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The Backside of the Loop

Design Thinking as a Strategic Resource For Change

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Abstract

Strategy and organizational management are increasingly more sophisticated, but to survive and thrive in a competitive landscape is still an elusive skill set for organizations. Through a review of literature, this paper contains a brief history of strategy and the different schools of formation and formulation of strategy. It then contrasts two different organizational capabilities, strategic thinking and design thinking, in order to explain how they fit together and their value to organizations. By using two concepts, *adaptive cycles* and *organizational ecocycles*, to explore the life stages of organizations, this paper explains the necessity of creative management and design thinking as a resource for change. While business administration is used to stabilize and formalize organizational processes, design thinking can be used to disrupt old processes and empower emergent innovations. Finally, this paper argues that design thinking as a resource must be protected and handled strategically in order to be effective.

Keywords

Introduction

Organizations have become increasingly sophisticated in their strategy formation and processes to function. Yet as change has accelerated globally, adapting to and navigating through change have become dire imperatives for 21st century organizations. Design thinkers have embraced being changemakers for organizations, and have been advocating for their value strategically. Management expert Henry Mintzberg argues that both continuity and change need to be accepted within organizations (Moore, 2012). And although change has been talked about extensively, organizations struggle to adapt their strategies and dedicate their resources to prepare for existential crises and organizational renewal arising from them (Hurst, 1995; Martin 2009). In addition, the need for organizations to boost their capacity to innovate has become an intensely studied subject. For organizations to innovate continuously, many have recognized design thinking's potential to fulfill that need; because of that, organizations have incorporated design thinking and creative leadership into many management functions at multiple levels. Design thinking as a capability is not just found in designers, but facilitated and taught to non-designers in the organization. In the wake of this broad uptake of design thinking we wish to ask what does it mean to think like a designer? How is design thinking different from strategic thinking, which is also encouraged not just in the executive suite but throughout all levels of management? Does design thinking need and deserve support from the executive level of the organization, and why?

To answer those questions, I will first summarize and critically examine the history of corporate strategy and the perspectives on strategy formation. At the beginning of the 1960s, strategy formation was believed to be expert-oriented and singular, focused in the leader or chief executive. However, over time "emergent strategies" arising from lower levels of management have been recognized as inevitable organizational occurrences. A more sophisticated theory on strategy formation posits the idea of life cycles for organizations and the need for different kinds of strategy formation at different stages of the life cycle. These life cycles contain both stability and crisis; design thinking can be utilized as a resource to exploit these points of crises. The intent of this paper is to further argue for increasing an organization's capacity for change by reframing the debate around the organizational life cycle, while also recognizing how important and necessary traditional strategic management is to the stability and growth of the organization.

A Brief History of Corporate Strategy

Entire volumes have been written on the history of strategy, so I will offer a brief summary and provide strands of interest in relation to design thinking for later discussion in this paper. Strategy is used as an all-encompassing word that covers strategy formulation, strategic planning, and strategic management. Although Harvard Business School was established in 1908, the word strategy did not appear in the context of corporate management until the 1960s, used by Alfred D. Chandler Jr., who borrowed the word from the military. He specifically used the word in the context of long-term planning and implementation. In 1963, Bruce Henderson founded the Boston Consulting Group (BCG), specializing in strategy to differentiate companies from their competition (BCG Global, n.d.). In 1964, Peter Drucker published *Managing for Results*, a book dedicated to designing strategies, while a year later Igor Ansoff published *Corporate Strategy*. From then on, corporate strategy became a commonly understood term and an organizational necessity (Freedman, 2013).

Does this mean that business leaders did not strategize how to run their business before the term became familiar? No. A famous example is Alfred P. Sloan, president of General Motors (GM) from 1923–37 and then chairman from 1937–56. Sloan had to employ strategic thinking as GM's executive leader; just as a rose by any other name would smell as sweet. For Mintzberg, strategic thinking is a way of formulating strategies. From this perspective it is a "synthesizing process, utilizing intuition and creativity, whose outcome is an integrated perspective of the enterprise" (Liedtka, 1998, p. 121).

Strategies are formed in 5 different ways: intended (strategy as what we anticipate) or realized (strategy as what we did), and further delineated into deliberate (planned strategy), unrealized (abandoned strategy), or emergent (unintended strategy) (Mintzberg, Ahlstrand, & Lampel, 1998). The ideas on strategic thinking have evolved over time, with different methods of strategy making and different perspectives on how strategies occur. In the early literature of corporate strategy, prescriptive perspectives were the dominant ways of discussing strategy, which assumed strategy as intended, deliberate, and realized. Descriptive perspectives of strategy gained popularity, from the 1980s onward, as a way to illustrate how intended strategies were at risk of being unrealized, and how emergent strategies could be the actual cause of strategic movement for organizations.

Prescriptive Schools of Strategy Formation

In corporate culture, there was, and still is, a strong bias towards prescriptive methods of creating strategy: from the design, planning, and positioning schools of strategy formation (Mintzberg et al.,

1998). Especially with the rise of consulting groups in the 1960s, and with the chief executive officer seen as both leader and strategist, strategy as a top-down approach has been taught at business schools, and forms the basis of much of what we think of as strategy today. Below are simplified concepts of the prescriptive schools of strategy (adapted from Mintzberg et al., 1998).

From the design school, strategic formation is a structured and deliberate process by which the chief executive examines environmental conditions of the marketplace as well as the organization's internal capabilities and competencies in order to create strategic fit and unique perspective on strategy. This school is responsible for the popular SWOT (strengths, weaknesses, opportunities, and threats) model of strategy-making.

From the planning school, once a SWOT model is created, it then needs to be delineated into manageable objectives. Elaborate operational plans and budgets are made to further delineate the process to meet those objectives. The planning school focuses so much on how to *implement* strategy that it ignores how to *create* strategy.

From the positioning school, strategies are based on the marketplace in which the organization operates. By analyzing the economic and competitive landscape, one chooses from a set of predetermined strategies based on the position they occupy within the marketplace.

The prescriptive schools were the first schools of thought on strategy as leaders and their managers tried to create formulas for successful strategies based on deductive reasoning and quantitative analysis, and on the assumption that they could accurately forecast their future based on past experience. Bruce Henderson of BCG imagined the market as a closed system with other competitors tending toward zero sum equilibrium, wherein successful strategy disrupts the system and reorients the organization into a dominant position. This same idea of markets as a closed system was reflected in Michael Porter's positioning ideas on creating strategies based almost exclusively on the opportunities and threats from the environment (Porter, 1985). He identified only three worthwhile market positions: the market leader with low costs, the differentiator with products that are difficult to emulate, and the niche expert serving a portion of the market through specialization and quality. More recent theory interprets the market as an open, complex system with multiple dominant players and fluctuating customer segments (Freedman, 2013). In general, ideas from the prescriptive schools tend to operate best with the assumption of stable marketplaces and Taylorist views of the workforce (Morgan, 2006).

Descriptive Schools of Strategy Formation

The assumption of prescriptive schools is that the process of strategic management is linear. The strategy realized over time is top-down strategy, carefully formulated, planned, and implemented. It ignores bottom-up approaches to strategic thinking, and much of these established strategic practices ignored the complexities of human nature and of systems, both the internal organizational structure, and the external changing market dynamics (Freedman, 2013). The descriptive schools of strategy formation does not make this assumption, and instead attempts to answer the question of what occurs over time with realized strategies. Below are simplified concepts of the descriptive schools of strategy (adapted from Mintzberg et al., 1998).

From the entrepreneurial school, the vision of the leader is the strategy. Strategy formulation is an unarticulated mental process by the leader. The entrepreneur represents bringing *creative destruction* to the market with new and novel ideas (Schumpeter, 1947).

From the cognitive school, a conglomerate of ideas is explored based on the different ways we process information to create strategy. The cognitive school explores ideas on how choices, and therefore decisions, are made based on inputs received, and on the environment not as a static landscape that we move through but as a shifting landscape that changes as we act in it. Two dominant ideas have emerged: cognitive interpretation of information produces "objective" knowledge like a photograph, or cognitive interpretation of information produces "subjective" knowledge like a painting.

From the learning school, strategy formation is not so much a planned process, but an everyday occurrence at the lowest levels of the organization which is trickled upwards to provide direction. Here strategy is not formulated; it emerges based on a chain of strategic sensemaking from managers until it reaches the executive level.

From the power school, strategy formation is based on the negotiations and persuasiveness of different stakeholders. This school closely aligns with political strategy because it makes explicit the inherently human side of organizations. There are different factions of varying power within an organization and they all vie for scarce resources to accomplish their own strategic goals. This school also recognizes the external influences on an organization; suppliers, unions, competitors, investors, and governments can change or force certain strategies onto an organization.

From the culture school, strategic thinking is informed by and a product of the shared beliefs of the members of an organization. Strategy formation emerges from cultural beliefs and existing systems of resources already in place, and can only be changed through an upheaval of those

systems and cultures. A quote from Abraham Maslow sums up the cognitive biases that inform decision-making: "I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail" (1966).

From the environmental school, strategic thinking is not a formulation, but a continual response to environmental conditions. An organization's existence is entirely dependent on the forces exerted upon it by the environment. Borrowed from population ecology, organizations exist in market ecosystems with fixed carrying capacity and must acquiesce, compromise, avoid, defy, or manipulate their position to survive.

Finally, **from the configuration school**, strategy formation is determined by an organization's states of configuration and periods of transformation. This school is almost a meta-analysis of an organization's life cycle, with different schools of strategy applying themselves to different aspects of that life cycle. A state of configuration can be interrupted by a period of transformation; strategy formation then becomes an exercise of maintaining stability in a particular state, or of moving from one state to the next. Strategic thinking is a continuous activity.

The descriptive schools of strategy reflect a fundamental difference in perspective by introducing the social and cognitive aspects of strategy-making. The literature for these ideas proliferated in the 80s and 90s (Freedman, 2013). The main ideas from these schools are that "multiple actors at all levels" strategize, and that "micro-level decisions could influence the macro-level performance" (Freedman, 2013, p. 563). However, macro-level decisions are still important due to their reach and organizational impact on allocation of resources.

A Nuanced View

While contemporary writing has continued to focus on case studies and narratives to highlight new frameworks for strategy-making and strategy formation, Freedman critiques the narrative approach:

> The more academic business strategists tended to use their stories largely for illustration, selecting cases which made their points without always asking whether there were comparable cases where the outcomes had been quite different, or whether the same players would always get the same results by employing the approved strategic practices in slightly different circumstances. Sometimes the stories were not only selected carefully, but their telling was also highly contrived. (2013, p. 565)

And although there exists plenty of literature and case studies on strategy formation, there has been no formula that has guaranteed the long term success of an organization. This is evident if we examine the list of Fortune 500 firms from 1955 to 2017; only 60 of those 500 companies remain (Perry, 2017). If we examine the average tenure of companies, in 1964, the average tenure of a company on the S&P 500 was 33 years; as of 2018 that number has since dropped to 24 years (Perry, 2017). This means that companies are rising and falling at a faster rate than they were fifty-some years ago.

In contemporary strategic thinking, there are still many different ideas of how to formulate strategy. For example, Richard Rumelt has put forth the idea of "strategy dynamics" by examining the changes that arise within industries, and as well as the value denied by each change. Organizations should focus resources on taking advantage of those changes when they arise, which requires more short-term thinking and adaptive resilience in the organization. "The more dynamic the situation, the poorer your foresight will be" (Rumelt, 2011, p. 111). This type of thinking cross-cuts both the design school and the configuration school. Mintzberg et al. note at the end of their book,

> Strategy formation is judgmental designing, intuitive visioning, and emergent learning; it is about transformation as well as perpetuation; it must involve individual cognition and social interaction, cooperation as well as conflict; it has to include analyzing before and programming after as well as negotiating during; and all of this must be in response to what can be a demanding environment. (1998, p. 373)

It is a recognition of nuance, complexity, and uncertainty, and that different methods of strategic thinking are needed for different situations. Combining and re-combining methods of strategy formation should be encouraged as the needs of an organization and the demands of its market change.

A Comparison of Traits

Characteristics of Strategic Thinking

Strategy is not a simple thing to define, nor does it necessarily have simple characteristics. Loosely, Freedman defines strategy as "maintaining a balance between ends, ways, and means; about identifying objectives; and about the resources and methods available for meeting such objectives" (Freedman, 2013, p. XI). Strategy can refer to both the actions taken towards an objective, and "the processes by which actions are decided and implemented" (Chaffee, 1985, p. 89). For the purposes of this paper, we will separate those two concepts and refer to the actions taken as strategy and the

processes determining those actions as strategic thinking, while acknowledging that the separation of those concepts is tenuous at best (Mintzberg et al., 1998).

There are some commonalities in corporate strategy literature on *what* strategy means, on which Ellen Chaffee has elucidated. Strategy concerns both internal organization and external environment. Strategy is nonroutine and nonrepetitive due to the ever evolving, novel circumstances challenging an organization. In other words, it defies refinement as a heuristic, and certainly has avoided becoming algorithmic, if we use Roger Martin's concept of the funnel of knowledge (2009). Strategy affects the welfare of an organization; either good or bad. Intended, emergent, and realized strategies are not always one and the same. Strategy exists on different hierarchical levels in an organization. And finally, strategy requires both analytical and conceptual exercises.

Similarly, strategic thinking has had various definitions and ideas on *how* strategy is approached. Based on the cognitive school of strategy formation, strategic thinking is not just a deliberate process for the formulation of strategy, but a lens for making particular decisions out of a set of possible decisions, even at the lowest levels of the organization. In addition to identifying qualities of synthesis and intuition, Jeanne Liedtka (1998) outlines some common threads to define the characteristics of strategic thinking:

A strategic thinker must have a systems perspective. They require an understanding of the complex ecosystem of the context in which one operates (Moore, 1993), while also recognizing the interrelationships forming the internal structures of an organization (Senge, 1992). The strategist must cut across their organization and also look at the macro- and micro-systems in place, as well as their own personal position within those systems.

A strategic thinker must have an intent. Strategic intent contains a sense of direction, a sense of discovery, and a sense of destiny (Hamel & Prahalad, 1989). Strategic thinking also requires long term focus and an ability to resist distraction in order to maintain strategic intent.

A strategic thinker must have intelligent opportunism. Having plans that are too concrete runs the risk of being unable to adapt an organization to better fit any changes in the environment (Burgelman, 1991). On the other hand, having opportunism allows the strategist to not only recognize but react to unfolding situations. Therefore, intent must be continuous and systemic as new challenges, needs, and aspirations unfold (Stacey, 1992).

A strategic thinker must think through time. Originally, strategic fit was about matching current capabilities to current opportunities. Strategic intent seeks to bridge a gap between present reality

and future possibilities (Hamel & Prahalad, 1989). In addition, a strategist must account for the past historical and cultural contexts of an organization (note the connection to the cultural school), while looking at present organizational capabilities and strategic intent for the future (Handy, 1994).

A strategic thinker must be hypothesis-driven. Strategic thinking has an iterative approach that combines both creative and intuitive thought processes with analytical and critical ones (Liedtka, 1998). Generation of hypotheses requires creative leaps of abductive reasoning ("What if…") while testing hypotheses ("If… Then…"); analyzing the results requires deductive and inductive reasoning. I will explore this more when we speak of design thinking, which also follows the scientific method (Dubberly Design Office, 2009).

These characteristics are interrelated to bolster and strengthen other characteristics. Peter Senge's position, which is referenced by both Liedtka and Mintzberg, is that strategic thinking is a learning process. It requires the strategist to have the ability to inquire about other perspectives, not just to advocate for one's own perspective. Although I have decoupled strategy from strategic thinking to help define and expand the terms, in practice there is no such separation. Strategy is made from thinking strategically when multiple options exist under complex circumstances, even when that thinking is either explicit and formal, or intuitive and unconscious. This is what separates a strategy from a plan.

Characteristics of Design Thinking

Design is a word used to describe many things, in many different ways. A fashion designer, a systems engineer, and a UI designer all "design" things and yet each has different ways of designing and produces different outputs. Buchanan identifies four main areas of design: symbolic and visual communications, material objects, activities and organized services, and complex systems or environments for living, working, playing, and learning (1992). This list illustrates the *outcomes* of design, but not the *thinking* of design. The concept of design thinking has shifted and changed throughout the last few decades. In 1982, Nigel Cross adapted the term *satisficing*, from Herbert Simon's *The Sciences of the Artificial* (1969), to design as a "process of 'satisficing' rather than optimising; producing any one of what might well be a large range of satisfactory solutions rather than attempting to generate the one hypothetically-optimum solution" (p. 224). More recently, from Van Alstyne and Logan, "design refers to an intentional, human, creative process," in contrast with emergence which the authors see as creative but not intentional (2007, p. 121).

While there is a lot of literature on *what* design thinking involves, and the methodologies it likes to use, here is a compilation from various authors on *how* to think like a designer.

A design thinker must be both hypothesis-driven, *and* solution-oriented. Design thinking relies on cognitive processes associated with the scientific method, in that it explores hypotheses through abductive reasoning and iterates on solving the problem. However, Nigel Cross has posited that "scientists problem-solve by analysis, whereas designers problem-solve by synthesis" (1982, p. 223). The analytical approach attempts to find possible solutions and systematically explores each one to better understand the hypothesis and context in which it operates, the synthetical approach biases toward finding a range of probable solutions and systematically eliminates each one to find the most effective solution for the hypothesis and context in which it operates. A design thinker uses and mixes both abductive reasoning and deductive reasoning, a particular combination of skills that Martin places at the centre of *integrative thinking* (2009).

A design thinker must be recursive. Design thinking is generally not linear, and while problem solving in design requires an iterative approach, it is also recursive (Dubberly Design Office, 2009). One of its main tools, rapid prototyping, draws on an iterative approach, but it is intrinsically tied with creation as well. Design thinkers formulate designs, create rough representations to test viability, then formulate other designs, etc. However, complex problems—in particular that class defined as *wicked problems*—are unique and generally have no beginning or end (Rittel & Weber, 1973, Buchanan, 1992). They exist across multiple systemic boundaries. Any formulated solution changes the context that contains the original hypothesis and invalidates that hypothesis as it is "solved." Any formulation of a solution requires re-formulation of the problem. This correlates to strategic thinking based on the need for systems thinking and time-based thinking.

A design thinker must be particular. Design thinking is concerned with hypothesis validation *and* effective application. By finding solutions that are context- and hypothesis-specific, design formulations are inherently unique and irreplicable for other contexts and hypotheses; solutions are project-based (Brown, 2009). In addition, two particular concepts constrain designers: the ideas of *bounded rationality*, which Herbert Simon describes as "the limits upon the ability of human beings to adapt optimally, or even satisfactorily, to complex environments" (1989, p. 12), and *sensemaking*, which is interpreting data through a particular perspective (Klein, Moon, & Hoffman, 2006). Design thinkers are human; they are both empowered by, and limited in, their knowledge and their perspectives. Two people approaching the same problem will likely solve it in different ways due to a difference in how and what data they gather, and in how they interpret that data.

A design thinker must be concerned with novelty. Design thinking attempts to find new solutions to problems. If each solution in the past has been a particular solution to a problem, then a new context will change the problem, and will require a new solution. Martin describes three stages in the knowledge funnel: *mysteries*—"things in our environment that excite our curiosity but elude our

understanding" (2009, p. 11), *heuristics*—"open-ended prompts to think or act in a particular way" (p. 11), and *algorithms*—"performance [guarantees] that come along with using them" (p. 11). If design thinking is concerned with wicked problems, which are unique, then each presentation of a problem requires designers to go back up the knowledge funnel for potential solutions. This is why design thinking is generally associated with innovation—if organizations provide opportunities and contexts for mystery-seeking behaviours to flourish, then they also provide possibilities for innovations to emerge (Van Alstyne & Logan, 2007).

A design thinker must be empathetic. Design thinking is truly meant to solve human-centred problems; as Tim Brown puts it, solutions must be desirable. Liedtka & Ogilvie explain further: "Design thinking assumes the primacy of personal experience. … Decisions in this world are seen as driven by emotion more than logic; desire is a far more powerful motivator than goals" (2011, p. 10). Many of design thinking's methodologies—observation, collaboration, and visualization, as examples—are popular because they allow design thinkers to frame and reframe their perspectives and to reduce bounded rationality to create effective solutions (Lockwood, 2010). Addressing an argument put forth by Natasha Iskander that challenges the top-down approach to designing solutions (2018), design thinkers are increasingly becoming less craft-based designers and more design facilitators to the stakeholders involved (Jones, 2018). The concept of everyone in an organization having strategic thinking capabilities seems relevant here as a comparison; can we teach all stakeholders involved to have design thinking capabilities?

A design thinker must be strategic. Design thinking must produce something feasible, which Lockwood describes as "anticipating what new business activities may be required … as well as the resources it may require and the competitive landscape in which [a new offering] will appear" (2010, p. XII). This means a designer thinker must also be a good strategic thinker, with all of the characteristics outlined in the last section.

These design thinking characteristics are interrelated. We can also see more clearly how strategic and design thinking intersect now. They are both integrative thinking processes, and both require synthesizing knowledge to accomplish their goals. These two processes have vastly different historical backgrounds however, and by understanding how they were shaped, we can see how they diverge. Strategic thinking is thinking about how to accomplish a goal in which the solution is not guaranteed, and the goal is consistently out-of-reach and in need of continual reframing. Design thinking is thinking about how to solve a human-centred problem, one that is constantly changing and also needs continual reframing. Strategy has historically been forming a vision; design has

historically been solving problems preventing that vision. So I now ask the question; where does design thinking fit within strategy formation?

Design Thinking as a Resource for Change

The Organization's Life Cycle

Coming back to the configuration school of strategy formation, the idea of organizations experiencing life cycles has been put forth by David Hurst (1995). Hurst illustrated a diagram on the organizational ecocycle, which is very similar to C. S. Holling's *adaptive cycle*, a concept to explain ecosystems and social-ecological systems (1986). See the two figures below and on the next page for comparison.
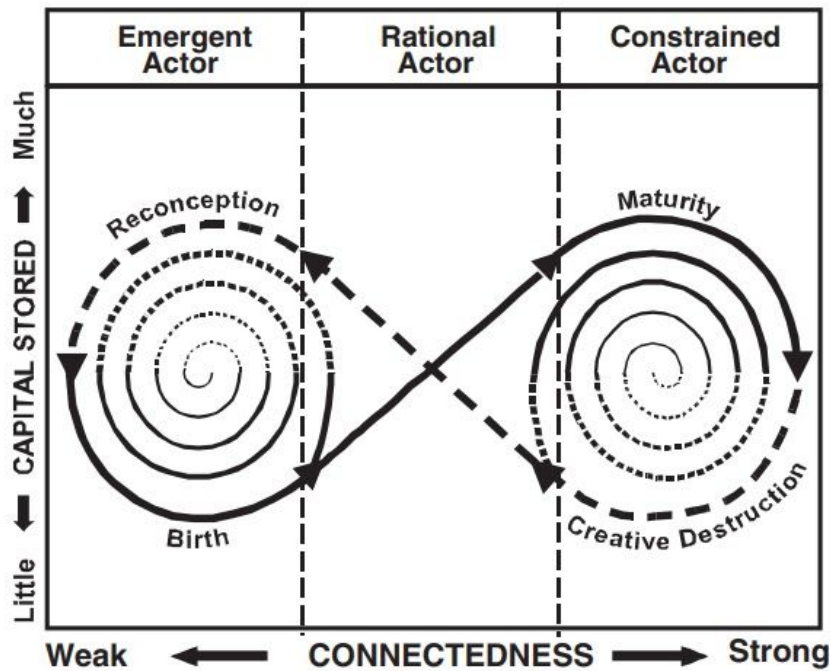

Figure 1. The organizational ecocycle. The spirals indicate common traps: the failure trap on the left, and the success trap on the right From "Strategic Renewal as Improvisation: Reconciling The Tension Between Exploration and Exploitation," by Crossan, M. M. & Hurst, D. K. Advances in Strategic Management, *23, pp. 273-298. Copyright © 2006 by Emerald Publishing Limited. Reproduced by permission of Emerald Publishing Limited, Bingley, UK.*
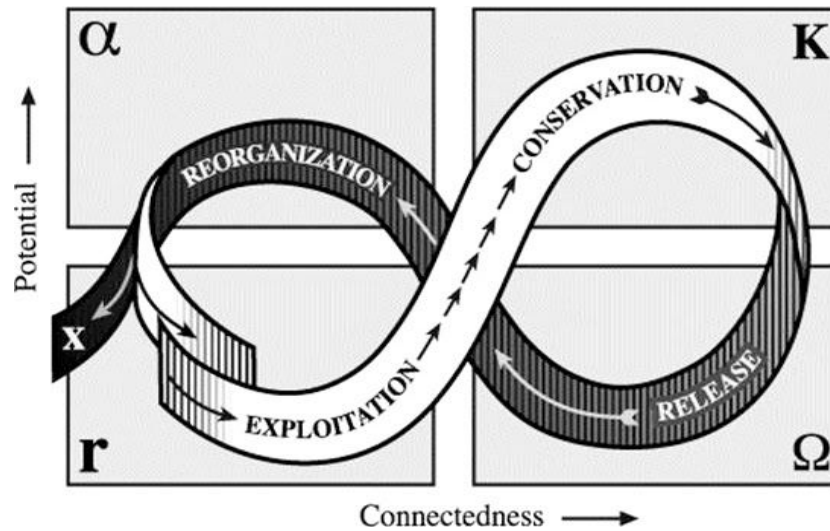
Figure 2. The adaptive cycle, an ecological concept to describe the evolution of an ecosystem. Adaptive cycles are nested within one another; "X" marks the point where upper cycles can change lower cycles. Adapted from Panarchy *edited by Gunderson, L.H. & Holling, C.S. p. 34. Copyright © 2002 Island Press. Reproduced by permission of Island Press, Washington, DC, USA. https://islandpress.org/books/panarchy*

Both loops are similarly showing periods of conservation and stability, as well as creative destruction and periods of upheaval as they reorganize. The "front" loop in Holling's adaptive cycle, from exploitation to conservation based on potential and connectedness is similarly construed in Hurst's diagram as birth to maturity based on capital stored and connectedness. This can be summarized as business administration:

> The exploitation of knowledge within a given stage—that is running an existing
> heuristic, gently honing and refining it, but not seeking to move knowledge to an
> algorithm or running an existing algorithm and not seeking to explore the next
> mystery—is the administration of business. (Martin, 2009, p. 19)

Roger Martin posits that businesses who only exploit their original business premise, even if they last longer than the average startup, will eventually expire if they do not have validation-seeking behaviour built into their organization (2009).

Businesses can be stable for years, such as a corner store grocer, but if a crisis arises, creative leadership is needed as the business loses its connectedness and potential. For example, at the beginning of the COVID-19 pandemic, businesses were shutting down as lockdowns were imposed globally, and learning how to adapt quickly to the new and enduring crisis; food and hospitality businesses pivoted into food delivery and partnerships with each other, and most corporate offices

shut down and had to put infrastructure in place to give all of their employees the ability to work remotely full-time (Craven, Liu, Wilson, & Mysore, 2020).

Business administration is generally seen as being able to provide reliability to an organization's processes (Martin, 2009). This is extremely important when taking an innovation, and exploiting it through supporting functions that help scale the business upwards. For example, say you invent a new vacuum cleaner; you will need experts who can set up manufacturing capabilities, sales, marketing, payment systems, accounting, legal counsel, etc. to bring it to a mass market. Reliability means reducing variability in existing processes, at the risk of becoming more fragile to cataclysmic events or when those processes are no longer relevant.

However, at the leadership level, it's been shown that past successes have little to no empirical evidence on performance at a new company (Rasmussen & Haonan, 2019). As Christensen and Raynor mention in *The Innovator's Solution*,

> It is not as important that managers have succeeded with the problem as it is for them to have wrestled with it and developed the skills and intuition for how to meet the challenge successfully the next time around. One problem with predicting future success from past success is that managers can succeed for reasons not of their own making—we often learn far more from our failures than our successes. (2013, p. 180)

So if managers who were reliable in administering processes are not able to navigate a circumstance where past success has no bearing on the future, who then, should lead a company through a crisis as change inevitably occurs and requires adaptation?

Design Thinking as Creative Management

A good strategist will recognize the need for people who fail far more often than succeed, as well as being adept at tackling particular, wicked problems that are solved and resolved as the situation changes. Implementing design thinking throughout the organization creates the opportunity for innovation to emerge. As a resource, design thinking rejects business administration and the race towards reliable processes and cultures that propagate reliability.

Businesses are already implementing design thinking within organizations; McKinsey reports that from 2015 to 2020, the number of design leadership roles has doubled. Yet only 10% of design leaders felt they were being utilized to their full potential (Dalrymple & Sheppard, 2020). McKinsey identifies two main causes for this: CEOs lack clarity in fully understanding design thinking capabilities, and what's more they do not fully embrace design thinking to help frame strategic

initiatives—despite the evidence that strategies can be *designed.* How can design thinking be fully embraced within organizations? Holling's concept of *adaptive cycles* could provide a solution. Adaptive cycles exist from micro- to macro-scales, with smaller, unit-sized adaptive cycles happening faster than larger, organizational adaptive cycles, which are, in turn, happening faster than industry-wide adaptive cycles.

Emergence happens when smaller adaptive cycles reach a crisis and fundamentally disrupt the adaptive cycle above it. As an example of smaller systems disrupting larger ones, imagine a scenario wherein a junior IT technician is doing routine updates to the company's servers and accidentally deletes critical information during the update. This would cause a crisis reaching up the chain of command very quickly, requiring leadership to navigate the crisis and to reallocate resources to fix the mistake; it would *also* likely lead managers and senior IT experts to rethink their processes such that the mistake will not reoccur. The entire organization adapts to the unforeseen problem and new protocols emerge on the other side for propagation.

The learning school of strategy formation can be thought of as emerging from the smaller adaptive cycles to "revolt" and disrupt the larger ones (Holling, 2001, p. 398). On the other hand, the culture school of strategy can be thought of as imposing the values of the organization down to the lower cycles through a process of "remembering" when choices (in Figure 1, the point at which *reconception* merges with *birth*) need to be made after experimenting with new solutions. The power school of strategy formation can be thought of as preventing higher and lower adaptive cycles from affecting each other. How often do we hear the story of a leader being too stubborn to change strategic course despite the organization's need to pivot? Or how ideas are quashed from lower levels because they don't fit with management's modus operandi? Mintzberg et al. argue that transformational change cannot just have vision and culture change; every level below those two overarching concepts such as strategic positions, organizational structures, products, and people also need to change (1998). Proclamations from leadership also do nothing if smaller adaptive cycles are not put into crisis and forced to change.

Christensen and Raynor discuss how "disruptive innovations occur so intermittently that no company has a practiced process for handling them" (2013, p. 190). This means that if design thinking leaders, as *creative leadership* (Hurst, 2012), were to be fully integrated within an organization, they need to have political leverage and strategic power within the organization to re-imagine the organization during crises—from smaller ones like a product no longer fulfilling the needs of its customers, to bigger ones like new disruptive technology changing the entire industry. They need financial resources to create project-based teams that can force smaller disruptions throughout the organization such as re-designing processes, or facilitating design thinking

workshops for other teams within the organization to reframe their problems. In addition, they need to be independent enough within an organization to protect disruptive ideas despite their perceived threat to the sustaining aspects of the organization. Different kinds of ideas need different processes to handle them. This is not to say this is easy; Martin makes it clear that "financial planning and reward systems…are dramatically tilted toward running an existing heuristic or algorithm and must be modified in significant ways to create a balance between reliability [business administration] and validity [design thinking]" (2009, p. 122). Creative leadership should be responsible for disruptive ideas, whereas traditional management can implement sustaining ideas (Christensen & Raynor, 2003).

Conclusion

We've seen how strategic thinking and design thinking are similar, but also distinctly different and need to be used concurrently to formulate and overcome challenges. By taking a holistic view of organizational adaptive cycles, design thinking can help organizations strategically manage "sustainable development" (Holling, 2001, p. 399). The need for political clout to support creative leadership is apparent; large organizations overwhelmingly favour reliable improvements to the business due to a bias towards analytical thinking and measuring financial returns in the short-term (Martin, 2009; Christensen & Raynor, 2013). In the same way pilots are trained extensively to handle emergency situations despite the fact that there are very few emergencies on flights (Greenspan, 2017), organizations ought to invest in resources that will handle crises. In this way we create space for, and protect, the force that Christensen first described as *disruptive technology* (1997) and later characterized as *empowering innovation* (2013). By taking this path we are enabled not just to have creative leadership at the executive level, but to integrate design thinking within all levels of the organization.

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