COMPETITIVE MEMORY:
BRINGING THE STRATEGIC PAST INTO THE PRESENT

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ABSTRACT

Although two decades have passed since the publication of Walsh and Ungson’s (1991) seminal article on organizational memory, there has been only limited theoretical elaboration and application of this critical aspect of cognition in the strategic management literature. We remedy this gap by advancing the construct of competitive memory, which we define as a firm’s dynamic capability consisting of stored information from its past competitive interaction with a given rival that can be brought to bear on present or future competitive actions. We theorize that competitive memory is composed of both procedural and declarative elements and can be accessed automatically and deliberatively. Additionally, we suggest that competitive memory is relational: As rivals within a competitive set interact in the market, competitive memory drives not only their strategic actions, but also their expectations about their competitors. Lastly, competitive memory is also dynamic, which can be constructed and reconstructed over time by an organization’s enactment of its internal and external environments and by purposive memory trials with its competitive set.

Key words: organizational memory, competitive dynamics, competitive cognition
Renault is still haunted by the memory of selling American Motors Corp. (AMC) to Chrysler 10 years ago. Renault gave up two huge advantages when it sold AMC: an overseas base and a prime sport-utility brand, Jeep. After Renault abandoned its American dream, two of its European rivals, Daimler-Benz and BMW, immediately built assembly plants in the U.S. Now a global reach is considered crucial for an automaker. What is especially painful to Renault is that it gave up Jeep. “We could not comprehend why we did it,” said Francois Castaing, then AMC vice president of production and quality and now Renault executive vice president for International Operations. “It turns out to be one of the biggest mistakes Renault has ever made.” Officially, Renault has put the decision in the past. But according to Francois Castaing and other insiders, many company officials still “tremendously regret leaving the U.S.” and were repeatedly reminded of this unforgettable moment when making globalization decisions.

(Sedgwick, D. 9/1/97, Automotive News Europe, emphasis added)

It has been nearly a quarter of a century since Walsh and Ungson (1991:61) penned their influential article on organizational memory. They defined the construct as the “stored information from an organization’s history that can be brought to bear on present decisions.” A flurry of work ensued, focused largely on examining the structure of memory, i.e., the organization of retention that enabled remembering and the processes by which information was acquired, stored and retrieved. Nissley and Casey (2002), for instance, explored how corporate museums, as a retainer of organizational memory, were used strategically to develop organizational image and reputation. Schwartz (1996) explained historical processes, examining how, during World War II, images of Abraham Lincoln were invoked by U. S. government agencies as cues to interpret, motivate, legitimate, and rationalize the experience of war for its citizens. Through an analysis of internal bulletins produced at a French aeronautics firm, Anteby and Molnar (2012) demonstrated the endurance of collective memory over time. Lastly, Moorman and Miner (1998) elaborated the procedural and declarative components of organizational memory to investigate their role in organizational improvisation.
As insightful as this work has been, it has focused largely on the developmental processes by which memory is encoded, stored, and retrieved in organizations, rather than its effects on organizations. To date, there has been limited theoretical advancement beyond Walsh and Ungson’s original formulation (Casey & Olivera, 2011). And, the call that Walsh and Ungson (1991: 62) issued remains largely unanswered: “we need to investigate precise ways by which the use of memory is consequential to organizational outcomes and performance” (emphasis added).

We take up their charge by advancing the construct of competitive memory, which we view as an integral piece of an organization’s memory that operates in the strategic context of interfirm rivalry. We define competitive memory as a firm’s dynamic capability consisting of stored information from its past competitive interaction with a given rival that can be brought to bear on present or future competitive actions. We argue that competitive memory is essentially relational and construed by rivals within a competitive set (i.e., a focal firm and its competitors) about one another. Accordingly, as the rivals within a competitive set interact in the market, competitive memory drives their own strategic decisions, actions, and advantages, as well as their expectations about their competitors. Moreover, because competitive memory is dynamic, it is in flux and necessitates continual updating, as firms learn from experience and as they engage in deliberate tests or memory trials, i.e., tentative or small-scale actions by firms that draw on competitive memories to test anticipated rivals’ responses, to affirm or verify previous learnings or to explore new possibilities. We propose that memory trials are more likely to be launched against rivals with whom the firms’ competitive memory may no longer be salient and to take the form of strategic skirmishes in peripheral markets.
Drawing from relevant literatures, we build on this line of reasoning to address the following questions: How will rivals retrieve and act upon their memories when they compete? How will competitive memory affect a focal firm’s competitive advantages? Lastly, how will competitors test or verify the reliability and applicability of their competitive memory? To answer these questions, we first develop the conceptual foundations of competitive memory, drawing on organizational theory and strategic management research in order to identify the major components and functions of competitive memory. This enables us to relate competitive memory to theoretically adjacent cognitive constructs, and especially, to organizational learning. Following this, we develop a conceptual framework and advance a series of propositions that articulate how competitive memory can affect the competitive actions of firms and their rivals.

We believe that examining how competitive memory works as a dynamic, strategic capability in market competition necessitates revisiting our conceptualization of memory. Extant research on memory tends to emphasize how organizations retain the past and, especially, to highlight the structure of memory storage, in museum-like “bins” identified by Walsh and Ungson (1991: 81) that include individuals, culture, transformations, ecology and external archives. However, we focus on a relatively overlooked argument in Walsh and Ungson (1991), i.e., that organizational memory is the mechanism through which organizations retain and make organizational knowledge accessible. This leads us to elaborate two particular extensions that conjoin the literatures on organizational memory and interfirm rivalry.

We make the first extension by taking the notion of mechanisms seriously, emphasizing how organizational memory itself functions as a mechanism, or as the cogs and wheels that motor organizational behavior (Davis & Marquis, 2005). We theorize organizational memory as a dynamic capability that enables organizations to use historical information in enacting strategic
behavior and securing competitive advantages. Theorizing memory as a strategic mechanism highlights the ongoing processes that enrich and modify organizational memory in order to ensure its continuing effectiveness and accuracy in guiding organizations’ competitive actions. Our contribution is to offer a complement to the existing literature on competitive cognition, which has tended to use a static approach in studying organizations’ perceptions, identification, and categorization of their rivals.

Our second extension is to examine organizational memory in the context of strategic behavior, and, in particular, competition. Although research in organizational memory has explored its effects on a wide range of organizational outcomes (see, for instance, Moorman & Miner, 1998; Anteby & Molnar, 2012; Moorman & Miner, 1997), neglected has been an understanding of the role of organizational memory in market positioning and strategic competition. Although a small group of scholars in the strategic management literature have begun to take a cognitive approach to conceptualizing how firms identify (Porac, Thomas, Wilson, Paton, & Kanfer, 1995; Clark & Montgomery, 1999) and categorize (Hodgkinson & Johnson, 1994) competitors, as well as strategic (Reger & Huff, 1993) and competitive groups (Porac et al., 1995), they have overlooked the role of organizational memory. These oversights are consequential. As reflected in the quote that opens up our chapter, competitors do integrate what they remember from the past in their strategic decision-making; thus, used wisely, competitive memory can become an important organizational capability and source of competitive advantage. We begin by exploring the content and processes that constitute competitive memory.
COMPETITIVE MEMORY AND COMPETITIVE ADVANTAGE

We draw from the relevant literatures in organizational theory and strategic management, as well as the related domain of cognition, to conceptualize competitive memory, focusing on its content (procedural and declarative elements), and processes of access or retrieval (automatic or deliberate selection).

The Content of Competitive Memory: Procedural and Declarative Elements

Consistent with a large body of literature (Cohen & Levinthal, 1990, 1994; Cyert & March, 1963; Daft & Weick, 1984; Gavetti, Greve, Levinthal, & Ocasio, 2012; Walsh & Ungson, 1991), we treat memory as an organizational phenomenon. We argue that, as “mental entities capable of thought” (Sandelands & Stablein, 1987: 136), organizations process, use, and store information, creating an organizational memory in the form of shared beliefs, knowledge, causal assumptions, norms, and behaviors that are distinct from the memory of individuals within the organization. Walsh and Ungson (1991) conceptualized organizational memory as being housed in five bins internal to organizations -- individuals, culture, transformations, structure, and ecology – as well as in bins and archives external to the organization, such as analyst reports, media articles, historical narratives. Since Walsh and Ungson’s (1991) foundational theorization, their definition of organizational memory primarily in terms of its storehouse function has persisted.

An alternative perspective emerged subsequently, which views memory not simply as knowledge stored but as a dynamic process, continually constructed and reconstructed by organizations in interactions with their internal and external environment (e.g., Morgeson & Hofmann, 1999; Corbett, 2000). This perspective highlights how organizational beliefs about the past are continuously shaped (and reshaped) by current circumstances, problems, and
interactions, and, in turn, how different elements of the past become more or less relevant as these circumstances and problems change.

In line with this processual perspective, we view a firm’s competitive memory as a dynamic capability that can inform present or future competitive actions. Broadly speaking, competitive memory is part of an organization’s memory. However, one distinctive feature of competitive memory is that it is fundamentally relational in nature. Competitive memory centers on a focal firm and its particular rival(s) or a competitive set and is shaped by the relational nature of interfirm rivalries. As such, competitive memory incorporates relational interfaces, i.e., organizational perceptions derived from connections and/or relationships with other firms or strategic groups of firms in a specific market space. Competitive memory positions organizations in this market space and shapes their strategic behavior vis-à-vis other firms. Moreover, because competitive memory is a cognitive construct, it provides order and furnishes interpretation for firms to understand the nature of their rivalry and the drivers of that rivalry. Baum and Korn (1999) observed that rivalry is fundamentally a property of the relationship between two firms, established through dynamic interactions across markets and/or over time. Rivalry operates at such a level because it is at this level at which “actual competitive engagement occurs, in which competitors enact their strategies, test their opponents’ mettle and capabilities, defend their reputations, and signal their toughness, via their responses or lack of responses” (Chen & MacMillan, 1992: 541).

We contend that competitive memory includes both private, organization-specific components, such as firm-level knowledge about specific rivals, as well as public, industry-level components, such as competitive norms, institutional frameworks or dominant designs shared and constructed by incumbent organizations within an industry. Researchers have highlighted the
interdependence between these two components of memory (Walsh & Ungson, 1991).

Organization-specific memory typically integrates – or pulls down – what the firm views as important elements from the aggregate level of the industry. In parallel, industry-level memory, residing in reports of stock analysts, trade journals, and professional or industry museums, offers rich narratives and cultural repertoires or frames (e.g., Swidler, 1986) that incumbent organizations can draw upon to make sense of rivals’ competitive strategy and to use to craft their own.

Organization-specific competitive memory can be described in terms of its two constitutive elements: procedural and declarative (Moorman & Miner, 1998). Procedural memory is memory “for how things are done” (Cohen & Bacdayan, 1994: 404) or memory for “things you can do” (Berliner, 1994: 102); in competitive memory, this element retains knowledge about competitive tactics, processes, and routines. A key characteristic of procedural memory is that it becomes automatic or accessible unconsciously.

When procedural memory consists of a rich repertoire, it can provide a substantial resource for managerial choice; in this way, it improves the likelihood that managers will select effective competitive actions, given the strategic context and the actions of their rivals. The existence of a large number and wide variety of procedural routines in a firm’s memory defines a broad pool of possibilities that managers can search, act upon, and use to affect organizational performance, a process that describes organizational learning.

Organizations have been conceptualized as experiential learning systems that are “routine-based, history-dependent, and target-oriented” (Levitt & March, 1988: 319), a view that necessitates an organizational memory. Mezias and Glynn (1993) unpack this perspective to delineate three categories of routines – search, performance, and change – that affect
organizational learning, adaptive change, and innovation. These authors note that the “principal contribution of a learning framework… [is that]…it takes into account the effects of history, and in particular, how the organization’s past may affect its future capabilities for renewal and change” (Mezias & Glynn, 1993: 79). Thus, a learning perspective alerts us to how competitive memory, with its reservoir of retained procedural knowledge, routines, and actions, can be both an antecedent to, and an outcome of, ongoing learning by the organization. In particular, the organizationally remembered routines of search, performance and change (March, 1981) encoded in procedural memory, affect both the refinement of an organization’s existing competitive capabilities and its implementation of new, different or innovative competitive capabilities. Thus, the richness of procedural memory can enable a firm’s coherent action in the market and over time. Conversely, when procedural memory is sparse or lacking in rich possibilities, the pool in which managers can search for competitive options will be more limited; in turn, strategic actions are more likely to be limited, narrowly defined or even inert. In this case, organizational response or adaptation to new or changing competitive conditions is likely to be less effective.

In contrast to routine-heavy procedural memory, declarative memory is “memory for facts, events, or propositions” (Cohen, 1991: 137). A key characteristic of declarative memory is the variety of uses to which it can be put, as generic facts can be applied across a range of competitive contexts; thus, it is often less specific than procedural memory. Declarative knowledge is important to organizations for making sense of new competitive contexts, deriving meaning from unstructured markets, or using heuristic principles to predict outcomes. Because declarative memory typically is more theoretical and abstract, it has greater flexibility for learning and thus may be applied to numerous situations in many ways, thereby encouraging
greater novelty (Moorman & Miner, 1998). Declarative memory does not carry as much risk of falling into pre-existing or “use-specific” (Singley & Anderson, 1989) patterns as does procedural memory. However, since declarative knowledge is not committed to a particular use and thus potentially relevant in many different kinds of competitive situations, its use could lead to problematic managerial search (Singley & Anderson, 1989: 220) and delayed competitive actions and responses. In contrast, procedural memory is more likely to improve the speed of competitive action, thanks to its automatic nature.

The two elements of an organization’s competitive memory – procedural and declarative – are distinct but work best in concert to enable a firm’s strategic advantage. The routines of procedural memory appropriate, employ and sometimes recombine the data and propositions of declarative memory into revised routines or processes; one type of memory without the other is insufficient and yet, one working in opposition to the other is ineffective and potentially disastrous. To illustrate, consider the unsuccessful early international expansion of Jollibee Food Corporation. Jollibee, a Philippines-based hamburger chain, was the leader in its local fast food industry. Over the years, the company accumulated rich competitive experience through its long-time battles against domestic and multinational competitors. In the early 1990s, the company started to consider international expansion and Tony Kitchner was selected as the head of the international division. After spending 14 years in Pizza Hut’s Hong Kong office, Kitchner was equipped with good declarative knowledge of the “principles” important to international diversification, which he had extensively applied to his market entry strategy. Instead of taking advantage of the competitive routines and tactics that had worked well for Jollibee for decades, Kitchner implemented substantial customization of the menu in each new country market. This not only increased the operational costs, but also drove Jollibee’s loyal customers away. In this
example, the misuse of his declarative knowledge, along with the intention to be creative in a setting that required more procedural expertise to stay competitive, resulted in massive losses for Jollibee (Bartlett & O'Connell, 1998).

Procedural and declarative elements define the content of competitive memory; but, how this content is accessed and retrieved by the organization is a critical aspect of competitive memory, which we discuss next.

**Competitive Memory: Processes of Access and Retrieval**

As critical as content is, it is useful only to the extent that it can be accessed when needed by managers. To describe the access and retrieval processes of competitive memory, we build on the two major modes identified by Walsh and Ungson (1991): automatic retrieval and deliberate retrieval. Automatic retrieval of memory content covers cases whereby information relevant to present competitive decisions is drawn effortlessly and intuitively from competitive memory, partly as a function of the execution of some well-established or habitual sequences of action. One example of automatic retrieval occurs when present competitive behaviors (such as new product introduction or a new marketing campaign) are strictly based on previous practices and procedures that have been encoded in organizational routines and specifications. Not surprisingly, automatic retrieval is often tied to the procedural memory an organization possesses, which can amplify the speed of launching competitive actions.

Although automatic retrieval has the advantage of speed of processing (and, presumably, a speedy translation to action), it is not without its drawbacks. For one thing, it may lead to so-called “competency traps” in learning (Levinthal & March, 1981), where competitive decisions and actions of the past are continuously replicated in the present, limiting the pool of actions that managers see as appropriate choices; this, in turn, narrows the range of competitive behaviors
and their adaptability to new or different contexts. This reasoning is foreshadowed in organizational learning models, which have shown how “inferior alternatives with which the organization has competence are preferred to superior alternatives with which the organization lacks competence” (Mezias & Glynn, 1993: 83). Thus, as much as competitive memory may enable organizational adaption to changing market conditions, it can also be a constraint, if organizations rely largely on the automatic retrieval of well-worn, taken-for-granted practices.

Beyond automatic retrieval, more deliberate and purposeful retrieval of memory knowledge can also occur. In this case, the organization retrieves information consciously in a target-oriented process of organizational learning (e.g., Mezias & Glynn, 1993), often by making an analogy to a past competitive decision (Gavetti, Levinthal, & Rivkin, 2005) or a more comprehensive diagnosis of current conditions. In this process, competitive memory actually serves as a backdrop or perceptual lens for the comprehension of current events, helping construe these current events by keying them to the past. Schwartz (1996) suggested six steps for such a keying process: selection, scanning, event alignment, identification, value alignment and idealization.

Ideally, deliberate or purposeful retrieval of elements in competitive memory is aligned with the strategic objectives in a particular market context. And yet, such purposeful selection is vulnerable to the “paradox of success” (Levinthal & March, 1981) highlighted by organizational learning theorists. Essentially, firms learn to associate patterns of success and failure with particular routines in light of their experience; in other words, learning, like memory, is history-dependent (Levinthal & March, 1981). Consider the poor performance of Disneyland Resorts in Paris as an example. Disney penetrated the Japanese market successfully, with a standard set of routines (learned in the U.S. market) and little adaptation to the local setting. As a result, they
encoded these strategies into memory as successful ones and repeated this when they went to Paris; however, this reliance on their earlier success failed to take into account the very different market conditions in France. The result was that Disney lost its magic in Paris. In this example, success made Disney indifferent to the salient differences in the new market (Maznevski & Jonsen, 2006).

Both automatic and deliberate processes of retrieval can help managers frame a particular problem or opportunity in its historical context. Most often, it is deliberate or purposeful retrieval that is most helpful in competitive strategy formulation (Walsh & Ungson, 1991) because it takes into account the particular context for strategic action. As managers assess the similarities and differences between the past and the present, they should “treat memory as a pest” and attempt to discredit or doubt this retrieved information in the context of present conditions and opportunities (Weick, 1979: 221). In other words, competitive memory is most effective when managers can establish the predictive validity of the past for the present (or anticipated future). The uncontested use of past decisions can increase the likelihood of market errors or strategic mistakes.

To summarize, we have offered a conceptualization of organization-specific competitive memory in terms of both its content and processes of access and retrieval. We identified two key elements of content -- routine-based procedural memory and fact-based declarative memory – and two key modes of retrieval – automatic and deliberate. Although we have discussed these elements discreetly, we do not mean to imply that they are independent from each other; rather, they can combine (or recombine) in various ways interactively to affect a firm’s strategic decisions, actions and performance. We take up these effects on performance next.
COMPETITIVE MEMORY AND ORGANIZATIONAL PERFORMANCE

In the preceding discussion, we suggested that organizations have to learn how to deploy their competitive memory skillfully to launch competitive actions that are effective in the marketplace. However, the effectiveness of a focal firm’s competitive action usually depends on the reaction of its rivals. And rivals’ responses are often determined by their interpretations of their remembered past strategic behavior of the focal firm and anticipation of its future actions. If the focal firm knows and appreciates how its rivals process and retrieve the information stored in their competitive memories, we suggest that it can launch competitive actions to create competitive advantages.

Memory-Inconsistent Actions and Organizational Performance

Many studies in the competitive dynamics literature have shown that the characteristics of firms’ competitive actions and the responses of their rivals influence critical organizational outcomes, including: profitability (Chen & Miller, 1994; Miller & Chen, 1994; Young, Smith, & Grimm, 1996), relative market share (Ferrier, 2001), market value (Bettis & Weeks, 1987; Ferrier & Lee, 2002), and firm reputation (Basdeo, Smith, Grimm, Rindova, & Derfus, 2006). Generally speaking, such strategic advantages accrue to firms that can launch strategic moves that preempt or delay rivals from responding.

Porter (1980) noted that the ultimate effectiveness of any competitive action depends largely on whether that action goes unchallenged by rival, or, if it does not, on whether the rival’s response is delayed. Empirical evidence strongly supports Porter’s argument. Chen and Hambrick (1995) found that radical actions—actions that depart from previous competitive norms and/or surprise rivals—initiated by a focal firm are positively related to its performance. Similarly, research on competitive inertia (Miller & Chen, 1994) and strategic persistence (Audia,
Locke, & Smith, 2000) has shown that there is a negative relationship between the predictability of a firm’s competitive actions and its performance (Rindova, Ferrier, & Wiltbank, 2010). Lastly, research on hypercompetition has also found that firms can seize temporary advantages over rivals through aggressive competitive actions characterized by strategic surprise (D’Aveni, 1994).

Building on this research, we propose that the competitive memories of rivals provide important references for gauging the potential surprise of a focal firm’s strategic actions; a focal firm can gain competitive advantage by acting in ways that deviate from the routines or facts stored in rivals’ competitive memories. Such deviations are likely to surprise rivals which, in turn, should increase the delay in their competitive responses. We base this proposal on two reasons. First, when challenged by an attack that is very different from the past actions of the attacker, it is difficult for the responder to automatically retrieve and take advantage of its procedural routines. Second, due to the distinctiveness of the attack, it is equally difficult for the responder to make creative use of its declarative knowledge through controlled retrieval of information from its competitive memory. Hence, we propose that compared with memory “conformists,” who compete in a highly consistent manner over time, memory “iconoclasts,” who are skillful at utilizing diverse competitive methods and deviating from their conventional modes of competition, may surprise their rivals (Chen & MacMillan, 1992), develop appeals that are difficult to imitate and retaliate against (Chen & Miller, 1994), thus resulting in longer monopolistic position and greater competitive advantage.

Consider the turnaround story of Swatch as an example. In the early 1980s, the Swatch group had a near death experience. Under the leadership of Nicolas Hayek, the launch of Swatch timepieces overhauled the company’s conventional way of competing. Different from the traditional “Swiss-made” watches that emphasized watchmaker’s craftsmanship, the Swatch was
introduced as an inexpensive, good quality watch that was fun and fashionable, and sold in many free-standing Swatch stores. The launch of Swatch completely surprised rivals; as a result, they were not able to come up with an effective response for years. Consequently, Swatch enjoyed significant competitive advantage; just six years after its debut, the Swatch group had placed 70 million Swatches on customers’ wrists (Morrison & Bouquet, 1999; Raffaelli, 2013).

Following this line of thought, we propose:

\[ P1: \text{The degree of consistency between a focal firm’s strategic actions and rivals’ competitive memory (of those actions) is positively related to the speed of this rival’s response and negatively related to endurance of the focal firm’s competitive advantages.} \]

\[ P1a: \text{A focal firm’s strategic action that can be easily comprehended by rivals using their competitive memories will result in faster responses from the rivals and hence shorter initial competitive advantages for the focal firm.} \]

\[ P1b: \text{A focal firm’s strategic action that can not be comprehended by rivals using their competitive memories will result in delayed responses from the rivals and longer initial competitive advantages for the focal firm.} \]

Above, we suggest that a focal firm’s strategic actions that surprise rivals (i.e. are inconsistent with rivals’ competitive memories) can result in competitive advantages for the focal firm (see P1, a and b). Such actions however may surprise external audiences as well, who may play a critical role in the creation of the focal firm’s competitive advantage. As a result, we further propose that the positive effect for memory-inconsistent actions on competitive advantage is moderated by the comprehensibility of those actions by external audiences and the framing skills of the focal organization to make those actions more comprehensible and favorable.

There is a burgeoning literature suggesting that competitive advantages are defined not only by the resource conditions and strategic choices of individual organizations, but also by the knowledge, expectations and sensemaking of external audiences that interact with these
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organizations in an industry. External audiences include constituents who engage in exchanges in product, factor, labor, and capital markets, as well as institutional intermediaries, such as stock analysts and industry analysts that transmit and magnify information about organizations (DiMaggio & Powell, 1984; Thornton, Ocasio & Lounsbury, 2012).

According to Rindova and Fombrun (1999), external audiences alter competitive conditions and contribute to the construction of competitive advantages through three types of processes: 1) resource allocations, 2) definitions of success, and 3) the development of industry paradigms. External audiences allocate the resources that they control by making decisions about buying and selling goods or services, investing in organizations, and seeking employment. Each audience decision shifts resources to alternative uses and contributes to determining which organizations enjoy competitive advantages. For instance, the opinions and recommendations of movie critics affect the decisions of movie-goers and hence the financial performance of the movie producer. Similarly, media reports can render some firms conducting initial public offerings more desirable, and therefore more legitimate, by increasing investors’ exposure to information about these firms and by framing this information positively (Pollock & Rindova, 2003).

Additionally, external audiences express their judgments of organizations, not only through their resource allocation, but also through direct evaluations about the relative success of organizations in meeting their expectations. Rank-ordering organizations in reputational standings, and featuring them as exemplars, are common ways through which external audiences provide organizations with the definition of success. Not surprisingly, organizations defined as successful by external audiences will have better access to resources and more opportunities to explore. Apple is a good example of this. Although the iPad may not be technically superior to
other tablets on the market, the reputation of Apple conferred by the popular press, academics, and financial analysts has lent it advantages over its competitors.

Finally, external audiences affect the development of industry paradigms, i.e., shared understandings about how organizations in an industry create value, through their interpretations of successes (and failures) and resource allocations. As they interpret industry conditions, investors, bankers and analysts, for instance, confirm an industry paradigm by authorizing flows of financial capital to perceived "winners" and denying funds to perceived "losers." For instance, Tripsas and Gavetti (2000) found that even though Polaroid’s new 1996 digital camera was not superior than those of its 40-plus competitors, its dominant position in instant photography influenced the proliferation of awards to the new camera and elicited confidence that the company will win the game of digital imaging.

Recognizing the important role of external audiences, institutional theorists argued that organizations that do not meet the expectations of external audiences risk legitimacy (DiMaggio & Powell, 1984). The threat of illegitimacy undermines organizations’ competitive advantage because it may lead audiences to question (or even withhold) resource allocations and favorable evaluations of the firm’s reputation. Consequently, even the best-targeted investments may not contribute to competitive advantage if the focal organization does not demonstrate its social fitness to external audiences (e.g., Navis & Glynn, 2010). In interorganizational relations, actors and objects that resist categorization can suffer penalties because they threaten reigning interpretive frameworks or create identity confusion for external audiences.

Following this line of thought, we propose that the positive effect of memory-inconsistent actions on organizational performance will be moderated by the perceptions and understanding of external audiences, as follows:
P2: The positive effect of memory-inconsistent actions on organizational performance is moderated by the comprehensibility of those actions by external audiences.

If audience comprehension and sanctioning is so important, what can organizations do to enhance favorable interpretations and evaluations by external audiences? We propose that managers, as skilled rhetoricians or cultural operatives, can effectively engage in framing by using linguistic or rhetorical tools such as metaphors, catchphrases, slogans, contrasts, spin and stories (Cornelissen, Holt & Zundel, 2012; Fairhurst, 2010; Sonenshein, 2010) to shape positive interpretations by external audiences.

Within the broad area of management and organization theory, the framing construct has been extensively used and stretched to encompass a whole range of cognitive, semantic, and cultural processes in a variety of organizational and institutional contexts (Cornelissen & Werner, 2014). Framing has been used, for example, to explain organization’s internal processes of sensemaking (Weick, 1995) as well as audiences’ external processes of meaning-making; moreover, framing has been shown to be essential for mobilizing organizational support and for gaining legitimacy (Creed, Langstraat & Scully, 2002).

Goffman (1974) describes framing as an interpretation; he theorizes that framing involves an actor’s actively figuring out what is going on, without which any action or utterance could not be understood meaningfully. The act of framing involves the ways in which actors use language or other symbolic gestures either to reinforce existing interpretive understandings or to call new understandings into being. Framing has significant consequences for organizations in that they can bind external audiences to a set of capabilities and a course of action, and blind them to alternative options (Benner & Tripsas, 2012). Kaplan (2008: 744) explains: “which interests became salient depended on how actors frame the situation. Skilled social actors found frames that made others think that what was proposed was in their best interests.” Kaplan also
noted that skilled actors used frames to deftly mediate between their own interests and those of others, which may successfully help them win the support of external audiences.

Following this line of thought, we propose that the positive effect of memory-inconsistent actions on organizational performance will be moderated by the focal firm’s framing of its actions for external audiences.

*P3: The positive effect of memory-inconsistent actions on organizational performance is moderated by the focal firm’s ability to favorably frame its actions for external audiences.*

To summarize, built upon foundational ideas about competitive memory (discussed in the previous section), we shifted perspective from the memory of the focal firm to that of its rivals. We argue that the effectiveness of a focal firm’s competitive action not only depends on how it effectively draws from its own competitive memory, but also how its rivals understand these actions. When rivals perceive the focal firm’s actions as inconsistent with its past competitive actions, their marketplace responses are more likely to be delayed, thereby giving competitive advantages to the focal firm, at least initially. We also identified two contingencies that will govern the positive effects for memory-inconsistent strategic moves: comprehensibility (by external audiences) and framing (by the focal firm).

According to competitive dynamics research (Ferrier, 2001), firms must constantly defend their market positions as they strive for competitive advantages. The dynamic nature of interfirm rivalry suggests that a firm may need to continuously update its competitive memory. Next, we discuss how firms can do so through purposive learning gleaned from conducting memory trials.

**STRATEGIC LEARNING THROUGH MEMORY TRIALS**

Schumpeter (1950) described interfirm rivalry as an incessant race to get or stay ahead of one’s competitors. The dynamic nature of interfirm rivalry suggests that competitive memory
should be correspondingly dynamic. Attesting to the dynamic nature of competitive memory, Feldman (2000: 623) argued that routines, an important retention facility of competitive memory, are themselves continually changing with continuous flows of “repairing, expanding and striving that change routines.” Similarly, Walsh and Ungson (1991) cautioned that decision makers should not blindly re-enact the past but, instead, work to establish the predictive validity of the past in the present. Weick (1979: 206) insightfully pointed out that “If an organization is to learn anything, then ….the accuracy of that memory, and the conditions under which that memory is treated as a constraint, become crucial characteristics of organizing.”

To date, there has been little theorizing (to our knowledge) about the processes through which organizations attempt to test the accuracy of their memory. We suggest that organizations update their competitive memory based on the feedback they receive from rivals’ responses to their strategic actions. Usually, competitive actions are taken to improve the competitive position of the organization. We propose that organizations may also initiate competitive actions that are experimental in nature to test the reliability of their competitive memory. We call these experimental actions memory trials, which we view as explicit opportunities for organizational learning. Next, we discuss the conditions under which a focal firm is more likely to engage in memory trials and why memory trials are more likely to take the form of strategic skirmishes in peripheral markets.

Given its relational nature, an organization’s competitive memory is associated with each of its particular rivals. However, not all of these rivalry-centered memories are equally significant or salient to the focal firm; rather, they likely differ by the significance or the salience of the rival in particular markets. As a result, we expect that the likelihood for a focal firm to engage in memory trials relative to a particular rival will be contingent on: first, the nature of the
rivalry, especially in terms of the negativity of historical interactions, and, second, the nature of the focal firm’s linkages to the rival, especially the complexity of ties that define their competition.

First, we propose that the degree of negativity embedded historically in a focal firm’s competitive memory affects its likelihood of conducting memory trials. Research in many areas of psychology has revealed that it is usually hard to minimize or walk away from unpleasant interactions. Negative events and negative relationships have a greater impact on human attitudes, cognition, physiological response, and behavior than do positive or neutral events (Taylor, 1991). Colloquially, one might say: Once bitten, twice shy.

We expect that a focal organization is less likely to engage in memory trials against a rival when its recent competitive interaction with this rival is negative. For instance, the literature on price competition shows that organizations that experience significant losses in a previous price war are generally less likely to poke or challenge rivals with whom they fought (Rao, Bergen & Davis, 2000). We return to the Philippines-based burger chain, Jollibee, as an illustration. In 1981, McDonald’s opened its first store in the Philippines. The CEO of Jollibee, Tan Caktiong decided to fight back using the very things that made McDonald's successful: the mascot, the colorful uniforms of the crew, their cheerful greetings, French fries, fried chicken, and a burger aimed at Filipino tastes but priced much lower. The result was that McDonald’s lost the battle miserably. By 1984, Jollibee had become the dominant player in the local fast-food market. The Economist (February 28, 2002) declared: “The Philippines is a huge embarrassment to McDonald's." Due to its very negative memory of the competitive interaction with Jollibee, McDonald’s was reluctant to challenge Jollibee for years, which has partially contributed to the
leadership position of Jollibee in the Philippines that has lasted until now (Bartlett & O'Connell, 1998).

Second, the complexity and number of linkages between a focal firm and a given rival decrease the focal firm’s likelihood of using memory trails directed towards this rival. The structural embeddedness argument (Granovetter, 1985) suggests that action in an economic relationship is embedded in a network of other economic and social relationships. Gimeno and Woo (1996) contend that two competitors are interdependent through multiple simultaneous relationships, such as common geographic/product presence, supplier-buyer relationship, alliance, interlocked directors or common institutional ownership, a situation they termed as economic multiplexity. Economic multiplexity appears to be a relatively frequent phenomenon, especially among large conglomerates. As Hamel and Prahalad (1994) put it, “on any given day… AT&T might find Motorola to be a supplier, a buyer, a competitor, and a partner.” As the number of interorganizational linkages between two rivals increases, the frequency the focal organization will “meet” a given rival through multiple networks of ties will increase. As a result, the focal organization may have multiple channels to verify the accuracy of its competitive memory, reducing its need to do so through launching competitive actions in memory trials. Hence, we propose:

\( P4: \text{The likelihood for a firm to engage in rivalry-focused memory trials depends upon the history of interaction and the complexity of linkages across markets with the rival.} \)

\( P4a: \text{A firm is less likely to engage in rivalry-focused memory trials against a rival with whom it has a very negative history stored in competitive memory.} \)

\( P4b: \text{A firm is less likely to engage in rivalry-focused memory trials against a rival with whom it has a large number of complex interorganizational ties.} \)

As we have proposed, firms may engage in memory trials under certain competitive conditions; now, the question becomes how and where the firm launches such trials. Given that
the purpose of memory trials is to test or verify the accuracy of an organization’s memory and not to escalate the rivalry, we argue that the firm initiating memory trials will likely try to avoid aggressive competitive responses from rivals. Based on this logic, we propose that memory trials are more likely to take the form of strategic skirmishes in peripheral markets for several reasons.

First, previous research argues that firms should anticipate fast and aggressive competitive responses from rivals when they are challenged in their important markets. Chen and MacMillan (1992), for instance, found that competitors are generally motivated to respond to, and to make quicker and stronger responses, if they view an action as a threat to important markets. Similarly, Tsai, MacMillan and Low (1991) showed that competitors who are highly dependent on a given market respond aggressively to the threat of a new entrant into that market. Organizations are more likely to be aware of an action taken in their important markets because such actions will generally be considered more threatening. Additionally, since organizations generally are very sensitive to the revenues and profits derived from key markets, the more an attacker’s move is in the organization’s key markets, the greater the response payoff is involved for the organization and, consequently, the more motivated the organization will be to launch a speedy response. Therefore, we propose that to avoid escalating competitive tension, organizations are more likely to launch memory trials in peripheral markets.

Second, a competitor’s action carries a message, expressed or implied, that other organizations must evaluate and process in order to compete successfully. Porter (1980: 75) noted that “the behavior of competitors provides signals in a myriad of ways. Market signals are indirect means of communicating in the market place, and most if not all of a competitor’s behavior can carry information that can aid in competitive analysis and strategy formulation.” Competitive actions vary in terms of magnitude. Major actions involve significant commitments
of specific, distinctive resources and are difficult to implement and reverse (Yu & Cannella, 2007). Research has shown that a rival feels more threatened by major actions and thus is more likely to play tit-for-tat in its competitive response. Accordingly, we propose that organizations are more likely to launch memory trials in the form of strategic skirmishes, i.e., targeted moves aimed at gaining knowledge about rivals’ capabilities, objectives, and market positions, and not directly aimed at either improving market position or performance or significantly committing resources. Hence, we propose,

**P5:** Organizations are more likely to launch memory trials to test stored rivalry-focused competitive knowledge using strategic skirmishes and in peripheral markets.

**DISCUSSION**

As a first step to linking organizational memory and competitive actions, we advanced the construct of “competitive memory,” delineating two of its constituent elements -- procedural and declarative -- and two important mechanisms for the retrieval of stored information -- automatic and deliberative. We argued that, as much as a firm’s history-dependent competitive memory can enable (or constrain) its own strategic decisions and actions, rivals too develop competitive memories about a focal firm’s behaviors which they use to filter and interpret its strategic activities.

We advanced a series of propositions that focused first, on the effects of memory-inconsistent strategic actions by focal firms on rival responses that can increase (or decrease) competitive advantage. More specifically, we argued that when a focal firm’s actions are inconsistent with its past routines (stored in its rivals’ competitive memories), it can create an initial competitive advantage (P1, 1a, 1b) by delaying rivals’ responses. Additionally, we contended that this positive effect for memory-inconsistent actions on competitive advantage is
moderated by the comprehensibility of those actions by external audiences (P2) and the framing skills of the focal organization to make those actions more comprehensible and favorable (P3).

In contrast to dominant approaches that take a relatively static view of memory and focus on an organization’s storage system, we propose that competitive memory is dynamic. To update or verify their competitive memories, we argued that organizations engage in rivalry-focused memory trials. Such trials are more likely undertaken towards rivals with whom the focal organization does not have a history of negative interactions (P4a) and are not linked by complex and numerous interorganizational ties (P4b). Moreover, we proposed that organizations engage in memory trials with targeted rivals using strategic skirmishes in peripheral markets (P5).

We believe that our work makes several important theoretical contributions. First, we contribute to the organizational memory literature by identifying and elaborating competitive memory, an important and often overlooked component of organizational memory. The unique feature that differentiates competitive memory is that it is relational in nature, with knowledge stored specific to its rivals and competitive interactions. Our conceptualization of competitive memory departs from the existing literature by emphasizing the dynamic process through which memory is constructed, changed, and validated with experience and over time. We advanced the notion of memory trials to highlight the importance of testing the reliability and accuracy of organizational memory and to create opportunities for continued learning and knowledge generation, which, in turn, becomes incorporated into an organization’s competitive memory.

Second, our research contributes to the strategic management and competition literature. Over the past several decades, competitive cognition has garnered scholars’ attention but has been relatively under-studied to date. We addressed this gap by bringing organizational memory to the competitive context. We sought to shed light on how memory, as firm cognition,
challenges the static approach of identifying competitive blind spots and categorizing competitor and strategic groups. The existing work on these topics has primarily examined these phenomena as static snapshots rather than as dynamic processes of reconsidering or updating organizations’ understanding of their competitors.

By combining insights from both the organizational theory and strategic management literatures, our work also has important theoretical and managerial implications. To start, as Glynn (1997) noted, memorialized events become institutionalized over time; in turn, such memories affect the organization’s future capacity to learn and change. And yet, as custodians of competitive memory, organizational members are also active memory-makers, involved in “remembering the future,” so to speak. Thus, competitive memory can be both retrospective and prospective, cognitively marking the present to remember it in the future. By analyzing the extent to which an organization resurrects its past glories, we can glean how organizations can be captive prisoners (or free agents) of their own histories; in this way, competitive memory can play a significant role in shaping organizational inertia and change.

Further, competitive memory, as an important strategic resource, can enable an organization to obtain superior competitive advantages but can also disable those advantages when used unthinkingly or inappropriately in a new environmental context. For instance, Nystrom and Starbuck (1984: 53) wrote, “Encased learning produces blindness and rigidity that may breed full-blown crises.” The recognition of these potential limitations led March (1972) to conclude that memory is an enemy of organizations, an enemy that can reinforce a single-loop learning style that maintains the status quo (Argyris & Schon, 1978). Evidence that memory can hinder organizational change abounds. Dougherty (1992), for instance, found that product development teams with well-established procedures are the least likely to deviate from pre-
existing action patterns. Similarly, Weick (1996:1) describes how experienced firefighters were unwilling to “drop their packs and tools” to “run faster” to escape catastrophic death. He speculates that this tendency was due to firefighters “overlearning” certain skills—a characteristic of procedural memory (Neustadt & May, 1986).

Additionally, researchers have also recognized that individuals, with their “encased learnings,” may obstruct a change effort. Starbuck, Greve and Hedberg (1978: 133) observed that managers overestimate the generality of their past decision rules and their past analytic techniques, so they underestimate the speed with which their expertise becomes obsolete. Thus, as much as competitive memory can enable strategic advantage, it can also disable it by becoming stuck in the past. An important mechanism for overcoming such inertial forces is by deliberate retrieval (rather than automatic retrieval) of existing knowledge or routines that target specific objectives for which memory can be deployed.

In terms of the practical implications of competitive memory, there are several. Perhaps the most important one is related to one of the most important makers or keepers of memory: organizational employees. Employee tenure or length of service in the organization is likely associated with the content and processes of competitive memory. As Pfeffer (1983) noted, an understanding of an organization’s historical and institutionalized practices and beliefs comes with employees’ tenure in the organization. Long-tenured employees can facilitate the retrieval of information from organizational memory. However, Morris (1973) and Pfeffer (1983) also point out that an organization dominated by employees of long-standing tenure is less attractive to younger, ambitious individuals who may be seeking new ideas or change. In such circumstances, the organization is poised to purposefully retrieve information from memory, but it may no longer acquire information effectively, as through memory trials, for example. Pfeffer
(1983) concluded that an organization that is marked by an unbroken distribution in the length of service of its employees is likely to be most effective; we believe his thinking extends to the development and retrieval of the firm’s competitive memory.

Our study offers several fruitful avenues for future research. First, to better understand the phenomenon of competitive memory, it is critical to examine it empirically. The challenge here is determining ways to measure competitive memory accurately and appropriately. We propose that Walsh and Ungson (196)'s storage bin definition of organizational memory offers a promising starting point. In fact, prior studies have already made inroads using such an approach. For instance, Anteby and Molnar (2012) used the internal bulletins produced at a French aeronautics firm over almost 50 years to capture the collective memory of the organization. Nissley and Casey (2002) proposed that the corporate museum is a form of organizational memory that can be used strategically by organizations to develop their identity and image. Such storage bins could reveal the content and structure of competitive memory and how it is partitioned by the organization’s perception of key rivals. To capture competitive memory, a necessary first step is to identify those competitors the organization views as significant; a second step then would involve examining dyad-specific competitive memory and how it is retained in different storage bins, accessed, and retrieved. Moreover, by examining relationships between not only the focal firm and its individual rivals, but among the rivals themselves, we can gain insight into the cognitive construal of a firm’s competitive landscape and relate this to their strategic decisions and actions.

Second, we encourage future researchers to investigate the occurrence of memory trials, and especially, their antecedents and consequences. The concept of memory trials points to the importance of studying situations of disequilibrium. Equilibrium is the central construct in game
theory. It represents a set of choices by players in which no player can improve his or her utility by unilaterally deviating from his or her choice.

Interestingly, in many economic and social interactions, cooperative or collusive outcomes may be observed even though players could benefit unilaterally by deviating. In those situations, cooperative or collusive outcomes are sustained by memories or beliefs that unilateral deviation would be met with an aggressive future response. For example, a potential entrant may choose not to enter a market because of a memory of a previous event when entering the market resulted in predatory response by the incumbent. Or, a rival may refrain from undercutting the market price because of a memory that other incumbents retaliated in the past.

In these cases, behaviors in equilibrium are sustained by memories about what would happen out of the equilibrium (Kreps, 1989). Since out-of-equilibrium memories are linked to expectations of actions that do not occur in equilibrium and therefore are rarely observed, prior research leaves open questions about how such memories might be reinforced in a market. In other words, how can a firm know what would happen if it is not going to deviate or cheat? How can competitors learn? And how can they test the reliability of their beliefs about competitive response? When, where, and with whom are they more likely to do so? How do organizations forget or update their memories? We believe that a refined analysis of memory trials might help us answer these intriguing questions.

Lastly, we acknowledge that we were not able to delve into the influence of different types of organization-specific memories on competitive actions, but leave this to future researchers. Moorman and Miner (1998) proposed that procedural memory and declarative memory will influence the speed and novelty of improvisation differently. We expect that due to the differences in content and retrieval processes, these two elements of competitive memory
should affect the speed, scope, type, and magnitude of the competitive actions differently as well. We suspect that procedural memory will be the most effective to launch tactical actions (actions that do not require substantial resource commitment and internal coordination), speedy actions, and single-market/single-target actions. And, by contrast, declarative memory will be most useful when a firm wants to launch strategic actions and multi-market/multi-target actions.

To conclude, our foray into understanding competitive memory revealed how cognition can productively inform strategy research. Through our examination of competitive memory and its interdependent relationship with organizations’ competitive actions, we hope to stimulate future research interest on this important but often overlooked aspect of organizational strategy.
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