrated in [Figure 1](#), strategic agility can take a variety of forms which are designed for different market conditions and different strategic purposes. Form 1 (complementary augmentation) and Form 2 (breakthrough conversion) can be achieved through dynamic capabilities and routines that are familiar and rehearsed, capture expertise that has been developed over time, and reflect intricate analysis, planning, and implementation sequences. Form 3 (innovative elaboration) and Form 4 (radical improvisation) can be achieved through dynamic capabilities and routines that are developed in an emergent fashion, are guided by simple rules, and are designed to absorb complexity. Both complementary augmentation (Form

1) and innovative elaboration (Form 3) build on a firm's sustaining technologies and reinforce or apply current strengths. The purpose of these forms of strategic agility is to augment and extend established organizational competencies. In contrast, both breakthrough conversion (Form 2) and radical improvisation (Form 4) emphasize disruptive technologies and to reciprocally trigger and respond quickly to discontinuous shifts in the marketplace. The intent of these latter forms of strategic agility is more akin to creative destruction in which existing competencies are unlearned and replaced by new and very different capabilities. An important issue for a firm is choosing the best form of strategic agility for existing strategic needs and recognizing the need to change forms as conditions shift.

Insert Figure 1 about here

An organization's need for strategic agility is directly tied to the rate and persistence of change the firm encounters. As change becomes increasingly relentless, agility becomes essential for organizational success. Several factors underpin the overarching agility capability regardless of which form is being enacted: (a) a unified managerial commitment, (b) strategic acuity enabling key leaders to identify and appreciate opportunities and threats, (c) fluid and tinkerable resources that can be mobilized, reassembled, and redeployed to meet differing needs, and (d) adept learning, unlearning and knowledge exploitation capabilities (Doz & Kosonen, 2007; Ghemawat & del Sol, 1998; McCann, 2004; Roth, 1996). Different dynamic capabilities, a choice between complexity reduction and complexity absorption, and an emphasis on competence-enhancing versus competence-destroying investments are then overlaid on these foundation factors to create different forms of agility to respond to market conditions and the kind of shifts that must be managed. Over time, an organization may develop a portfolio of different agility approaches to correspond to the different competitive realities it experiences.

RESILIENCE CAPACITY AND STRATEGIC AGILITY

Resilience capacity offers firms the potential both to develop strategic agility in a way that matches prevailing environmental conditions and competitive realities, and also create a platform for developing variations in forms of strategic agility over time. This is similar to the role resilience capacity plays in enabling firms to choose between adaptive fit and robust transformation when faced with strong environmental shifts (Lengnick-Hall & Beck, 2005). The logic is fairly straightforward. Resilience capacity stimulates a firm to develop a diverse repertoire of routines and resources. This variety means that a firm is able to construct an array of different combinations of activities and assets to achieve strategic agility. Behavioral and contextual resilience provide the elements, relationships, patterns, experiences, and subroutines that can be mixed and matched to establish competence-enhancing or competence-destroying activities.

Similar to the way that absorptive capacity underpins a firm's ability to appreciate, transform, and exploit new knowledge for strategic purposes (Zahra & George, 2002), resilience capacity underlies a firm's ability to take actions to effectively reconfigure and augment a firm's resources and routines. In addition, resilience capacity captures an important conceptual diagnostic and interpretation component that enables a firm to accurately determine the most appropriate form of strategic agility to use in the current situation. The following sections explain how each of the components of resilience capacity can contribute to various forms of strategic agility.

Cognitive Resilience and Strategic Agility

The firm-specific routines a firm develops are grounded in the collective consciousness of organization members (Fiol & Lyles, 1985). Therefore, cognitive resilience facilitates a firm's ability to both envision different types of routines that might be needed and to craft specific kinds of routines to respond to particular conditions. In addition, cognitive resilience promotes higher-level learning (Tripsas & Gavetti, 2000) which, in turn, encourages the development of multiple routines and prompts a firm to question its prevailing assumptions. Having a range of different routines and perspectives available to choose from enables a firm to respond to a variety of problem-solving requirements (Lei et al., 1996). Cognitive resilience provides several specific contributions to achieving strategic agility.

First, since cognitive resilience helps members of an organization see new patterns and consider alternate conditions, it heightens an organization's ability to perceive shifts in the external environment. Moreover, cognitive resilience helps organization members determine whether environmental changes are temporary or long-standing and whether they are evolutionary or discontinuous (Lengnick-Hall & Beck, 2005). In this way, cognitive resilience leads to an understanding of the environment that helps a firm decide whether a competence-enhancing route or competence-destroying initiatives should be pursued. It also helps a firm determine whether the most effective strategic actions will be repetitive or emergent. Accurate assessment of the environment is a precondition for selecting an appropriate form of strategic agility.

Second, cognitive resilience contributes to the realization of various forms of strategic agility. Cognitive resilience is useful for refining persistent, repetitive dynamic capabilities and for creating fluid, emerging agility routines. On the one hand, an emphasis on realistic appraisal

that underpins cognitive resilience enhances a firm's ability to set challenging but achievable goals and to structure internal processes for maximum feasibility, efficiency, and scalability. Effective goal setting and efficient process design provide a foundation for learning and refining routines over time and developing recurring patterns of behavior. On the other hand, insight and wisdom emerging from applied cognitive resilience is a foundation for creating and selecting the simple rules that drive more fluid forms of strategic agility. Cognitive resilience also constrains pressure to undertake either gratuitous invention or reckless initiatives. Thus, cognitive resilience offers a useful constraint on investment under uncertainty.

Third, the conceptual skills that enable cognitive resilience are also crucial for envisioning effective alternatives regardless of which form of strategic agility is selected. In this way, conceptual skills that lead to resilience capacity concurrently contribute to agile resources and routines. Gillette offers an example of cognitive resilience in action. When Bic introduced the disposable razor it drastically redefined the shaving industry, cannibalizing Gillette's cartridge system, and switching the primary signal of value toward price competition (D'Aveni, 1999). Gillette faced three choices: (1) elaborating its current business model (competence-enhancing), (2) following new rules that required entirely different resources and competencies from those the firm possessed (competence-destroying by following a rival), or (3) using its resources and competencies in new ways to redefine the industry again (competence-destroying and setting the agenda). Gillette realized it could not compete effectively using Bic's ground rules, and that its current business model was on shaky ground, so they chose to create a further discontinuous shift in the market by redefining value to shaving quality and brand image. They also developed the capacity to periodically punctuate the market with disruptive shifts in order to

maintain their strategic supremacy (D'Aveni, 1999). Cognitive resilience enabled accurate diagnosis and effective choice.

Finally, cognitive resilience plays a role in selecting between complexity reduction and complexity absorption. As indicated previously, cognitive resilience increases the probability that a firm will be able to accurately distinguish between temporary, permanent, and continuous changes in their external environment (Lengnick-Hall & Beck, 2005). Thus, cognitive resilience enables a firm to determine whether analysis can lead to the discovery of a single preferred solution or whether the firm must maintain an understanding of competing influences and multiple potential interpretations. If it is possible to design a single best answer, then complexity reduction can be employed. However, if conditions are perpetually emerging, then a complexity absorption strategy is more effective. Cognitive resilience is particularly useful with complexity absorption approaches because the same types of skills that enable individuals and organizations to balance competing forces and achieve wisdom and sensemaking also allow people and units to hold multiple perspectives simultaneously.

Behavioral Resilience and Strategic Agility

The components of behavioral resilience have a strong influence on both persistent and fluid capability routines. First, useful habits are vital for rehearsing and honing the analytic processes that efficiently use existing knowledge. Useful habits also facilitate linear execution of established work processes to produce the predictable outcomes associated with persistent dynamic capabilities. Second, a deliberate strategy of frequent, time-triggered, diverse competitive moves is a key element in developing a complex action repertoire (Smith, Ferrier, & Grimm, 2001). This type of premeditated, tightly-orchestrated routine is a prototype for complementary augmentation and for breakthrough conversion forms of agility. Third, a

complex and varied action inventory provides a rich repertoire of alternatives for responding to the emerging, iterative requirements for the fluid dynamic capabilities needed for innovative elaboration and radical improvisation. Interdependence makes it easier for organizations to recognize the value of ideas that come from other sources and to see the benefits of mixing and matching resources in unprecedented ways. Successful emergency response and disaster recovery organizations, for example, often rely on the useful habit of modular work teams, incident command, and project-based assignments to reinforce and rehearse their rapid deployment capabilities. For these firms, the lessons learned during familiar assignments lead to the expertise needed for unprecedented and unconventional missions.

Likewise the components of behavioral resilience can contribute to either a competence-enhancing or competence-destroying strategic orientation. Useful habits reinforce the core competencies that drive a competence-enhancing strategy and provide a focus for accumulating and concentrating resources. A complex and varied action inventory provides the raw materials necessary to execute unconventional experiments, disconnected simultaneous actions, and the quick responses that are associated with competence-destroying strategies. The factors that contribute to behavioral preparedness also stimulate a firm's ability to vacillate between competence-enhancing and competence-destroying actions. Effectiveness at unlearning coupled with a willingness to make prerequisite investments in assets, human capital, or various capabilities insures that the ingredients are available for either type of strategic initiative (Kogut & Zander, 1996).

Complexity reduction requires codification (assigning data to categories) and abstraction (limiting the number of categories to which data can be assigned) (Boisot & Child, 1999). As organizations repeatedly follow firm-specific rules for evaluating, sorting, and analyzing data

they become more adept at complexity reduction. In addition, as a firm elaborates its action inventory it increases the likelihood that the means to implement a wider variety of inventive approaches will be available. This increases opportunities for complexity absorption by expanding the number of contingent conditions that can be accommodated and improves complexity reduction by increasing the likelihood that any given alternative identified as ideal will be feasible to implement. However, as a firm increases the variety of its action inventory, it increases the number of diverse elements in the system, which raises the level of complexity within the firm. Complexity is often accompanied by increased specialization. This, in turn, can lead to complicated routines designed to promote higher-order learning and reduce complexity (Lei et al., 1996). Alternatively, as complexity increases firms can become more comfortable with ambiguity and develop routines that encourage both exploitive and exploratory learning (March & Levinthal, 1993), thus enhancing their ability to absorb complexity. In this way a complex and varied action inventory provides the ingredients for generating both complexity reduction and complexity absorption routines.

Contextual Resilience and Strategic Agility

Deep social capital, broad resource networks, and deference to expertise, the elements comprising contextual resilience, also shape the dimensions leading to different types of strategic agility. The repeated interactions typical of deep social capital provide the connections necessary to fine tune the persistent dynamic capabilities associated with complementary augmentation and with breakthrough conversion. Deep social capital provides a level of trust and commitment to community (rather than individual) interests that encourage learning from experience and from unexpected surprises. This kind of learning is essential for a firm to benefit

from the iterations of fluid dynamic capabilities associated with innovative elaboration and radical improvisation.

Deep social capital also provides a support system that enables a firm to engage in unfamiliar and unconventional activities and to learn from failure. An ability to accommodate mistakes is a prerequisite for competence-destroying strategies since some failures are inevitable and even successful strategies are short-lived. Broad resource networks help firms figure out how best to use knowledge by offering an array of alternatives, and enable timely information exchange from increased connectivity. These factors can facilitate either competence-enhancing or competence-destroying capabilities. In addition, interpersonal networks facilitate the implementation of sustaining technologies by reducing turnover, encouraging collective goals, providing clear and transparent reward criteria needed to encourage collaboration, and forming a basis for reconciling differences (Inkpen & Tsang, 2005). Finally, shared responsibility and interdependence make it more likely that diverse perspectives will be heard and considered. This increases the likelihood that an effective strategic orientation will be selected.

Contextual resilience also influences complexity reduction and complexity absorption. Stable personal ties make it easier to develop norms and rules that govern complexity reduction activities (Inkpen & Tsang, 2005) and to construct the firm-specific language needed for efficient codification (Boisot & Child, 1999). Complexity reduction depends on complementary external and internal actions and deep social capital facilitates the search for common ground. The trust and social support resulting from deep social capital helps buffer the stress of complexity absorption. Moreover, resources secured through opportunistic exchanges with outside groups are a crucial factor enabling complexity absorption (Boisot & Child, 1999).

Resilience Capacity, Strategic Agility and Organization Performance under Challenging Conditions

Three important relationships between resilience capacity and strategic agility have been discussed in the previous sections. These proposed relationships are depicted in [Figure 2](#).

Insert Figure 2 about here

As indicated previously, resilience capacity and strategic agility reflect a number of common roots including the need for change and emergent behavior; creativity; intentional, purposeful decision making and action; and requirements to act despite uncertainty. Consequently, many of the building-block skills, resources and competencies that contribute to resilience capacity simultaneously help develop a firm's strategic agility. For example, creative problem solving routines, a degree of organizational slack, a clear sense of purpose, high levels of intellectual and social capital, and a propensity for iterative, double-loop learning contribute to both the development of strategic agility and the development of resilience capacity. Therefore, whether a firm considers its current need for resilience capacity to be extremely high or relatively modest, investments made to develop this capacity are quite fungible. Once the skills, resources, and competencies are in place they can be applied toward both resilience capacity and strategic agility allowing a firm to leverage its investments in a highly productive manner and to prepare for whatever the firm encounters. Proposition 1 asserts that common investments can be used to build resilience capacity and strategic agility.

Proposition #1: Many of the skills and competencies that contribute to resilience capacity also contribute to strategic agility; therefore, as a firm works to develop its resilience capacity it concurrently creates a foundation for agility.

There are numerous interactions among the three components of resilience capacity and a firm's ability to develop and select an effective strategic agility portfolio. For example, the empowering interpretation of the world and self-efficacy that accompanies cognitive resilience enables a firm to act on its decisions despite uncertainty and complexity. Similarly, a complex and varied action inventory increases a firm's absorptive capacity because it has developed expertise in a broader range of activities. This, in turn, increases the firm's ability to recognize value in new knowledge, which leads to enhanced cognitive resilience. The perspective and mental agility that stem from cognitive resilience provide a foundation for a firm to be able to learn from the consequences of the actions it undertakes within its complex action repertoire. Useful habits such as continuous dialog and the trust that results from deep social capital provide the raw material for constructing meaning and making difficult choices in ambiguous situations. Proposition 2 explains how the direct and indirect connections between the two constructs suggest that resilience capacity is not only the basis for restoring a firm's performance following a crisis, but can be a foundation for developing strategic agility as well:

Proposition #2: Firms with high levels of resilience capacity are more likely to have a more robust and diversified agility repertoire than is available to firms with little resilience capacity.

Strong resilience capacity creates a useful internal guidance system for organizational analysis and decision making. The outcomes of cognitive resilience enable a firm to more accurately diagnose environmental conditions and to select the most effective strategic posture in terms of building upon current sources of advantage or creating fundamentally different sources of advantage. As Eisenhardt and Martin (2000) point out, effective application of dynamic activities requires both ingredients and a recipe. The varied action repertoire that is the result of

the divergent forces of behavioral resilience provides the ingredients needed to apply strategic agility for competitive advantage. Simultaneously, the convergent forces contributing to behavioral resilience (useful habits and behavioral preparedness) often yield simple rules to guide organization choices under turbulent conditions. Simple rules provide an effective recipe for leveraging the new resource and capability ingredients that an organization produces. Finally contextual resilience offers fertile ground for using strategic agility to best advantage. Together these implications lead to three propositions regarding the ways in which resilience capacity moderates the relationship between strategic agility and organizational performance and helps translate preparation into realized success.

Proposition #3a: Resilience capacity strengthens the relationship between a firm's strategic agility and its performance by facilitating the selection of an appropriate form of agility for use given the existing environmental conditions and strategic orientation.

Proposition #3b: Resilience capacity strengthens the relationship between a firm's strategic agility and its performance by engaging those behaviors that are particularly useful for applying agility to a specific strategic orientation.

Proposition #3c: Resilience capacity strengthens the relationship between a firm's strategic agility and its performance by harnessing and capitalizing on networks and complementary external resources.

DISCUSSION AND CONCLUSIONS

Three themes underpin the ideas presented in this chapter. One, resilience capacity and strategic agility rely on complementary resources, skills, and competencies. Consequently, as a firm builds its resilience capacity it simultaneously develops a foundation for creating strategic agility. Two, strategic agility is a complex, varied construct that can take multiple forms. The

likelihood of achieving desirable competitive results increases if the particular form of agility is a solid match to the degree of market turbulence and to the nature of the shifts taking place. Three, resilience capacity can substantially contribute to a firm's ability to both develop a robust strategic agility portfolio and aid in the selection of the most appropriate form of strategic agility for a particular strategic condition. Therefore, resilience capacity can be viewed as a moderator of the relationship between a firm's strategic agility and subsequent firm performance.

One important contribution of this chapter is a better understanding of the relationship between resilience capacity and a firm's ability to develop the different forms of agility that enable it to thrive over time and under diverse conditions. A better understanding of this relationship suggests a number of interesting research directions. For example, while a variety of resources and competencies are likely to underpin both strategic agility and resilience capacity, it would be useful to examine which specific resources are universally useful in generating both attributes and which resources and competencies are more strongly associated with resilience capacity or specific forms of strategic agility. Similarly, it would be beneficial to identify specific resources and competencies that are essential for developing resilience capability and strategic agility and to distinguish crucial assets from those that are beneficial but discretionary. In addition, it would be useful to explore organizational processes that increase or decrease the versatility of resource and competency applications toward both objectives.

A second important contribution from this chapter is a detailed, specific and potentially measurable description of the components of resilience capacity. Definitions and descriptions that have appeared in prior research are often more vague, and have not discussed the component elements in depth. In this chapter, we articulate the crucial elements that underlie the path-

dependent process of creating resilience capacity and describe these factors in terms that can be more directly operationalized.

Third, this chapter explains the impact resilience capacity may have in strengthening the performance benefits of a robust strategic agility portfolio. Most research treats strategic agility as a uniform construct. We argue that different types of agility are needed for different competitive conditions. In the same way that the agility necessary for superior performance on a basketball court is fundamentally different from the agility needed to provide emergency care following a tornado, organizations need different forms of agility to take advantage of the different environmental situations and requirements they encounter. For example, organizations responding to relentless product improvements from aggressive competitors within their strategic group require a different form of agility than organizations competing with emerging rivals who are actively redefining the value proposition and introducing unfamiliar technologies. The routines, assumptions, and processes that enable a firm to effectively reconfigure its value proposition are quite different from the resources, beliefs, and approaches that enable it to be flexible in terms of the means it uses to achieve selected objectives. Resilience capacity enhances a firm's ability to select the most appropriate form of agility at a particular point in time. It also provides support that facilitates an organization's efforts to implement, reconfigure, integrate, or release resources towards a desired configuration. Additionally, resilience capacity provides increased access to important resources by fostering and building on strong network relationships. An understanding of the connections among resilience capacity, strategic agility, and competitive performance contributes to the growing literature on intangible assets.

There are also several useful managerial implications from this chapter. Most organizations operate under conditions of resource limitations or scarcity. Consequently

investing in resources and competencies that can be effectively leveraged because they can be combined easily with other complementary assets or because they can be applied flexibly for multiple purposes is positively correlated with organizational performance (Hamel & Prahalad, 1993). Recognition that certain types of resources and capabilities contribute to both resilience capacity and strategic agility can help firms develop improved investment strategies. For example, investments in human capital to develop employees who are adept learners, strong communicators, and skilled at creating strong interpersonal ties create a foundation for both resilience capacity and strategic agility. Similarly, developing organizational skills such as ‘ritualized ingenuity’ (Coutu, 2002), temporal pacing (Eisenhardt & Martin, 2000), using action to shape cognition (Weick, 1995), and counterintuitive thinking (Meyer, 1982) contribute to both organizational attributes. Even choices regarding physical resource allocations such as designing buildings with open architecture to facilitate interaction and information systems such as knowledge repositories to increase the stock of ideas available can enable a firm to develop assets that are more effectively leveraged.

Resilience capacity can be developed and managed. This implies that managers should build the capacity to effectively attend to, analyze, and understand environmental conditions by establishing a strong organizational purpose, and communicating this purpose throughout the firm to encourage decision making and action that is consistent with the firm’s core values. In addition, managers should ensure their firms develop the capacity to take successful joint action when they incorporate behavioral routines of resourcefulness and creativity while also identifying and maintaining useful habits in an effort to provide strategic agility. Third, managers should foster their firm’s capacity to utilize environmental analysis and implement behavioral routines by establishing settings that are conducive to inter- and intra-organizational

relationships. Together, these organizational relationships open access to skills, resources, and competencies useful for improved analysis and greater diversity in behavioral responses to uncertain and surprising conditions. Finally, managers should actively attend to their firm's resilience capacity levels in order to achieve greater strategic potential from their strategic agility.

In conclusion, change is an inevitable feature of organizational life. Sometimes change is mandated by powerful external agents. Sometimes change is the natural consequence of interdependence and interaction. Sometimes change is a deliberate strategic initiative designed to increase competitive advantage. Regardless of the causal trigger, organizations must be able to efficiently and effectively alter their resources, competencies, and business models in order to survive and thrive. When change is imposed on a firm, both resilience capacity and strategic agility are essential for selecting an effective responsive posture and for implementing the transformation. When change is an internal choice, strategic agility may initially take precedence, but it is likely that resilience capacity will play an important role in enabling the firm to make subsequent adjustments in response to the reactions of other firms in its marketplace. Resilience capacity is the basis for building sufficient diversity into a firm's strategic agility to enable a portfolio of options and outcomes. Strategic agility that is deep, broad, and varied has been argued to be the foundation of strategic supremacy (D'Aveni, 1999; Eisenhardt & Martin, 2000; Ferrier, 2001). In summary, if an organization wants to be able to recover from adversity, thrive amid turbulence and environmental jolts, and set an agenda that capitalizes on the inevitability of change, it must develop both resilience capacity to ensure restoration and rejuvenation, and strategic agility to prepare for the adjustments it will need to make when faced with the unpleasant surprises and/or unprecedented opportunities that

sometimes accompany relentless change. A better understanding of resilience capacity, strategic agility and the interactions between these two attributes will offer new ways to explain why some firms continue to outperform others.

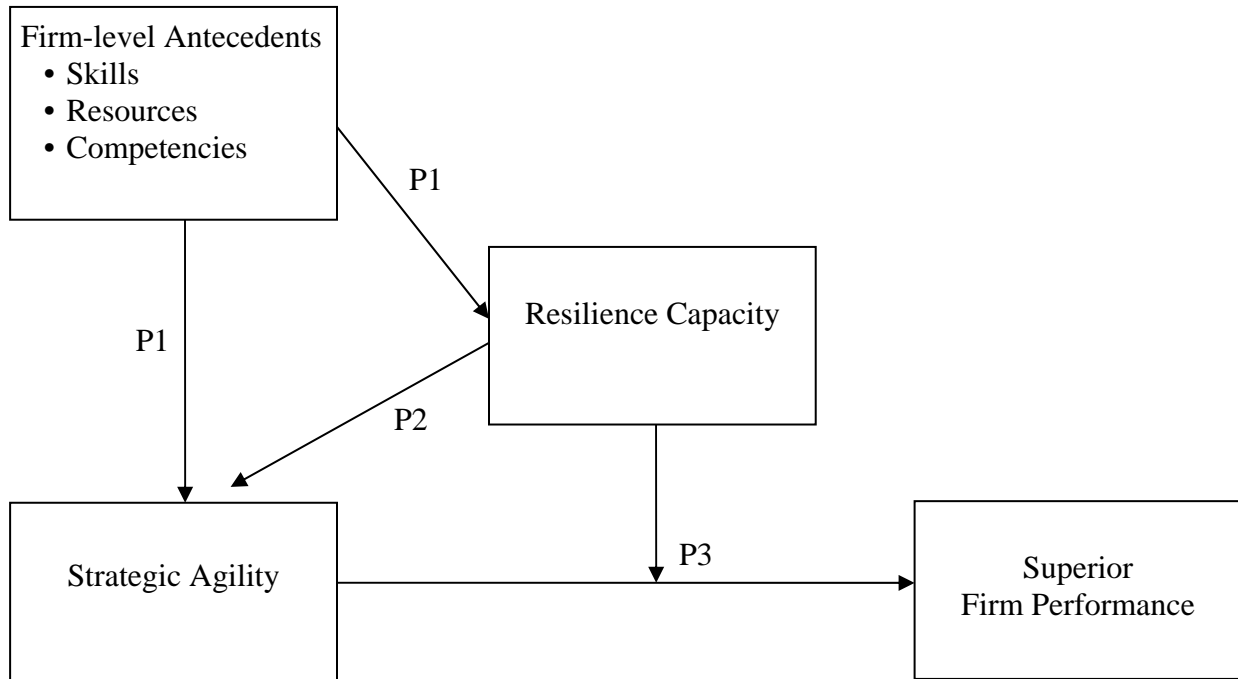
Table 1: Comparative Analysis of Resilience Capacity and Strategic Agility

Resilience Capacity	Strategic Agility
<p>Environmental Conditions</p> <ul style="list-style-type: none"> • Disruptive change • Surprise <p>Foundational Components</p> <ul style="list-style-type: none"> • Cognitive resilience • Behavioral resilience • Contextual resilience <p>Strategic Relevance/Usefulness</p> <ul style="list-style-type: none"> • Survival • Restoration • Transformation <p><i>Valuable capability for responding to unexpected disruptions across varying environmental and operating conditions</i></p>	<p>Environmental Conditions</p> <ul style="list-style-type: none"> • Continuous change <p>Foundational Components</p> <ul style="list-style-type: none"> • Flexible resource base • Learning aptitude • Decision making prowess • Resilience capacity <p>Strategic Relevance/Usefulness</p> <ul style="list-style-type: none"> • Responsiveness • Proactive adjustment • Change initiation • Strategic supremacy <p><i>Valuable capability for achieving fit between action alternatives, resource configurations, market conditions, and strategic intent</i></p>

Figure 1: Four Forms of Strategic Agility

		Market Conditions	
		Evolving Market	High-Velocity, Turbulent Market
Strategic Issue	Sustaining Technology and Complimentary Shifts	<p>Form 1 – Complementary Augmentation</p> <p>Persistent dynamic capability routines</p> <p>Complexity reduction</p> <p>Competence-enhancing strategy to continuously nurture and develop current strengths</p> <p><i>(same value proposition – same means)</i></p>	<p>Form 3 – Innovative Elaboration</p> <p>Fluid dynamic capability routines</p> <p>Complexity absorption</p> <p>Competence enhancing strategy that makes current strengths more fungible and more easily applied to alternate uses</p> <p><i>(same value proposition – different means)</i></p>
	Disruptive Technology and Discontinuous Shifts	<p>Form 2 – Breakthrough Conversion</p> <p>Persistent dynamic capability modules & subroutines</p> <p>Complexity reduction</p> <p>Competence-destroying strategy that periodically redefines the basis for value creation</p> <p><i>(new value proposition for emerging market – same means)</i></p>	<p>Form 4 – Radical Improvisation</p> <p>Fluid dynamic capability modules & subroutines</p> <p>Complexity absorption</p> <p>Competence-destroying strategy that increase variety, tempo, and unpredictability of strategic actions, business models, and value propositions</p> <p><i>(new value proposition for emerging market – new means)</i></p>

Figure 2: Interactions among Resilience Capacity, Strategic Agility and Organizational Performance



References

- Adler, P. S., & Kwon, S. 2000. Social Capital: The good, the bad, and the ugly. In E. L. Lesser (Ed.), *Knowledge and social capital: Foundations and applications*: 89-115. Boston: Butterworth-Heinemann.
- Amabile, T. M. 1988. A model of creativity and innovation in organizations. *Journal of Organizational Behavior*, 10: 123-168.
- Beinhocker, E. D. 1999. Robust adaptive strategies. *Sloan Management Review*, 40(3): 95-106.
- Benner, M. J., & Tushman, M. L. 2003. Exploitation, Exploration, and Process Management: The Productivity Dilemma Revisited. *Academy of Management Review*, 28: 238-256.
- Boisot, M., & Child, J. 1999. Organizations as adaptive systems in complex environments: The case of China. *Organization Science*, 10: 237-252.
- Brown, S., & Eisenhardt, K. M. 1997. The art of continuous change: Linking complexity theory and time-paced evolution in relentlessly shifting organizations. *Administrative Science Quarterly*, 42: 1-34.
- Christensen, C. M. 1997. *The innovator's dilemma*. New York: HarperCollins.
- Collins, J. C., & Porras, J. I. 1994. *Built to last: Successful habits of visionary companies*. New York: Harper Business.
- Coutu, D. L. 2002. How resilience works. *Harvard Business Review*, 80(5): 46-55.
- Crossan, M. M., Lane, H. W., & White, R. E. 1999. An organizational unlearning framework: From intuition to institution. *Academy of Management Review*, 23(3): 522-537.
- D'Aveni, R. 1999. Strategic supremacy through disruption and dominance. *Sloan Management Review*: 127-135.

- D'Aveni, R. A. 1994. *Hypercompetition: Managing the dynamics of strategic maneuvering*. New York: Free Press.
- Deevy, E. 1995. *Creating the Resilient Organization: A Rapid Response Management Program*. Englewood Cliffs, New Jersey: Prentice Hall.
- Doz, Y., & Kosonen, M. 2007. Strategic renewal: Building strategic agility, *International Strategic Management Society Conference*. San Diego, CA.
- Dutton, J. E., & Jackson, S. E. 1987. Categorizing strategic issues: Links to organizational action. *Academy of Management Review*, 12: 76-90.
- Eisenhardt, K. M., & Martin, J. 2000. Dynamic capabilities: What are they? *Strategic Management Journal*, 21: 1105-1121.
- Eisenhardt, K. M., & Tabrizi, B. N. 1995. Accelerating adaptive processes: Product innovation in the global computer industry. *Administrative Science Quarterly*, 40: 84-111.
- Ferrier, W. J. 2001. Navigating the competitive landscape: The drivers and consequences of competitive aggressiveness. *Academy of Management Journal*, 44(4): 858-877.
- Ferrier, W. J., Smith, K. G., & Grimm, C. M. 1999. The role of competitive action in market share erosion and industry dethronement: A study of industry leaders and challengers. *Academy of Management Journal*, 42: 372-388.
- Fiol, C. M., & Lyles, M. A. 1985. Organizational Learning. *Academy of Management Review*, 10(4): 803-813.
- Ghemawat, P., & del Sol, P. 1998. Commitment versus flexibility. *California Management Review*, 40(4): 26-42.
- Goldman, S. L., Nagel, R. N., & Preiss, K. 1995. *Agile competitors and virtual organizations*. New York: John Wiley.

- Grimm, C. M., Lee, H., & Smith, K. G. 2006. *Strategy as action: Competitive dynamics and competitive advantage*. Oxford: Oxford University Press.
- Hamel, G., & Prahalad, C. K. 1993. Strategy as stretch and leverage. *Harvard Business Review*, 71(2): 75-85.
- Hamel, G., & Prahalad, C. K. 1994. *Competing for the future*. Boston, MA: Harvard Business School Press.
- Hamel, G., & Valikangas, L. 2003. The quest for resilience. *Harvard Business Review*, 81(9): 52-63.
- Hammonds, K. H. 2002. The strategy of a fighter pilot. *Fast Company*, 59: 98-105.
- Inkpen, A. C., & Tsang, E. W. K. 2005. Social Capital, Networks, and Knowledge Transfer. *Academy of Management Review*, 30(1): 146-165.
- Ireland, R. D., Hitt, M. A., & Vaidyanath, D. 2002. Alliance management as a source of competitive advantage. *Journal of Management*, 28(3): 413-446.
- Jamrog, J. J., McCann, J. E., III, Lee, J. M., Morrison, C. L., Selsky, J. W., & Vickers, M. 2006. *Agility and Resilience in the Face of Continuous Change: A Global Study of Current Trends and Future Possibilities 2006-2016*. New York: American Management Association.
- Judge, W. Q., Fryxell, G. E., & Dooley, R. S. 1997. The new task for R&D management: Creating goal-directed communities for innovation. *California Management Review*, 39(3): 72-86.
- Kirton, M. 1976. Adaptors and innovators: A description and measure. *Journal of Applied Psychology*, 61(5): 622-629.

- Kogut, B., & Zander, U. 1996. What firms do? Coordination, identity, and learning. *Organization Science*, 7(5): 502-518.
- Lei, D., Hitt, M. A., & Bettis, R. 1996. Dynamic Core Competencies through Meta-Learning and Strategic Context. *Journal of Management*, 22(4): 549-569.
- Lengnick-Hall, C. A., & Beck, T. E. 2003. *Beyond bouncing back: The concept of organizational resilience*. Paper presented at the National Academy of Management meetings, Seattle, WA.
- Lengnick-Hall, C. A., & Beck, T. E. 2005. Adaptive fit versus robust transformation: How organizations respond to environmental change. *Journal of Management*, 31(5): 738-757.
- Lengnick-Hall, M. L., & Lengnick-Hall, C. A. 2003. *Human Resource Management in the Knowledge Economy: New challenges, new roles, new capabilities*. San Francisco, CA: Berrett-Koehler Publishers, Inc.
- Mallak, L. A. 1998a. Measuring resilience in health care provider organizations. *Health Manpower Management*, 24(4): 148-152.
- Mallak, L. A. 1998b. Putting organizational resilience to work. *Industrial Management*, 40(6): 8-13.
- March, J. G. 1991. Exploration and exploitation in organizational learning. *Organization Science*, 2(1): 71-87.
- March, J. G., & Levinthal, D. A. 1993. The myopia of learning. *Strategic Management Journal*, 14 (special issue): 95-112.
- McCann, J. 2004. Organizational Effectiveness: Changing Concepts for Changing Environments. *Human Resource Planning*, 27(1): 42-50.

- Meyer, A. D. 1982. Adapting to environmental jolts. *Administrative Science Quarterly*, 27: 515-537.
- Morgan, G. 1997. *Images of organization* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- O'Reilly, C. A. I., & Tushman, M. L. 2004. The ambidextrous organization. *Harvard Business Review*, 82(4): 74-81.
- Rindova, V. P., & Kotha, S. 2001. Continuous "Morphing": Competing Through Dynamic Capabilities, Form, and Function. *Academy of Management Journal*, 44(6): 1263-1280.
- Roth, A. V. 1996. Achieving Strategic Agility Through Economies of Knowledge. *Strategy & Leadership*, 24(2): 30-37.
- Senge, P. M., Roberts, C., Ross, R. B., Smith, B. J., & Kleiner, A. 1994. *The fifth discipline fieldbook: Strategies and tools for building a learning organization*. New York: Free Press.
- Sheremata, W. A. 2000. Centrifugal and centripetal forces in radical new product development under time pressure. *Academy of Management Review*, 25: 389-408.
- Simons, A. J. 1997. *The company they keep: Life inside the U.S. army special forces*. New York: Avon.
- Smith, K. G., Ferrier, W. J., & Grimm, C. M. 2001. King of the hill: Dethroning the industry leader. *Academy of Management Executive*, 15(2): 59-70.
- Sutcliffe, K. M., & Vogus, T. J. 2003. Organizing for resilience. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive Organizational Scholarship: Foundations of a New Discipline*: 94-110. San Francisco: Berrett-Koehler.

- Teece, D. J., Pisano, G., & Shuen, A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7): 509-533.
- Thomas, J. B., Clark, S. M., & Gioia, D. A. 1993. Strategic sensemaking and organizational performance: Linkages among scanning, interpretation, action, and outcomes. *Academy of Management Journal*, 36: 239-271.
- Thomas, L. G. I. 1996. The Two Faces of Competition: Dynamic Resourcefulness and the Hypercompetitive Shift. *Organization Science*, 7(3): 221-242.
- Tripsas, M., & Gavetti, G. 2000. Capabilities, cognition, and inertia: Evidence from digital imaging. *Strategic Management Journal*, 21: 1147-1161.
- Waterman, R. H. 1987. *The Renewal Factor*. New York: Bantam Books.
- Weick, K. E. 1993. The collapse of sensemaking in organizations: The Mann Gulch disaster. *Administrative Science Quarterly*, 38: 628-652.
- Weick, K. E. 1995. *Sensemaking in organizations*. Thousand Oaks, CA: Sage.
- Weick, K. E., & Sutcliffe, K. M. 2001. *Managing the unexpected: Assuring high performance in an age of complexity*. San Francisco: Jossey-Bass.
- Werner, E. E., & Smith, R. S. 2001. *Journeys from Childhood to Midlife: Risk, Resilience, and Recovery*. Ithaca, NY: Cornell University Press.
- Winter, S. G. 2003. Understanding dynamic capabilities. *Strategic Management Journal*, 24: 991-995.
- Zahra, S. A., & George, G. 2002. Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27(2): 185-203.