

Strategic Management Review (forthcoming)

Integrating Diverse Perspectives in Strategy Studies¹

Paul J.H. Schoemaker

The Wharton School

February 5, 2024

The field of business strategy has seen a wide range of approaches to understanding and improving strategic decisions in organizations and beyond. This paper examines the growing need for further integration among the myriad intellectual perspectives available to strategy researchers, in order to lessen unwelcome balkanization in theory and practice. After examining cases where different problem definitions all point to the same solution, we turn to harder cases for which no single best solution exists. Multiple approaches are discussed to reconcile conflicting problem frames and conceptual lenses. A key distinction is made - when resolving complex strategy problems - between pattern matching solutions and designs based on first principles. My main focus is on what should be done after a strategy problem has been well analyzed descriptively but diverse solution ideas remain without integration.

When dealing with complex business cases, for descriptive or prescriptive purposes, researchers need to make assumptions about conceptual approaches as well as varying levels of intellectual abstraction. The various conceptual models available to strategy researchers today reflect such diverse disciplines as economics, sociology, political science, psychology, decision theory, organization theory and more. Different academic models and tools will at times rival each other for attention and print space, even when different conceptual lenses are clearly needed for a deeper understanding or resolution. This paper examines alternative meta frameworks to combine opposing viewpoints into an overall problem synthesis. The need to encompass multiple disciplinary perspectives is especially critical for strategy theory and problem solving, as emphasized in the title of the 1993 SMS Chicago conference “Integrating Strategy.” This crisp heading should serve as our North Star to counter ever-increasing emphasis (and value) on specialization.

At present, we still lack broadly accepted canons or meta-theories about which intellectual lenses best fit different kinds of circumstances, to effectively analyze and solve strategy problems (for some practical mappings, see Reeves et al, 2012). Pivotal questions remain about how to synthesize alternative

perspectives for descriptive, prescriptive or normative purposes in strategy. Although various integration approaches have been proposed in past decades (such as Allison, 1969; Barney and Ouchi, 1986; Bowman, 1990; Mintzberg, 1973b; Shrivastava and Grant, 1985; Schoemaker, 1990; and Rumelt et al, 1994; Reeves et al, 2012, Durand et al, 2017 and Leiblein et al, 2018), the strategy field overall has not coalesced around canonical guidelines with broad support. One reason for this failure is continued balkanization in the field of strategy.

Webster defines balkanization as “breaking up a region or group into smaller and often hostile units.” Its drivers in our field include the different academic disciplines that underpin doctoral training, the type of strategy problems that are in vogue, the various methodologies deployed, and the need for scholars to enhance their own reputations through differentiation. Also important are the funding mechanisms that support strategy research and the kind of access that researchers receive to conduct interviews, analyze data sources and examine processes. New approaches to synthesizing opposing frames may be needed to overcome continued factionalism in the field of strategy, both in theory and practice (see Ghemawat, 2002; Gavetti and Levinthal, 2004; Bindra et al, 2019; Teece, 2020, McGahan, 2023).

The current paper starts with an instructive restaurant parable and then builds further on a classic meta-analysis proposed by Graham Allison (1969) about the Cuban Missile Crisis.² Allison contrasted three important interpretative frameworks to which I shall add a fourth (see Table 1) to reflect subsequent contextual process views. This additional view highlights the unpredictable aspects of strategic decisions in organizations, as in the so-called garbage can model (Cohen et al, 1972). The remainder of the paper will examine different approaches to combining and integrating diverse academic perspectives, once sufficient conceptual problem differentiation has occurred.

I am not calling here for a general unified theory of strategy where problem definitions and possible resolutions are fundamentally connected at deep levels. My focus is on practical theory-based insights about how to conduct integrative analyses in strategy that transcend disciplinary boundaries. First, I shall emphasize the benefits that kaleidoscopic thinking brings in challenging our mental models. Second, once multiple conceptual lenses have been well examined, we need to find ways to reconcile them if possible or make careful trade-offs. Third, we need to distinguish problem-solving methods based on pattern matching from solutions developed by applying canonical principles rooted in strategy theory. Our field has struggled with conceptual unification among its three main theoretical strands which have been anchored in economics, organization theory and behavioral decision theory. Likewise,

tensions between classical and emergent views of strategy remain largely unresolved.

1. Lessons from the Parable of Spindle

Conceptual pluralism, in the sense of using multiple disciplinary lenses to diagnose or remedy a complex strategy problem, does not necessarily have to result in conflict or confusion. At times, pluralism can actually affirm, based on different intellectual perspectives, the wisdom of a particular insight or solution. An instructive case is the Parable of the Spindle recounted by Elias Porter (1962) in the *Harvard Business Review*. The problem concerned recurring friction in a restaurant chain between the kitchen staff and multiple servers taking orders from customers seated at tables. The main symptoms at the time were waitresses breaking down in tears, cooks walking off the job, and managers occasionally firing employees on the spot. The chain's senior leaders consulted three different specialists, a sociologist, psychologist and anthropologist, to study all this further and offer advice.

The sociologist focused mostly on status differences among the cooks, servers, and bus boys including who gives orders to whom, especially when a restaurant gets busy. The psychologist keyed in on prevailing gender differences between cooks and servers plus traditional stereotypes according to which the manager is viewed as the father, the cooks as sons and the waitresses as daughters. The anthropologist also focused on embedded values, noting that the managers and cooks prioritize the restaurant's long-term viability whereas the servers mostly sought to supplement income for their poor families. When under pressure, these different value structures could escalate into conflicts.

The original article contains much more background about the three main perspectives sketched, including additional facts, insights, and nuances befitting each discipline's academic orientation. After diagnosing the problem, each expert was also asked to offer recommendations about how to alleviate the tensions that periodically blew-up into very stressful episodes with lingering angers and recriminations. Each expert independently suggested to rearrange the interactions between serves and kitchen staff by using a rotating spindle at the counter that separates the kitchen area from the restaurant. The experts independently proposed that servers should simply write out their orders and clip them in sequence to a slowly rotating spindle which could be attended to by the kitchen staff when appropriate from their perspective.

This simple procedure allows cooks to handle work orders at their own pace without shouting back and forth across the kitchen counter. The three experts then further explained in their own language why this important decoupling strategy would be a durable solution, with references to their own theoretical models and findings. Once this idea was implemented, the spindle indeed reduced frictions for various reasons that each expert had touched on, if only in part. To the sociologist, the spindle preserved key status differences whereas for the psychologist it softened gender tensions between female servers and male cooks. The power of combining diverse perspectives is that solutions may surface that make sense from different framings angles. If so, such alignment attests to the solution's robustness and wisdom, akin to the blind men in a folk Hindu fable who shared their touch impressions to identify an elephant they stumbled upon.

The solution that the Kennedy administration eventually opted for in the Cuban Missile crisis proved likewise to be conceptually robust. Imposing a naval blockade on Cuba was a sensible US strategy in each of Allison's three models and it proved successful. But there is no guarantee this will always work since the assumptions underlying Allison's three conceptual lenses represent alternative views of how large organizations or government agencies work. Table 1 provides a conceptual positioning of these three views by juxtaposing them along two axes denoting congruence of goals and efficiency of execution (see Schoemaker, 1993b). The table also shows a fourth view (bottom left), in addition to Allison's three models, which emphasizes how ambiguity and situational happenstance often shape decision making.

Table 1 – Four Views of Organizations

		Coordinative Efficiency?	
		<i>High</i>	<i>Low</i>
Goal Congruency?	<i>High</i>	Unitary Actor Model	Organizational Model
	<i>Low</i>	Political Model	Contextual Model (garbage can view)

2. Conceptual Models About Organizations

Unitary Actor Model

This was Allison's label for views that adopt a rational policy perspective. It posits unity of action within a group, organization or country, assuming that collective acts emanate from a coherent set of objectives and the pursuit of rational solutions. This view is still commonly adopted, in spite of its evident empirical limitations and implicit fallacy of composition, since its main virtue is simplicity of analysis. We often think of a company, a government (such as Uncle Sam) or entire nations (like the Hermit Kingdom) as if they actually were rational unitary actors. The media may likewise treat them as monolithic entities to be understood in terms of their shared goals and strategic rationalities. Economists do so by assuming utility optimization, Bayesian updating of beliefs and market efficiency. Likewise, some political scientists have built their analyses entirely by assuming ruthless and rational pursuit of self-interest by nation states, as exemplified by De Mesquita (2010).

Organizational Model

This second model of Allison still assumes a coherent set of objectives within a given organization but not necessarily fully aligned collective action. To keep their affairs manageable, organizations practice division of labor. But this differentiation then requires integration of functions and actions over time (Lawrence and Lorsch, 1967). Internal units may allocate their limited attentions differently by focusing on just a subset of opportunities and threats facing the firm. Each of these units has its own perceptions, constraints and limitations in terms of the actions it can take. Allison (1971) also emphasized that the organizational model relies on programmed decision-making and organizational routines. As noted earlier by Simon (1955) and Cyert and March (1963), this can easily result in bureaucratic missteps at times. In short, this second Allison model acknowledges the internal complexity of group and organizational decisions stemming from imperfections in sharing information and internal coordination. Importantly, many different images and metaphors still exist within the organization model as profiled by Gareth Morgan (1997).

Political Model

This third view of Allison explicitly abandons the assumption of shared organizational objectives and highlights that individual, group and departmental goals often supersede those of the collective. One department or function might knowingly diminish the organization's overall well-being in order to enhance its own power position or payoffs. Such self-interested gaming should not be too blatant, however, since it will engender counter-vailing forces. The political model highlights the existence of imperfect

congruence between individual and organizational goals, stemming from uncertainty, ambiguity or complexity of the real-world problems to be addressed. This view naturally focuses on partisan behavior by key actors, coalitions among sub-units within the organization, and the challenges of resolving a variety of principal-agent problems. Conjoined with Williamson's (1995) transaction cost view, it follows that organizations are usually sub-optimal in their decision making when judged overall.

Contextual View

In Schoemaker (1993b), I added a contextual perspective to Allison's classic model to reflect that organizational environments can be so complex, and human interests so varied, that each decision context becomes its own reality. The net result is limited decision consistency across situations and goals, in line with the garbage can model of March and Olson (1976). The particulars of the context or environment become the driving force for the decision, rather than superordinate goals or comprehensive planning. This view embodies elements of Nelson and Winter's (1981) myopic routines, the disjointed incremental muddling through lens of Lindblom (1959) and Quinn (1978) plus Mintzberg's (1990) view that strategy is an emergent process. The contrast between intended vs realized strategies was clearly highlighted by Mintzberg et al's (1969) classic analysis of Honda's entry into the US motorcycle market in the 1960s, in which chance played a major role. The contextual view also aligns broadly with parts of population ecology (Hannan and Freeman, 1989) which emphasizes the uncontrollable aspects of external environments and the limited managerial capacity to respond effectively to the ensuing ambiguity or chaos.³

3. Which Viewpoints to Adopt When?

In his seminal book *Essence of Decision*, Allison (1971) applied variants of the first three models to the Cuban missile crisis of October 1962. At that time President Kennedy faced a sudden, dangerous geopolitical move due to Russia sending intercontinental missiles to Cuba (Abel, 1966). US responses would depend critically on which views his team would adopt about internal decision dynamics inside the Soviet Union, Cuba and other rivals. Given the secretive, dictatorial and bureaucratic nature of the USSR, Allison argued that cases could be made for all three models. Some evidence pointed to strong top-down control by Secretary Khrushchev (as in the unitary actor model), other evidence underscored bungling bureaucratic missteps lower down (as per the

organizational model), and yet other information suggested various power struggles within the Kremlin and Polit Bureau (as in the political model). Each of these three models emphasized different benefits and costs for the solutions that Kennedy was considering about this global threat.

Judged from afar, simplicity is one of the great virtues of the unitary actor model but also its major weakness. As a first-order approximation, it may be a sound starting point although it will seldom be a satisfactory ending one. The organizational model introduces considerably more intra firm complexity into the picture. Whether this additional detail is needed or desirable in fully understanding different policy outcomes depends on the type of decisions considered. In the political model, the organization's reward system is often foremost, including divergences between organizational and individual goals. This model recognizes that it is impossible to design incentive systems such that which people will always act in full harmony with the goals of the organization. The obstacles include future uncertainty, pursuits of self-interest, information asymmetry, differences in risk attitudes and more (Ross, 1973).

These three conceptual models, even when combined, still have limits as to how much detail they can really capture. Much of what transpires in organizational life may be beyond the scope or resolution of any of the three models due to random interactions and opaque factors. As noted before, such micro contextual effects lie at the heart of March and Olson's (1976) 'garbage can model' of decision-making (see also Cohen and March, 1974; Cohen et al., 1972). In this view, organizations at times resemble chaotic coping systems in which people, problem perceptions and solution approaches meet in largely random ways, like being tossed about in a garbage can.

This unexplained micro variance highlights the highly textured and continually changing nature of numerous organizational interactions. Each participant may be involved in multiple decision processes, pursuing multiple agendas, and developing his or her own theories of what is going on. To quote March (1981):

“From this perspective, decision processes are cross-sections of the lives of individual participants, and cannot easily be understood without embedding them within those lives. The context is a shifting intermeshing of the vagaries of demands on the lives of the whole array of actors.”

In this mosaic view, two aspects become very critical: the cross-sectional details of decisions facing different stakeholders and the broader context determining how much attention any one participant gives to different decisions being considered. Cross-sectional detail here refers to how important the decision is to different people in the organization at that point in time, how

ready they are to commit (given their own agendas) and what constraints they personally face. Each of these factors requires such detailed knowledge and micro-level observations that they severely limit what is practically knowable or predictable from the outside. These obscure factors are generally omitted from the views developed by outside observers and thus end up in the error terms of the explanatory models proposed. Whenever this residual component is large, such that the model's $R^2 < .5$, not even half a full story is being told.

4. A Contextual View Example

The contextual model is supported by experimental research in behavioral decision research showing how sensitive decisions can be to unconscious biases, decision frames and context effects (Russo and Schoemaker, 2002; Gilovich et al, 2002). The wording and framing of questions can alter people's choices dramatically (Tversky and Kahneman, 1986); readily available information may serve as convenient anchors or otherwise bias final judgements (Tversky & Kahneman, 1974); risk-taking can vary widely as a function of context and reference points (Bowman, 1982; MacCrimmon, 1985); choice heuristics may overly depend on task structures to save cognitive efforts (Payne et al, 1993); and normatively equivalent response modes (such as making choices versus stating reservation prices) frequently reveal inconsistent preferences (Grether and Plott, 1979; Hershey and Schoemaker, 1985; Tversky et al., 1989) etc.

Many behavioral decision theorists view choice to be governed by task and context as much as by individual risk dispositions or global goals and stable preferences. In an organizational setting, this translates into low coordinative rationality unless countered by tight control systems, shared information sets, preprogrammed decision rules, directive leadership or a strong corporate vision. Strategic decisions as such may be pushed and pulled between contextual bottom-up forces and top-down strategic forces, with the balance shifting as a function of circumstance, reaction time, control and goal alignment. The notion that important strategic decisions can be dominated by contextual effects is well illustrated by yet another classic geopolitical event involving the Soviet Union: the collapse of the Berlin Wall in 1989.

When thousands of East Germans crossed the Berlin Wall on the night November 9th in 1989, it was not so much by design as by happenstance and confusion on the part of East Germany's leadership. Although none of the government officials wanted the Wall opened, the Czechoslovakian escape route had become a growing concern and embarrassment to them, with

thousands of East Germans crossing the border south-eastward by car and train. The government's plan was to permit more liberal, but still highly controlled, travel to the west through Berlin. This was meant to be a relief valve for mounting pressure and unrest among the populace. Instead, the following happened as reported in the Chicago Tribune of 28 October 1990.

A year earlier, Egon Krentz (the new East German head of state and successor to ousted potentate Erich Honecker) announced a highly restrictive law that fueled rather than quieted public anger. On 9 November 1989, amid mounting confusion and fear in the Communist Party, Prime Minister Willi Staph handed Krentz a draft decree at 3:30pm, just before a Central Committee meeting. It liberalized the travel policy and emphasized the need for prompt visa decisions. Krentz had introduced the decree as just a temporary measure. The intent was to keep the Party in power, buy additional time and gain more concessions from West Germany. Upon discussing the draft in committee, amendments were made to drop the term temporary and adopt it as law.

Most committee members assumed the draft had been carefully prepared in consultation with security agencies that controlled the border, the Soviet Union and other foreign governments. Each of these assumptions proved false. During a press conference late that afternoon, an ill-prepared government spokesman accidentally revealed the new decree. The intent had been to announce it publicly two days later, to give the border police and visa agencies time to prepare. The spokesman had inadvertently pulled out the decree when shuffling through his papers, in response to a last-minute, unplanned reporter question. Upon reading the decree out loud, he failed to appreciate its historic significance. When asked if this meant the Wall was now open, he simply re-read the statement out loud, hesitantly concluded that it apparently meant so, and hastily departed.

The ambiguity in the official's statement set the stage for further fortuity, like a comedy of errors. At first reporters were unsure what to report since police stations (which had to approve the visas) were already closed. But reports leaked out via radio and television, and by nightfall citizens believed the Wall was open (ignoring the visa stipulation). Elated crowds approached the border and by 10 pm thousands had gathered at well-known checkpoints. Confused guards, who had received no warning, were unsure what to do. Although sworn to shoot unauthorized crossers, as they had in the past, this time they were paralyzed by the lack of direction, the conflicting news items, and the excited masses. Many simply opened the gates, including the infamous East German checkpoint Charlie positioned in the middle of Berlin.

Later that evening, Krentz officially approved the opening of the gates in an emergency meeting of the Politburo. Moscow was notified and Gorbachev

quickly endorsed the action. Although the Soviets were deeply astonished that such a monumental decision, affecting the entire East-West balance, had been made without their approval or consultation, they were left with little choice. The face-saving Soviet response was that this was a matter for East Germans to decide. All three research strands identified earlier as part of the contextual view seem to apply here. External forces (involving the USA, the Soviet Union, Czechoslovakia, Romania, etc.) set the stage. Organizational mishaps caused erroneous committee decisions and press releases. Cognitive simplifications (plus affective factors) influenced crowd reaction and guard behavior in the absence of any guidance, resulting in jubilant crowds crossing the border and breaking down the despised wall further with axes.

The above contextual account raises interesting questions about notions of robustness and rational decision making. Conceptually, how can we test strategies for robustness if micro elements that are largely unpredictable can influence actions? Even though the East German government seemed fully in command of its policy and actions for decades, they were mostly a Soviet puppet. Just when communist governments officials sought to implement better visa policies, the façade of control cracked for all to see. It reminds us that unitary autocracies that seem stable may hide deep fault lines, akin to earthquakes or volcanos, that can quake or explode nearly at random. As such the four models of Table 1 may not always be mutually exclusive and should be viewed more kaleidoscopically.

5. Syntheses And Reconciliations

Contrasting rational and behavioral perspectives raises deeper questions about how deliberate and controlling organizations can or should strive to be. It is nearly impossible as well as normatively undesirable to monitor the decisions and thoughts of every person in an organization. This makes one wonder whether the four lenses profiled above should be viewed as competing versus complementary perspectives. Conceptually, there are at least four approaches or modes to manage the conundrum of multiple lenses:

- (a) compare the lenses and select only the best one for further use
- (b) differentially weigh the lenses and then rank the decision options
- (c) blend the lenses for meta insights via deeper conceptual synthesis
- (d) balance lenses over time to garner their benefits in dispersed ways

Each approach has pros and cons which Table 2 below highlights briefly, with an illustrative example for each mode. A sensible first step in deciding what lenses to adopt for understanding or resolving complex strategic issues is to examine how well the assumptions that undergird each lens actually fit the problem of interest. With that in hand, it will be easier to compare the four modes below and whether to choose one or mix them in some ways.

Table 2 – Ways to Integrate Diverse Conceptual Lenses

(a) Pick The Best Single Lens and Leverage it Fully

- Reasonable if most of its assumptions are valid and the solution is robust
- Sensible if one lens clearly stands out as the best single approximation
- Defensible if deeper mining of that lens adds significant creative insight
- Practical if blending multiple lenses creates chaos, conflict or stalemates
- Example: Merck’s drug disaster with Vioxx was analyzed by Jasper et al (2019) using the marketing lens. Their deep dive revealed valuable insights about key imbalances in that field’s central ‘market orientation’ concept.⁴

(b) Assign Relevance Weights to Lenses & Find Robust Solutions

- Reasonable if each lens shines new light on the issues and has group support
- Sensible if enough solutions exist that can be scored on attractiveness by lens
- Defensible if some lenses are so contradictory that blending is not possible
- Practical if weighted ranking of solutions surfaces robust or flexible options
- Example: in scenario planning, different futures are juxtaposed and weighted to help evaluate and rank-order strategic options (as shown in Table 3 later).

(c) Synthesize Diverse Lenses to arrive at a Superior Meta Model

- Reasonable if synergies exist such that model blending yields new insights
- Sensible if new creative solutions emerge that do not fit any single lens well
- Defensible if the effort is feasible and the metamodel can be leverage further
- Practical if the synthesis fosters new thinking modes and/or other benefits
- Example: auto-makers traditionally viewed low cost and high quality to be opposite goals until Toyota developed a meta-frame (TQM) in which they became synergistic.

(d) Oscillate Between the Above Modes Across Time

- Reasonable when the above methods do not yield the desired results
 - Sensible if compromises over time can help maintain internal balance
 - Defensible if circumstances are likely to change and flexibility is key
 - Practical if the switching costs among methods (a)-(c) are manageable
 - Example: most organizations operate to some extent in mode (d), not always by choice but by necessity whenever urgent problems arise.
-

The relevance of different lenses will much depend on the type of problems examined, the team members involved and solutions to be explored. The main challenge is that different lenses will inherently focus and define the issues of interest differently. For example, America's political decisions may seem quite unitary in terms of foreign policy but often become highly political when it concerns budgeting or other legislation. As such, an overall characterization of an organization's key decisions based on a single lens may not be feasible or even desirable, especially if the issues are multi-faceted and change over time. In so far as the method of analysis influences the phenomena being studied, we encounter here a kind Heisenberg uncertainty effect.⁵ It is prudent therefore to adopt a kaleidoscopic view first, to see various issues through multiple prisms, before finalizing the scope and framing of the matter to be understood or decided.

Integrating competing viewpoints at a given point in time, as in approaches (a) through (c) above, may be quite different from synthesizing them over periods of time as suggested in (d).⁶ In his book on managing strategy dilemmas, Hamden-Turner (1990) emphasized the importance of oscillating between competing models (such as modulation degrees of centralization over time), without locking into a fixed trade-off. In this hybrid view, examined further below, strategic leadership is akin to balancing an organization on the horns of a dilemma, with different lemmas deserving more or less respect at times. Such temporal tweaking could be deemed as a sensible quasi-resolution of conflicts over time or as falling victim to shifting fads and fashions in management. It may also be a way, however, to keep opposing viewpoints alive, without forcing integration, since new ways of inquiring often add value. Churchman (1971) examined the philosophical foundations of different inquiring systems (such as those of Leibnitz, Kant and Hegel), and praised the benefits that dialectical tensions produce. A classic example is the American legal system in which the thesis of innocence collides with the antithesis of guilt, such that jurors can render a better synthesis about where the balance of truth lies (ideally all overseen by an impartial judge).

6. Integrations Across Time

It is apparent from casual observation that organizational designs, as well as strategic planning processes, vary widely across and within industries, without any approach having emerged as universally best. It was early on recognized that multiple factors impact organizational designs, ranging from size and other organizational demographics (Khandwalla, 1977), to work-flows and technologies (Child and Mansfield, 1972; Hickson et al., 1969; Perrow, 1970; Pugh et al., 1968; Woodward, 1965), as well as the changing texture of the external world (Burns and Stalker, 1961; Emery and Trist, 1965). The rich diversity of organizational forms resembles natural biology where species adapt reactively, slowly and locally, but in amazingly diverse ways.

In light of this, Galbraith (1973) proposed an interesting cognitive synthesis of behavioral and rational elements across time, focusing on human information processing limitations inside firms. His integrative model built on Thompson's (1967) cybernetic view of how organizations cope with information over-load. In stable times, a company's rules, plans, and policies can readily capture how employees should handle routine problems. The operating manuals will reflect hard won lessons from the past as well as rational planning by the organization in anticipation of possible future challenges. However, these standardized rules, plans and policy guidelines will seldom cover all exigencies that may arise, nor should they try when considering the planning costs involved. Instead, many firms rely on 'management by exception' and ask employees to simply refer cases that don't fit the handbook up the chain of command.

This sensible approach, however, may cause information overloads vertically in times of sustained turbulence, such that the firm must either reduce the need to process information up and down the chain or increase its capacity to do so. Galbraith (1977) examined sub-strategies for each of these approaches, such as creating self-contained units, orchestrating lateral communications, increasing slack or further formalizing decision procedures. Companies typically employ a mix of such tailored solutions depending on their specific tasks, circumstances and legacy systems. Unlike biological evolution, this kind of adaption is not only achieved via trial and error but also through foresight and planning. In the rational view, firms may approach optimality when setting their goals, procedures, and design parameters. In cognitive and behavioral views, organizational designs evolve reactively via local hill-climbing and gradient searches rather than credible long-term global optimization models.⁷

The above considerations may favor the hybrid mode (d) of synthesizing strategy models. Managing oscillations over time can help accommodate

adaptive response lags and recurring market disequilibria. In turbulent times, many organizations will just play catch-up, even those with the best strategic planning systems. Also, their own varied reactions to external change will likely induce further change. This kind of enacted complexity perpetuates a state of periodic disequilibrium, and may prevent fully rational adaptation from being achieved for any length of time. These periodic disequilibria may last only short periods or span decades, as the evolution of organizational forms suggests. The modern corporation, for example, evolved in parallel with the industrial revolution, especially its railroads and telecommunications (Chandler, 1977). The rise of the multinational organization thereafter is mostly a 20th century phenomenon fueled by increasing globalization in commerce and stronger multi-lateral trade agreements (Williamson, 1981).

During periods of relative stability, firms may have had time to approximate the unitary actor model. In the early part of the previous century, for example, Henry Ford nearly perfected the assembly line which could mass-produce thousands of Model T cars. But this marvel of efficient engineering was later disrupted by Sloan's (1963) strategy at General Motors of product-market differentiation (via new automobile models) and the development of a multi-divisional organizational design (Armour and Teece, 1978; Chandler, 1990). Depending on whether one views organizational evolution to be a gradual adaptation process (Chakravarthy, 1982) or occasional punctuated equilibria (like the collapse of Soviet-style communism), the rational model may appeal more or less. As Bolshevik leader Vladimir Lenin wrote after the Revolution of 1905 "there are decades where nothing happens, and there are weeks when decades happen."

7. Why Strategy Theory Struggled to Evolve

The above reflections may explain in part why the growing field of strategic management has fractured without widely embraced canonical underpinnings. Any new insight that obtains wide currency (via articles, books, seminars or consulting) loses value in providing additional competitive advantage (Schoemaker, 1990). As with high-level chess, once strategy problems (like classic end game situations) have been solved and disseminated, they drop from the expanding frontier of knowledge that defines competitive advantage. Yet, this self-destructive aspect of strategic insight (in competitive situations) has received limited attention, as has the attendant need to continually innovate, disrupt and remain organizationally adaptive. Strategy often requires Schumpeterian destruction of business models but academics should apply a healthy dose of this medicine to their own theorizing as well. Such creative

destruction, by its nature, may cause instability at the cutting edges of the field but also further innovation.

As an academic specialty, strategic planning and business policy gained momentum in the sixties at Harvard and other case-oriented business schools. Although isolated building blocks about competition had been advanced earlier, such as von Clausewitz' (1832) treatise on war and von Neumann and Morgenstern's (1947) theory of games, comprehensive strategic management perspectives did not become available until much later (starting with Ansoff 1965; Learned et al. 1969; Steiner 1969). Over time, the field of strategy has become much better grounded academically, with its own respected scholarly journals and a large body of theory supported by empirical evidence. But solid advice for managers and leaders often lagged since companies need to look forward, rather than just explaining past success. They have to somehow pierce the fog of future uncertainties (apart from manage garden variety risks).

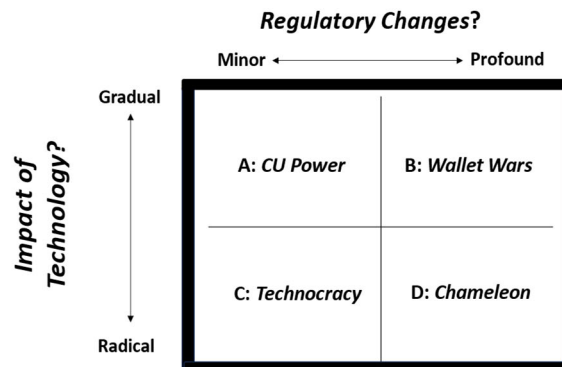
To meet these demands, many tools and techniques in strategic planning were developed by business and consulting firms rather than academics (see Gluck 1986 and Ghemawat 2016). Examples include experience curves (BCG), strategic business units (McKinsey, GE), portfolio planning (GE, Arthur D. Little, BCG, Shell), market share analyses (GE, PIMS/Strategic Planning Institute), scenarios (Hudson Institute, Shell), key success factors (GE, McKinsey), strategic segmentation (Strategic Planning Associates), benchmarking (Xerox), value chains (BCG), and competing in time (Bain & Co).⁸

However, the life span of consultancy-spawned models seems to have been quite short (Pascale 1990; Wooldridge 2015). Rosenzweig (2007) attributes this to lack of rigorous research by consultants and business gurus. To draw market attention, they lean more towards fads and fashions than to striving for academic kudos or Nobel prizes.⁹ Academics generally tend toward caution and risk-aversion when modeling or advising clients, while consultants less so. One problem facing academics is that innovative strategizing about how to navigate unknowable futures, or other complex business problems, may require skating on thin ice at times. This makes it challenging to advice business leaders rigorously about how to blend competing future views with clear commitments to robust as well as flexible strategies.

Although scenario planning is a well-known approach for envisioning diverse futures that may happen, it cannot easily overcome the inherent subjectivity of scenario projections and as such may not fit a rigorous academic research mode. To illustrate the stumbling block that subjectivism poses for strategy, suppose a credit union (CU) has developed four different scenarios about the future. Assume they were organized around the top two pivotal uncertainties

facing the industry: technological advances and regulatory changes in the playing field. If each uncertainty is bounded by two polar extremes as shown below, and crossed with the other uncertainty, four mutually exclusive cells will emerge around which detailed scenario narratives can then be developed.

Table 3a – **Four Mutually Exclusive Scenarios**



In applied settings, the scenarios would include other relevant uncertainties as well plus key industry trends affecting all scenarios in the same direction (see Schoemaker, 2020). Attempts to reconcile these four future views into one would be futile since opposite outcomes were projected, by design, for some of the key uncertainties. There is no objective way in scenario planning to fully resolve, weigh or synthesize the subjective elements that underpin the four different future images. Their perceived plausibility will vary since each manager will draw on different knowledge bases, mental models, frames and archetypes. Each scenario is at best a well-constructed plausible narrative that provides new insights about key aspects of the future. Toulmin's (1958) theory of arguments can provide further structure for each scenario by clearly specifying data (evidence), claims, backings and warrants. Different scenarios will vary, by design, in some or all of these elements and even when all scenarios are combined, they will not contain all possibilities exhaustively.

To illustrate further, Table 3b profiles five investment alternatives in terms of their strategic fit which each scenario, scaled from 1 (low) to 9 (high). Since alternative 1 scores well under each scenario, this one comes close to being a no-regret move and can thus be committed to strongly. Alternatives 2, 3 and 4 represent mixed cases since each strategic move scores high in some scenarios and poorly in others. These three strategic initiatives thus merit an options approach by making small commitments first and larger investments

later if some of the scenarios evolve favorably. If not, some of the options will have to be aborted. Lastly, not all investments can be approached step-by-step since they may be all or nothing choices. Investment 5 represent this case if we assume that staged investments are not possible here. Given its high variance across the scenarios, the choice is whether to make a big bet. For example, a micro-chip plant cannot practically be built at half size and then be doubled later when advantageous. A new minimally efficient 'fab' today costs 2-3 billion dollars. A complementary route is to find partners willing to share the risk and return, or to consider insurance policies and other hedges.

Table 3b – **Assessing Robustness of Options**

	Scenario A	Scenario B	Scenario C	Scenario D	
Investment 1	7	6	7	5	Robust
Investment 2	3	9	9	2	Fragile
Investment 3	8	2	8	5	Fragile
Investment 4	4	9	9	1	Fragile
Investment 5*	1	2	9	9	Big Bet

Each option's scenario fitness is scaled from 1 (low) to high (9); * = not scalable

The above scenario example represents a pristine approach to decision making under uncertainty but glosses over real-world messiness in developing useful scenarios or strategies (Knight, 1921; Savage, 1954). The deeper strategic management challenge in the real world is to examine these issues not just rationally but behaviorally as well, which is far more difficult. As Chicago economist Jose Scheinkman noted at a high-level meeting of physicists and economists, "there is only one way of being right, but there are thousands of ways of being wrong" (Pool, 1989, p. 703). The numerous ways in which players can err may create new rent opportunities for the smartest of them. Behavioral decision experiments to date, however, have mostly examined judgment and choice biases in isolation. Whether, when, and how these various biases magnify or counteract each other in markets, or inside organizations, remains terra incognita. Yet, for the field of strategy, this is where additional academic and economic rents may lie.

8. Reflections and Tentative Conclusions

The field of strategic management is highly diverse and fragmented along at least three core dimensions:

- (1) the domain of inquiry, ranging from the strategy of nations to individuals competing against nature alone (like a sole mountain climber)
- (2) the approach of inquiry, ranging from clinical anecdotes to abstract theory development, plus a plethora of hybrid models in between
- (3) the purpose of the inquiry, ranging from descriptive to predictive to purely normative (see Kleindorfer et al, 1993).

Compounding the problem is that the prescriptive side of strategy is focused on how best to exploit the uniqueness of the circumstances facing a particular strategizing agent (a nation, firm, individual or robot). But if too much uniqueness is perceived, the opportunity to draw similarities with other such cases is reduced. Herein lies the essence of the prescriptive challenge: balancing the tradeoff between exploiting situational uniqueness and wisely importing the lessons from analogous but not quite identical case studies. Historically, the field of strategy was rooted in case studies and only later were significant strides made in theoretical underpinnings, starting with economic theory followed by organization sciences (Schendel et al., 1994), and then behavioral research into cognitive, affective and social biases.

The deeper we understand the uniqueness of any one case, the less we may appreciate its similarities to other cases unless we know how to abstract from the specific micro details toward a valid canonical representation. The ideal strategist is one who keenly understands the subtleties of the problem at hand and yet can invoke broad, synthetic knowledge, gleaned from other cases, that is relevant to the current situation. The more patterns an analyst's repertoire contains, the greater the chance that isomorphic cases will come to mind. Search algorithms and AI can clearly support this matching challenge, based on similarity comparisons. But some forms of abstraction will be needed first to map the specific case encountered against a database of similar prior cases. This feature-matching process itself constitutes a form of integration. Without it, each case will have to be solved anew in isolation.

In addition to similarity comparisons, designs based on first principles can also be powerful approaches. They entail developing, piece by piece, a problem representation that is a special case within a general framework. This requires some creativity and design talents, especially in the formulation of the options set. The field of medicine offers a good example. Many treatment regiments today rely on pattern matching that calls for superficial expertise

plus a very large database. But tailored therapies, resting on advanced understandings of the underlying medical sciences, are also still used. The latter require deep medical expertise plus the clinical skill of application and translation. The training of physicians therefore requires a deep immersion in theory as well as vast exposures to clinical cases. However, specialists may not fare well with patients whose complex issues cut across medical disciplines (see Ruhstaller et al, 2016), suggesting that integration is not just undervalued in research communities but also in clinical practice.

A key lesson for the field of strategy is that integration without appropriate primitives and associated theories is bound to fail and will require continual horizontal communication in practice. We must continue to enlarge the set of exemplars from which theory and best practice can derive and to which it can be applied. At an early stage of development in any science, fragmentation is welcome since researchers need to reflect the fine detail of the numerous cases encountered. Biologists first started with observation and classification into taxonomies based on readily observable features, such as collecting, grouping and sorting butterflies. It would be premature to forge integration when the set of exemplars, or the development of primitives, precepts and associated theories, are still in an embryonic stage. Also, it would be imprudent and dangerous to do so in medical settings or business practice.

However, once the classification phase matures, time will be ripe for re-conceptualization, as Darwin did in the grandest of manners in biology and Newton or Einstein in physics. My own view is that the field of strategy is well beyond the classification stage. Just consider the extensive business case libraries developed at Harvard and elsewhere, the explosion of grounded research over the past few decades, and the rich plurality of concepts, theories and approaches referenced in the literature. On the other hand, the field of strategy and other social science disciplines have not yet seen the integrative equivalent of a Newton or a Darwin, let alone an Einstein. In this sense, the field is still in a semi-paradigmatic state, such that the question of integration is both timely and important (even without a unified theory).

Lastly, although theoretical pluralism may seem laudable, it will often lead to conflicting predictions or recommendations. Different outcomes or actions will seem plausible within different frames and this in turn affects their perceived legitimacy (Habermas, 1975). Strategic planning, for instance, will be more top-down, linear (Chandler, 1962) and deliberative (Lorange and Vancil, 1977) in the rational model, whereas the contextual view or garbage model specifically would favor a more incremental (Quinn, 1978), tacit and experiential approach (Mintzberg, 1990). To mediate these conflicting models, the transaction cost or information processing views might be adopted. The

former tilts toward the rational side and thus may be better suited for stable worlds. The cognitive view highlights the coping (and often groping) nature of managerial decisions and as such favors more uncertain settings.

Having examined various strategy lenses and their respective limitations, it seems that our strategy field needs better meta-theories to guide analysts in the selection of the most appropriate lens(es) for different types of problems. Economic models will naturally place the locus of profit at the industry or strategic group level (Caves, 1980; Porter, 1980, 1985). Organizational and political models instead will focus more on firm specific assets and related capabilities (Amit and Schoemaker, 1993). Both emphasize the importance of invisible assets (Itami, 1987), core competencies (Prahalad and Hamel, 1990), and dynamic capabilities (Teece et al, 1997). The contextual view, at last, would likely favor a problem-solving approach that is more experiential, iterative and process oriented (Mintzberg, 1990). Rather than orchestrate strategy top-down, this view would advocate an emergent view of strategy.

In conclusion, rarely will one single model or view prove to be superior all the time, underscoring that using multiple viewpoints makes good sense in practice and theory. Reframing matters greatly upfront, when defining and analyzing a strategy problem, and this entails differentiation of viewpoints. But once this is done, the problem remains of how to prioritize different solutions proposed, which will call for some form of integration. The first canonical strategy issue I raised concerns our over-reliance on a single dominant strategy approach (in terms of methods or disciplinary views). The second canonical issue discussed is the absence of broadly accepted canons and heuristic precepts that can guide the integration of alternative theories.¹⁰ My hope is that this paper will stimulate further foundational research on multiple well-grounded approaches to performing integrative examinations in the field of strategy, transcending disciplinary boundaries as needed.

REFERENCES

- Abel, E. (1966). *The Missile Crisis*. New York: Bantam Books.
- Allison, G. T. (1969). 'Conceptual models and the Cuban missile crisis'. *American Political Science Review*, 63, 3, 689-718.
- Allison, G. T. (1971). *Essence of Decision: Explaining the Cuban Missile Crisis*. Boston: Little, Brown.
- Amit, R and Schoemaker, P. J. H. (1993). 'Strategic assets and organizational rent', *Strategic Management Journal*, *Strategic Management Journal*.
- Ansoff, H. I. *Corporate strategy: An analytic approach to business policy for growth and expansion*. New York: McGraw- Hill, 1965.
- Armour, H. O. and Teece, D. J. (1978). 'Organizational structure and economic performance: a test of the multidivisional hypothesis'. *Bell Journal of Economics*, 9, I, 106-22.
- Barney, J.B. and Ouchi, W. G. (Eds.) (1986). *Organizational Economics*. San Francisco, Cal.: Jossey-Bass.
- Bindra, Sunali, Nakul Parameswar, and Sanjay Dhir. "Strategic management: The evolution of the field." *Strategic Change* 28.6 (2019): 469-478.
- Blight, J. G. and Welch, D. A. (1990). *On The Brink*. New York: Noonday Press.
- Bowman, E. H. (1982). 'Risk seeking by troubled firms'. *Sloan Management Review*, Fall, 23, 4, 33-42.
- Bowman, E. H. (1990). 'Strategy changes: possible worlds and actual minds'. In Fredrickson, J. W. (Ed.), *Perspectives on Strategic Management*. New York: Harper Business.
- Burns, T. and Stalker, G. M. (1961). *The Management of Innovation*. London: Tavistock Institute.
- Caves, R.E. (1980). 'Industrial organization, corporate strategy and structure'. *Journal of Economic Literature*, 18, 1, 64-92.
- Chakravarthy, B. S. (1982). 'Adaptation: a promising metaphor for strategic management'. *Academy of Management Review*, 7, 1, 35-44.
- Chandler, A. D. (1962). *Strategy and Structure*. Cambridge, Mass.: MIT Press.
- Chandler, A. D. (1977). *The Visible Hand*. New York: McGraw-Hill.
- Chandler, A. D. (1990). *Scale and Scope: The Dynamics of Industrial Capitalism*. Belknap Press of Harvard University.
- Child, J. and Mansfield, R. (1972). 'Technology, size and organization structure'. *Sociology*, 6, 369-93.
- Churchman, C. West, *The design of inquiring systems: Basic concepts of systems and organization*, Basic Books, Inc., New York, 1971.
- Clausewitz, C. Von, *On War* (1832, Penguin Books, 1968.
- Cohen, M. D. and March, G. (1974). *Leadership and Ambiguity: The American College President*. New York: McGraw-Hill.

- Cohen, M. D., March, J. G. and Olsen, J. P. (1972). 'A garbage can model of organizational choice'. *Administrative Science Quarterly*, 17, 1-25.
- Cummings, Stephen, & Urs Daellenbach. "A guide to the future of strategy? The history of long range planning." *Long Range Planning* 42.2 (2009): 234–63.
- Cyert, R. M. and March, J. G. (1963). *A Behavioral Theory of the Firm*. Englewood Cliffs, N.J.: Prentice-Hall.
- De Mesquita, Bruce Bueno. *The Predictioneer's Game: Using the logic of brazen self-interest to see and shape the future*. Random House Trade Paperbacks, 2010.
- Durand, Rodolphe, Robert M. Grant, and Tammy L. Madsen. "The expanding domain of strategic management research and the quest for integration." *Strategic Management Journal* 38.1 (2017): 4-16.
- Emery, F. and Trist, E. L. (1965). 'The causal texture of organizational environments'. *Human Relations*, 18, 21-32.
- Galbraith, J. R. (1973). *Designing Complex Organizations*. Reading, Mass.: Addison- Wesley.
- Galbraith, J. R. (1977). *Organization Design*. Reading, Mass.: Addison-Wesley.
- Gavetti, Giovanni, and Daniel A. Levinthal. "50th Anniversary article: The strategy field from the perspective of Management Science: Divergent strands and possible integration." *Management Science* 50.10 (2004): 1309-1318.
- Ghemawat, Pankaj. "Evolving ideas about business strategy." *Business History Review* 90.4 (2016): 727-749.
- Ghemawat, Pankaj. "Competition and business strategy in historical perspective." *Business History Review* 76.1 (2002): 37-74. 70, doi:10.2307/4127751.
- Gluck, Frederick W. "Strategic management: An overview." *Handbook of strategic planning* (1986): 1-36.
- Grether, D. M. and Plott, C. R. (1979). 'Economic theory of choice and the preference reversal phenomenon'. *American Economic Review*, 69, 623-38.
- Habermas, Jurgen. *Legitimation Crisis*, Boston, MA: Beacon Press, 1975.
- Hall, Robert L., and Charles J. Hitch. "Price theory and business behaviour." (1939): 12-45.
- Hamden-Turner, Charles, *Charting the corporate mind: from dilemma to strategy*. Oxford: Basil Blackwell, 1990.
- Hannan, M. T. and Freeman, J. (1989). *Organizational Ecology*. Cambridge, Mass.: Harvard University Press.
- Hershey, J.C. and Schoemaker, P. J. H. (1985). 'Probability versus certainty equivalence methods in utility measurement: are they equivalent?'. *Management Science*, 31, 1213-31.
- Hickson, D.J., Pugh, D.S. and Pheysey, D. C. (1969). 'Operations technology and organization structure'. *Administrative Science Quarterly*, 14, 378-97.
- Holmstrom, B. and Tirole, J. (1989). 'The theory of the firm'. Chapter 3 in Schmalensee, R. and Willig, R. D. (Eds.), *Handbook of Industrial Organization*. New York: Elsevier Science.
- Itami, H. (1987). *Mobilizing Invisible Assets*. Boston, Mass: Harvard University Press.
- Jensen, M. and Meckling, W. H. (1976). 'Theory of the firm: managerial behavior, agency costs and ownership structure'. *Journal of Financial Economics*, 3, 4, 35-60.

- Khandwalla, P. N. (1977). *The Design of Organizations*. New York: Harcourt Brace Jovanovich.
- Kleindorfer, Paul R., Howard G. Kunreuther, and Paul J.H. Schoemaker. *Decision sciences: An integrative perspective*. Cambridge University Press, 1993.
- Kleindorfer, Paul R. "Reflections on Decision Making under Uncertainty," in Diebold, X, Doherty, N, Herring, R (eds), *The Known, The Unknown, and The Unknowable in Financial Risk Management*. Princeton, NJ: Princeton University Press, 2010. 164–93.
- Knight, Frank Hyneman. *Risk, Uncertainty and Profit*. Boston, MA: Houghton Mifflin, 1921.
- Lawrence, P.R. and Lorsch, J. W. (1967). *Organization and Environment*. Cambridge, Mass.: Harvard University Press.
- Learned, E. P., C. R. Christensen, K. R. Andrews and D W. Guth, *Business Policy*, Irwin, Homewood, IL ,1969.
- Leiblein, MJ, Reuer JJ, Zenger TR. 2018. What makes a decision strategic? *Strategy Science*, 3(4): 558-573.
- Lindblom, C. E. (1959). 'The science of muddling through'. *Public Administration Review*, 19, 79-88.
- Lorange, Peter, Ilene S. Gordon, and Richard Smith. "The Management of Adaptation and Integration." *Journal of General Management* 4.4 (1977): 31-41.
- Lorange, P. and Vancil, R. (1977). *Strategic Planning Systems*. Englewood Cliffs, NJ.: Prentice-Hall.
- MacCrimmon, K. R. (1974). 'Descriptive aspects of team theory: observation, communication and decision heuristics in information systems,' *Management Science*, 20, 10, 1323-34.
- MacCrimmon, K. R. (1985). 'Understanding strategic decisions: three systematic approaches'. In Pennings, J. M. and Associates (Eds.), *Organizational Strategy and Change*. San Francisco: Jossey-Bass, 76-98.
- Machlup, F. (1946). 'Marginal analysis and empirical research'. *American Economic Review*, 36, 519-54.
- March, J. G. (1981). 'Footnotes to organizational change'. *Administrative Science Quarterly*, 26, 563-77.
- March, James G., and Johan P. Olsen. "Organizational choice under ambiguity." *Ambiguity and choice in organizations* 2 (1976): 10-23.
- McGahan, Anita M. "The new stakeholder theory on organizational purpose." *Strategy Science* (2023).
- Mintzberg, H., Pascale, R. T., Goold, M., & Rumelt, R. P. (1996). CMR forum: the "Honda effect" revisited. *California Management Review*, 38(4), 77-117.
- Mintzberg, H. (1973). 'Strategy-making in three modes'. *California Management Review*, Winter, 44-53.
- Mintzberg, H. (1990). 'The design school: reconsidering the basic premises of strategic management'. *Strategic Management Journal*, 11, 3, 171-96.

- Morgan, G. (1997). *Images in organizations* (2nd Ed.). Thousand Oaks, London: Sage Publications.
- Nelson, Philip Charles, Sarina Bromberg, Ann Hermundstad, and Jason Prentice. *Physical models of living systems*. New York: WH Freeman, 2015.
- Nelson, R.R. and Winter, S. G. (1981). *An Evolutionary Theory of Economic Behavior and Capabilities*. Cambridge, Mass.: Harvard University Press.
- Pascale, Richard T. *Managing on the Edge*. Simon and Schuster, 1990, 18-20.
- Payne, John W., James R. Bettman, and Eric J. Johnson. *The adaptive decision maker*. Cambridge university press, 1993.
- Perrow, C. (1970). *Organizational Analysis: A Sociological View*. Belmont, Cal.: Wadsworth.
- Pool, Robert. "Strange Bedfellows." *Science* 245.4919 (1989): 700-703.
- Porter, Elias, "The Parable of the Spindle" *Harvard Business Review*, May 1962.
- Porter, Michael E., *Competitive Strategy. "Techniques for analyzing industries and competitors"* New York: Free Press (1980).
- Porter, Michael E. *Competitive Advantage: Creating and Sustaining Superior Performance*. 1985. New York: Free Press 43 (1985): 214.
- Prahalad, C. K. and Hamel, G. (1990). 'The core competence of the corporation'. *Harvard Business Review*, 68, 3, 79-91.
- Pugh, D.S., Hickson, D.J., Hinings, C.R. and Turner, C. (1968). 'Dimensions of organization structure'. *Administrative Science Quarterly*, 13, 65-105.
- Quinn, J. B. (1978). 'Strategic change: logical incrementalism'. *Sloan Management Review*, 20, 7-21.
- Reeves, Martin, Claire Love, and Philipp Tillmanns. "Your strategy needs a strategy." *Harvard Business Review* 90.9 (2012): 76-83.
- Reeves, Martin, and Knut Haanaes. *Your strategy needs a strategy: How to choose and execute the right approach*. Harvard Business Review Press, 2015.
- Rosenzweig, Phil. "Misunderstanding the nature of company performance: The halo effect"
- Ross, S. A. (1973). 'The economic theory of agency: the principal problem'. *American Economic Review*, 63, 134-9.
- Rumelt, R. P., Schendel, D., & Teece, D. J., Eds. (1994). *Fundamental Issues in Strategy: A Research Agenda*. Boston: Harvard Business School Press.
- Ruhstaller, T., Roe, H., Thürlimann, B., & Nicoll, J. J. (2006). The multidisciplinary meeting: an indispensable aid to communication between different specialities. *European journal of cancer*, 42(15), 2459-2462.
- Russo, J. Edward, and Paul J.H Schoemaker. *Winning decisions: Getting it right the first time*. Currency, 2002, pages 27 & 42.
- Savage, Leonard J. *The foundations of statistics*. New York, NY: Wiley, 1954.
- Schendel, Dan E., David J. Teece, and Richard P. Rumelt. *Fundamental issues in strategy: a research agenda*. Harvard business school Press, 1994.

- Schoemaker, Paul. J. H. (1990). 'Strategy, complexity and economic rent'. *Management Science*, 36, 10, 1178-92.
- Schoemaker, P. J. H., "The Quest for Optimality: A Positive Heuristic of Science?", *The Behavioral and Brain Sciences*, Vol. 14, No. 2, 1991, pp. 205-215.
- Schoemaker, Paul JH. "Multiple scenario development: Its conceptual and behavioral foundation." *Strategic management journal* 14.3 (1993a): 193-213.
- Schoemaker, Paul J.H. "Strategic decisions in organizations: rational and behavioural views." *Journal Of Management Studies* 30.1 (1993b): 107-129.
- Schoemaker, Paul J.H. *Advanced Introduction to Scenario Planning*. Edward Elgar Publishing, 2022.
- Schoemaker, Paul J.H., "The Need for Kaleidoscopic Views in Strategic Management," *Strategic Management Review*, 2023.
- Shrivastava, P. and Grant, J. H. (1985). 'Empirically derived models of strategic decision-making processes'. *Strategic Management Journal*, 6, 96-113.
- Simon, H. A. (1955). 'A behavioral model of rational choice'. *Quarterly Journal of Economics*, 99-118.
- Sloan, Alfred P., *My Years with General Motors*, Garden City, NY: Doubleday, 1963.
- Steiner, G., *Top Management Planning*, MacMillan, New York, 1969
- Teece, David J., Gary Pisano, and Amy Shuen. "Dynamic capabilities and strategic management." *Strategic management journal* 18.7 (1997): 509-533.
- Teece, David J. "Fundamental issues in strategy: Time to reassess." *Strategic Management Review* 1.1 (2020): 103-144.
- Thompson, J. D. (1967). *Organizations in Action*. New York: McGraw-Hill.
- Toulmin, Stephen E. *The uses of argument*. Cambridge university press, 2003.
- Tversky, A and Kahneman, D. (1974). 'Judgment under uncertainty: heuristics and biases'. *Science*, 185, 1124-31.
- Tversky, A and Kahneman, D. (1986). 'Rational choice and the framing of decisions'. *Journal of Business*, 59, II, S251-84.
- Tversky, A., Sattath, S. And Slovic, P. (1989). 'Contingent weighting in judgement and choice'. *Psychological Review*, 95, 371-84.
- Useem, Michael, *The Edge*, PublicAffairs, 2021.
- Von Neumann, J. and O. Morgenstern, *Theory of Games and Economic Behavior*, Princeton Univ. Press, Princeton, NJ, 1947.
- Williamson, O.E. (1975). *Markets and Hierarchies: Analysis and Anti-Trust Implications: A Study in the Economics of Internal Organization*. New York: Free Press.
- Williamson, O. E. (1981). 'The modern corporation: origins, evolution, attributes'. *Journal of Economic Literature*, 19, 4, 1537-68.
- Woodward, J. (1965). *Industrial Organization: Theory and Practice*. Oxford: Oxford University Press.

Wooldridge Adriane, “The Twilight of The Gurus,” *Economist*, 2015.

ENDNOTES:

¹ I am grateful to the following academics for their helpful feedback on earlier versions of this paper. In alphabetically order, they are George Day, Tom Donaldson, Shardul Phadnis, Jeff Reuer, Jay Russo and one excellent anonymous reviewer who offered keen insights.

² A 25-year reunion of some of the key players in this geopolitical drama (including Robert McNamara and his Soviet counterparts) revealed significant misperceptions on both sides about the opponent's premises, objectives, fears and information sets. Although a positive outcome materialized, the underlying decision process seems to have been far from perfect (Blight and Welch, 1990).

³ The garbage can model focuses primarily on micro aspects of decision processes as they occur, often at random, at particular cross sections in the lives of the various individuals involved. The other contextual perspectives I mentioned also address group dynamics, organizational design features and even exogenous socio-economic factors.

⁴ Schoemaker (2023) examined this Vioxx case from five disciplinary perspectives which highlighted that much more than marketing issues were involved in this tragedy.

⁵ In physics, classic examples of complementary models - that also compete at times - are the corpuscular versus wave theories of light as in Fermat's theorem; see Schoemaker (1993).

⁶ One could view two of the four modes as special cases of mode (b); when the weights are set to zero except for one, it becomes like mode (a); and if we allow shifting weights over time in (b), it starts to look like mode (d).

⁷ Around the Second World War, a fierce academic debate raged across the Atlantic between proponents of the full-cost pricing view (Hall and Hitch, 1939) and marginal cost pricing (Machlup, 1946). The issue hinged on what pricing heuristics managers actually used and how compatible these were with the usual economic assumption of profit maximization.

⁸ Notable practitioners involved here, from 1958 to 2013, include: Joe Bain (entry barriers), Herman Kahn and Pierre Wack (scenario planning), Bruce Henderson (experience curves), Sidney Schoeffler (PIMS), Robert Camp (benchmarking), Tom Peters et al (7-S), Edward Deming (TQM), Kenichi Ohmae (3Cs), Fred Gluck (strategy phases), George Stalk (competing in time), Charles Handy (change management), Phillips Evans et al (competition capabilities), Joseph Pine (mass customization), James Moore (ecosystem strategy), John Elkington (sustainability), Andy Grove (inflection points), Adrian Slywotzky (value migration), Carl Stern (value chains), Malcolm Gladwell (tipping points), James Moncrieff (dynamic strategy), Martin Reeves (adaptation). For further details, see Reeves et al (2015).

⁹ For additional data about the ebb and flow of strategic planning ideas over 50 years, see Cummings et al (2009).

¹⁰ The adjective *Canonical* when used in science usually refers to a historically established paradigm or a set of norms tied to a standard conceptual model that can help simplify things sufficiently while still enjoying broad acceptance. In Einstein's famous phrase, 'make things as simple as possible, but not simpler.' Church canons strive to do this in their own way.