

A Model of Dynamic Strategy-Making

The Yin-Yang Process of Top-Down and Bottom-Up Mechanisms

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**A MODEL OF DYNAMIC STRATEGY-MAKING:
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**A Model of Dynamic Strategy-Making:
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Abstract

The organizational capacity to cope with unexpected changes remains a fundamental challenge in strategy as global competition and technological innovation increase environmental uncertainty. Conventional strategy-making is often conceived as a sequential linear process where we see it as a non-linear interaction between top-down and bottom-up mechanisms dealing with multiple actions taken throughout the organization over time. It is driven by intension but with a flexible balance between centralized (planned) and decentralized (spontaneous) activities. We adopt the principles of complementary Yin-Yang elements and Zhong Yong balance to explain the time bound interaction between these opposing yet complementary strategy-making mechanisms where tradeoffs and synergies are balanced across hierarchical levels.

Keywords: Adaptation; Responsiveness; Top-down; Bottom-up; Uncertainty; Yin-Yang; Zhong Yong.

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Introduction

The ability to renew strategy and adapt the organization to dynamic environmental conditions has been a central tenet of management studies for decades as businesses somehow must adjust to accommodate the changing competitive reality. In the traditional strategic management paradigm corporate executives develop strategy that fits the environment and design an organizational structure to match it (e.g., Andrews, 1971). So strategy and structure must be adapted when conditions change and executive management essentially deals with the ability to cope with change and adapt the corporate strategy (Hofer and Schendel, 1978; Chakravarthy, 1982). The challenge has not diminished as environments are becoming highly turbulent with frequent technological shifts that challenge existing competitive advantages (McGrath, 2013). Business conditions are increasingly uncertain and unpredictable, which calls for effective strategic response capabilities (Bettis and Hitt, 1995), adaptive capabilities (Volderba, 1996) and dynamic capabilities (Teece, 2007) to facilitate adaptation.

Yet, we do not really know what form these capabilities take and how organizations can use them effectively in the complex strategy-making processes. The firm should somehow be able to anticipate environmental changes and adapt activities accordingly (Chakravarthy, 1982). Organization theorists suggest that informal decentralized organic structures are better at accommodating change compared to formal central mechanistic structures. But it is not that simple because strategic choices are made both in organic and mechanistic structures. Strategic decisions are often conceived as central capital budgeting commitments derived from comprehensive analytical planning considerations in contrast to more spontaneous decentralized decisions made in response to emerging events (Mintzberg, 1994). We know that many capital budgeting decisions below given thresholds are delegated to lower-level managers and all these decisions influence the way business and strategy evolves (Bower, 2005). However, there is no clear theory to explain the underlying dynamic between the contradictory nature of planned and emerging strategies that rather spurred a heated debate between academic giants (Ansoff, 1991; Mintzberg, 1990).

Strategic management seems to recognize that central and decentralized processes coexist as expressed by the concepts of intended and emergent strategies (Mintzberg, 1978; Mintzberg and Waters, 1985), middle-up-down strategy (Nonaka, 1994), induced and autonomous strategies (Burgelman, 1996; Burgelman and Grove, 2007). Hence, the evidence seems to support that formalized and incremental strategy modes coexist (e.g., Brews and Hunt, 1999) and somehow complement each other but provides no deeper understanding of the underlying dynamic, which is often conceived as linear impact-response process, e.g., exemplified by dynamic capabilities following sequential steps of sensing, seizing and restructuring (Teece, 2007).

We contend that the key to understand dynamic strategy-making lies in ongoing interaction between different strategy-making modes without optimal equilibria but continuous information exchanges across different hierarchical levels and time horizons where everything is in flux. We develop a theoretical model to understand the underlying dynamic that integrates the seemingly contradictory strategy-modes by adopting the thinking behind the Chinese balancing views of Yin-Yang and Zhong Yong. We use it as inspiration to reconcile paradoxical opposites, such as, central versus decentralized, forward-looking versus retrospective, top versus bottom, long-cycled versus short-cycled, etc. where these elements represent contradictory yet complementary mechanisms (Li, 2014).

The strategy-making process

The dynamic process of making strategy has received notable little attention, although the concept is considered essential for the sustained success of organizations. Strategy scholars often refer to strategy-making, but the concept is rarely defined. Research that refers to strategy-making frequently uses the term to present examples of organizational change processes. Agarwal and Helfat (2009: 281) describe the strategic renewal concept meticulously and suggest that the underlying strategy formation process has several important characteristics. First, the process relates to organizational factors with a potential to substantially affect the long-term prospects of the corporate business activities. Second, it is comprised by the formation process, the content and the outcome of the process. Third, the process encompasses the refreshment or replacement of exiting organizational attributes. Fourth, this replacement lays a foundation for future growth and development. Based on such characteristics, Argawal and Helfat (2009: 282) define strategic renewal as *“the process, content, and outcome of refreshment or replacement of attributes of an organization that have*

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the potential to substantially affect its long-term prospects". In line with this, Barr, Stimpert and Huff (1992: 15) conclude that "process hinges not so much on noticing new conditions, but on being able to link environmental change to corporate strategy and to modify that linkage over time". That is, strategy is formed over time in a time-linked interaction between environmental changes and corporate responses.

The implied learning process has been analyzed to understand capability and knowledge creation (Nonaka, 1994), organizational memory (Casey, 1997) and mental cognitive changes (Barr et al., 1992). However, the extant literature has failed to address the fundamental tension between interacting strategy-modes focused on exploration and exploitation where how firms develop new competencies while exploiting existing ones. We attempt to address this by examining the dual strategy-making paradox and develop a model to balance creation and adaptation.

The dual strategy-making paradox

The conventional strategic management model is conceived as longitudinal sequences of analytics-based planning activities, organizational execution, and performance monitoring repeated over relatively long time-intervals typically within the twelve-month time span of the annual budget. It consists of comprehensive environmental analyses drawing strategic trajectories and outlining initiatives for subsequent implementation (e.g., Anthony, 1965; Richards, 1986; Ansoff, 1988). This applies to the design and planning schools described by Mintzberg (1990) where deviations between planned and realized outcomes can be assessed through (diagnostic) strategic controls (Simons, 1996, 2000). This process may foster learning about the changing environment although often with delayed and uncertain feedback (e.g., Goold and Quinn, 1990, 1993). If the environment changes frequently and in unexpected ways, the corrective actions may be misinformed and come too late.

In turbulent environments organizations are confronted with vast amounts of information involving a multiplicity of individual knowledge-based insights (Child and McGrath, 2001). The solution is to move decisions closer to the location of relevant information and individual expertise (Galbraith, 1994; Volberda, 1996). However, central strategy creation, or planning, and decentralized adaptive strategic actions have been seen as contradictory approaches. On the one hand planning is seen as necessary to comprehend the dynamic environment (Andrews, 1980; Hofer and Schendel, 1978). On the other hand, dynamic environments make the planned actions outdated and expose the firm to take impertinent actions (e.g., Mintzberg, 1978; 1990). Ansoff (1988) and others argue that strategic planning can better conceive of the changing environment with the aim of developing better strategies and fostering innovative solutions. Mintzberg (1994) argues that strategies are partially formed through informal learning and individual visions where formal planning fails. Since major environmental changes cannot be accurately predicted, a highly formalized planning process can become inbred and succumb to stale thinking.

The Yin-Yang and Zhong Yong balancing principle

The notions of Yin-Yang and Zhong Yong are at the heart of traditional Chinese philosophy. According to the Yin-Yang philosophy, the Yin element, such as, stability, exploitation, defensive, negative, etc., and the Yang element, such as, change, exploration, offensive, positive, etc., constitute a special pair that has simultaneous contradictory and complementary relationships between the two elements or forces. The contradictory relationship means there are trade-offs between the two elements, whereas the complementary relationship means there are synergies between the two that can be enhanced. Due to the paradoxical nature of Yin-Yang it has inspired and symbolized analyses of paradox (e.g., Chen, 2002; Lewis, 2000; Smith and Lewis, 2011; Li, 2014).

As Yin and Yang coexist there is simultaneous contradiction and complementarity in their relationship at any time. Yin and Yang are always contradictory but they are also complementary because each of the two will have a positive spillover effect on the other when they co-exist and when one is crowded out, or excluded, the other will ultimately suffer and become suboptimal. Hence, it is imperative to balance the Yin-Yang forces to gain a harmonious relationship between the two, where the contradiction, or conflict, between the two is minimized while the complementarity, or synergy, between them is maximized. This balancing view corresponds to the Chinese Zhong Yong philosophy. The essence of the Zhong Yong balance is that being excessive in a certain direction is as bad as being deficient in that direction. Due to the prescription of avoiding extreme, excessive or deficient, positions, the Zhong Yong solution is different from the

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ambidexterity approach to paradox (Benner and Tushman, 2003; O'Reilly and Tushman, 2004) as Zhong Yong balance requires that the Yin-Yang elements are fully integrated. Zhong Yong can prescribe solutions with different ratios between the Yin and Yang elements under different conditions and points in time. Zhong Yong solutions can prescribe adjustments to the ratio between the Yin-Yang elements according to specific environmental contingencies. The Yin-Yang philosophy is about how to balance contradictory yet complementary elements by dynamically adjusting the ratios between the Yin and Yang elements. Hence, centralized and decentralized processes can be dominant or subordinate under different circumstances where the weight may depend on the stage of the interactive strategy process, e.g., planning and budgeting, budget follow-up, short-term responses, strategic control, etc.

An interactive dynamic system

Even though complementary contraries by definition are opposed to each other, they can coexist and be mutually dependent. For example, central strategic plans and the thinking that goes into their making will change periodically as well as decentralized strategic actions change over time but at different organizational levels and with different temporal scopes. Poole and Van de Ven (1989) suggest that paradoxical conditions arise from such spatial and temporal separation where we interactive processes can explain how they complement each other and drive dynamic change. We note that in the dual strategy-making paradox one process is top management driven whereas the other is anchored around operational activities at the bottom of the organization and that the first process is long-cycled proactive (planning) where the latter is short-cycled and reactive (emerging) as a Yin-Yang pair. These two strategy-making modes are distinct in terms of their anchoring at different organizational levels and adopting different time horizons. Hence, it is argued that central top management driven long-cycled forward-looking strategy creation processes together with decentralized short-cycled strategic adaptation processes triggered by operational managers based on environmental stimuli can form a dynamic adaptive system (Andersen, 2013). The preceding arguments suggest the following proposition:

Proposition 1: The combination of long-cycled forward-looking planning processes at the top and short-cycled strategic responses at the bottom of the organization forms a dynamic adaptive system that can drive persistent and sustainable performance outcomes.

Lewis (2000) argues that paradoxical tensions derive from polarized cognitive social constructs where defensive reactions push perceptions towards their extreme interpretations (Lewis, 2000: 761). The tensions can be resolved by rethinking past perceptions and the practices driven by them. This can be accomplished by discovering the links between the opposing forces that open up for a new framework that give meaning to the contradictions. Paradox reflects dualities that are synergistically related within a more complete dynamic system (Smith and Lewis, 2011). The contradictory elements can be seen as thesis and antithesis that can be resolved through synthesis, where the synthesis becomes a new thesis, that eventually spurs an antithesis, and so forth. Hence, a plan is based on expectations (thesis) that can be proven wrong in practice (antithesis) so prior expectations are updated by the new experiential insights (synthesis). Hence, it is suggested that the organization can create a “dynamic equilibrium” in a continuous cyclical process of sustainable inter-temporal peak performances (Smith and Lewis, 2011).

The Yin-Yang symbol is often adopted to illustrate the tensions and signify the wholeness of contradictions (Lewis, 2000; Smith and Lewis, 2011). The Yin element is the black part that signifies stability, exploitation, defense, etc., and the Yang element is the white part signifying change, exploration, offence, etc. (Li, 2014). Adopting this symbolism to the dual strategy-making approaches, forward-looking strategic planning corresponds to the Yin element in so far as it represents a rational analytical approach to create a stable strategic direction for the organization, coordinating activities to exploit existing economies, and defending superior resource and market positions going forward. The emergent strategy approach arguably corresponds to the Yang element as it responds to changes in the environment as they arise, learns from trial-and-error and thereby explore what works and what does not in offensive moves that can uncover important future strategic options. So, one process is trying to proactively *create* strategy for the entire organization as seen from a top management perspective, whereas the other process is reactive and *adapts* strategy through many responsive actions taken at the bottom of the organization by operational managers and employees that gain new insights about the evolving environment from these ongoing activities.

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The strategic planning process seeks to create a common understanding of the competitive environment and give general direction to future activities where some investment decisions are planned and others are delegated for subsequent execution (Bower, 2005). After planning the organization executes the business activities in pursuit of the intended strategic direction taking adaptive actions as and when conditions change. The underlying assumptions of the central top-down planning process constitute the thesis and the actual experiences gained in subsequent bottom-up execution represent the antithesis as organizational members learn from ongoing actions. Synthesis arises when the experiential insights derived from the execution of business activities are referred back to the initial planning considerations to update the cognitive understanding of the competitive environment. This is a dynamic strategy-making process interacting between top driven forward-looking considerations and retrospective insights from trial-and-error experimentation at the bottom of the organization (Figure 1). In the initial period (A) planning first dominates as pursued at its highest level of intensity to displace the focus on execution (even though the business is still being handled) and once the planning is completed execution takes predominance and becomes the key focus. This cyclical interaction between dual strategy-making modes of creation (planning) and adaptation (emergence) continues in subsequent periods B, C, D, and so forth.

--- Insert Figure 1 about here ---

This forthcoming dynamic process resembles the well-known interfaces between strategy formulation and implementation but serves to emphasize the importance of synthesis that must bind the two processes together to be effective. In strategy jargon this is typically referred to as the strategic control process, but this area remains grossly under researched in the strategy field (Simons, 1990, 1994). As mentioned an interesting artifact of the dual perspective is that the two strategy-making modes can be distinguished by their diverse locations at the top and the bottom of the organization as well as their differing time horizons where one is long-term forward-looking and the other short-term and retrospective (Figure 2).

--- Insert Figure 2 about here ---

Hence, the administration around top management at the strategic level of the organization tries to assess the environment and discuss this with internal operating managers and external peers to outline an intended strategic direction several years forward in time. They enact the strategic path by committing some strategic investments and communicating the intended direction as managers and employees at the operational level deep down the organization subsequently take action and execute. The operating employees conduct all the current business activities within an existing organizational structure and resource investments committed by top management. They also take responsive actions when conditions change in unexpected ways and thereby test new strategic opportunities and learn about how the environment evolves. As they face changing conditions that challenge the strategic assumptions this constitutes opportunities to experiment and explore new ways of doing things that can adapt corporate activities to emerging trends. Hence, when, operational employees execute the intended, or planned strategy, they do two things: (1) they try to accomplish what the top-down strategic plan asks them to do, and (2) they do what bottom-up strategic emergence requires them to do when the real environmental context changes from the pre-planned assumptions and expectations. Hence, in reality the strategy execution as performed within the organization constitutes a mix of centralized top-down and decentralized bottom-up mechanisms that appear as a Yin and Yang pair.

This describes a virtuous cycle between the otherwise contradictory strategy-making modes of planning and emergence that can arise from interactive learning between top managers and managers/employees at the operational level. The experiential insights gained from the responsive actions at the operational level should be communicated and discussed interactively with top management to gain synthesis based on diverse updated insights. Here we must heed the Zhong Yong principle because defensive reactions otherwise might push perceptions towards extreme interpretations of planning or emergence where cyclical combinations of both is needed to achieve learning. Hence, there should be regular movements of emphasis and de-emphasis between planning and emergence over time as elements of the Yin-Yang dynamic so they never get permanently stuck in the extreme position of either approach (See center of Figure 2). A pure emphasis on planning will lose touch with reality because there is no ongoing information updating from operational activities where things are actually done and experienced hands-on (Mintzberg, 1994). Conversely, a pure emphasis on emerging responses and learning lacks the synthesis to understand how things are changing with

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concerted efforts to integrate activities for economic benefits (Brews and Hunt, 1999). These arguments suggest the following proposition:

Proposition 2: A balanced interaction between long-cycled forward-looking planning processes at the top and short-cycled strategic responses at the bottom of the organization is associated with more persistent and sustainable performance outcomes over time.

Just as open exchange of information between forward-looking analytical considerations around top management and current experiential insights gained from exploratory operational actions, there is also an issue of the frequency by which the information is exchanged. Obviously it is possible to maintain open and informal communication lines within an organization. Since the dual strategy-making modes should be synchronized over time with interchanging periods of high and low emphasis, the length of those periods determine the frequency with which the formal information exchange in interactive learning processes take place. In highly turbulent environments with frequent and unexpected changes there might be a need for frequent formal processes whereas the same requirement might not apply to relatively stable conditions. We note that the information discrepancy between the top and bottom of the organization will be progressively higher the more long-cycled the process is. Hence, we can reduce this information gap by entertaining shorter information processing cycles, which might be highly pertinent in turbulent and unpredictable industries. The previous discussion leads to the following propositions.

Proposition 3: Informal and open communication links between individuals engaged in long-cycled forward-looking planning processes at the top and short-cycled strategic responses at the bottom of the organization is associated with more persistent performance

Proposition 4: In turbulent and unpredictable environments high frequency interaction between long-cycled forward-looking planning processes at the top and short-cycled strategic responses at the bottom of the organization is associated with more persistent performance

Discussion

Hence, the Yin-Yang philosophy suggests that effective and sustainable strategy-making processes must be comprised by opposing, but complementary strategy-making modes of top-down forward-looking planning considerations that synthesize existing knowledge with updated experiential insights gained from responsive bottom-up emergent actions taken at lower-level operational entities. The Zhong Yong balancing principle tells us, that the two strategy-making modes must interact over time through both formal and informal communication channels with oscillating anti-modal emphasis and de-emphasis between the two modes in a way that none of the two come to dominate but retain a sound balance.

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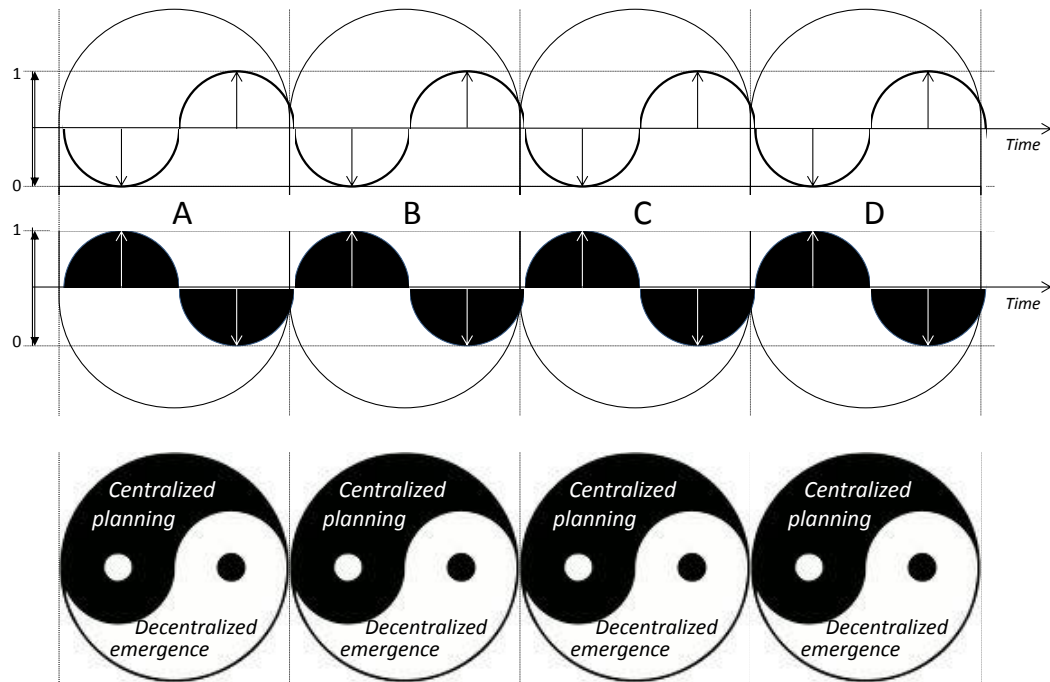
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Figure 1. Dynamic Interaction Between Strategic Planning and Execution



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Figure 2. A Model of the Dynamic Strategy-Making Process

