Special Issue:
Twenty Years of
Resource-Based Theory

Journal of Management
Vol. XX No. X, Month XXXX xx-xx
DOI: 10.1177/0149206310391805

Special Issue Editorial

The Future of Resource-Based Theory: Revitalization or Decline?

Jay Barney
The Ohio State University
David J. Ketchen Jr.
Auburn University
Mike Wright
Nottingham University Business School and EMLyon

Since the 1991 publication of the first Journal of Management *special issue devoted to resource-based inquiry, resource-based theory (RBT) has evolved from a nascent, upstart perspective to one of the most prominent and powerful theories for understanding organizations. Indeed, 20 years after that landmark issue, RBT appears to have reached maturity as a theory. One implication of this maturity is that RBT lies at a critical juncture, one that will be followed either by revitalization of the theory or by its decline. In this introductory article, the authors provide a brief overview of the contributions provided by the commentaries and articles contained in this third* Journal of Management special issue *on RBT. These contributions center on five themes: interlinkages with other perspectives, processes of resource acquisition and development, the micro-foundations of RBT, RBT and sustainability, and method and measurement issues. Their view is that the commentaries and articles collectively offer a foundation for extending RBT in meaningful new directions and steering clear of decline. They also offer their thoughts about some key opportunities within each of the themes for further revitalizing research involving the RBT.*

Keywords: *resource-based theory; resource-based view; resources*

Acknowledgments: We offer our thanks to the Journal of Management's *editor, Talya Bauer, and managing editor, Layla Mansfield, for their help and encouragement. The support of the Lowder Center for Family Business and Entrepreneurship at Auburn University and of Barclays Private Equity and Ernst & Young for the Center for Management Buy-Out Research at Nottingham University is gratefully acknowledged.*

Corresponding author: Jay Barney, Fisher College of Business, The Ohio State University, Columbus, OH 43210, USA

Email: barney.8@osu.edu

In 1991, the resource-based view (RBV) of the firm was prominent enough to warrant a special research forum in the *Journal of Management* edited by Jay Barney. The articles in this forum helped establish that resources and capabilities are important for understanding the sources of sustained competitive advantage for firms. They also helped define resources and capabilities as bundles of tangible and intangible assets, including a firm's management skills, its organizational processes and routines, and the information and knowledge it controls that can be used by firms to help choose and implement strategies. Within the context of this overall theme, various special forum articles focused on laying out the fundamental tenets of the RBV (Barney, 1991), resources and diversification (Harrison, Hitt, Hoskisson, & Ireland, 1991), chief executive officers as resources (Castanias & Helfat, 1991), organizational identity as a source of sustained competitive advantage (Fiol, 1991), and whether RBV was evolving as a new theory of the firm (Conner, 1991).

Twenty years later, resource-based theory (RBT) is widely acknowledged as one of the most prominent and powerful theories for describing, explaining, and predicting organizational relationships. This was not always the case, of course. Like many theories, RBT has undergone an evolution that mirrors the first three stages of the product life cycle (cf. Levitt, 1965): introduction, growth, and maturity. Table 1 summarizes selected key papers in the development of RBT over these stages.

Although some earlier works had identified organizational resources as important (e.g., Penrose, 1959), an RBV of the firm did not begin to take shape until the 1980s. This decade was dominated by frameworks that focused externally, such as Porter's (1980) five-forces model, but the gradual emergence of the RBV began to redirect attention inside of organizations (Hoskisson, Hitt, Wan, & Yiu, 1999). As shown in Table 1, a series of important articles provided insights into how phenomena such as organizational culture (Barney, 1986), causal ambiguity (Lippman & Rumelt, 1982), and resources in general (Wernerfelt, 1984) could contribute to organizational success.

The 1991 issue appears to have marked a shift from the introduction phase to the growth phase of the RBT. Indeed, as Table 1 shows, the proliferation of resource-based research within strategic management and related disciplines following the 1991 special forum was both dramatic and controversial. Landmark work published in 1992 and 1993 further advanced and delineated key elements of the RBV (Amit & Schoemaker, 1993; Kogut & Zander, 1992; Mahoney & Pandian, 1992; Peteraf, 1993). By 1996, the theory was developed enough to fuel the annual best paper award winner at the *Academy of Management Journal* (i.e., Miller & Shamsie, 1996). By 2001, the theory was prominent enough to attract the slings and arrows of critics (e.g., Priem & Butler, 2001a, 2001b). Also in 2001, the three of us edited a second special issue that attempted to assess the contributions of the RBV 10 years after 1991 (Barney, Wright, & Ketchen, 2001). In creating that issue, we asked the contributors to the 1991 issue to revisit their earlier articles in light of the tremendous growth of resource-based inquiry. To consolidate the gains made outside the RBV's main application within strategic management, we also published full-length articles that analyzed the implications of the RBV for other important fields, including human resource management (Wright, Dunford, & Snell, 2001), economics (Lockett & Thompson, 2001), entrepreneurship (Alvarez & Busenitz, 2001), marketing (Srivastava, Fahey, & Christensen, 2001), and international business (Peng, 2001).

Table 1
The Life Cycle of Resource-Based Theory: Selected Key Papers

Author(s) and Date	Key Contribution
Introduction stage	
Penrose, 1959	Theorized about how a firm's resources influence its growth; in particular, growth is constrained when resources are inadequate
Lippman & Rumelt, 1982	Explained the concepts of inimitability and causal ambiguity; these concepts became core elements of the resource-based view (RBV)
Wernerfelt, 1984	Emphasized the value of focusing on firms' resources rather than on their products; coined the term *resource-based view*
Barney, 1986	Theorized about how organizational culture could be a source of sustained competitive advantage
Dierickx & Cool, 1989	Developed the notion that resources are especially useful when no effective substitutes are available
Barney, 1991	Presented and developed the core tenets of RBV; presented a detailed definition of resources; and articulated the full set of characteristics that make a resource a potential source of competitive advantage (i.e., valuable, rare, inimitable, and nonsubstitutable)
Harrison, Hitt, Hoskisson, & Ireland, 1991	Highlighted the value of resources and synergy between resources in the context of diversification
Castanias & Helfat, 1991	Characterized CEOs as firm resources that possess varying (idiosyncratic) qualities and quantities of general, industry-specific, and firm-specific skills
Fiol, 1991	Organizational identity proposed as a core competency leading to competitive advantage
Conner, 1991	Juxtaposed the RBV with industrial-organization economics in order to demonstrate that RBV was developing as a new theory of the firm
Growth stage	
Mahoney & Pandian, 1992	Further delineated the RBV by relating it to distinctive competencies, organizational economics, and theory on industrial organization
Kogut & Zander, 1992	Introduced the concept of combinative capabilities; emphasized the importance of knowledge as a resource
Amit & Schoemaker, 1993	Split the overall construct of resources into resources and capabilities
Peteraf, 1993	Outlined the conditions under which competitive advantage exists
Hart, 1995	Introduced and developed a conceptual spin-off from the RBV called the *natural-resource-based view of the firm*
Grant, 1996	Articulated the knowledge-based view of the firm as a spin-off of RBV
Miller & Shamsie, 1996	Tested the resources–performance link while measuring resources directly; winner of *Academy of Management Journal*'s annual best paper award
Conner & Prahalad, 1996	Identified situations where the application of opportunism-based arguments and knowledge-based arguments may lead to opposite predictions regarding the organization of economic activity

(continued)

Table 1 (continued)

Author(s) and Date	Key Contribution
Oliver, 1997	Theorized about how RBV and institutional theory together can better explain sustained competitive advantage
Teece, Pisano, & Shuen, 1997	Built on RBV ideas to introduce the concept of dynamic capabilities; in particular, explained competitive advantage as arising from the confluence of assets, processes, and evolutionary paths
Coff, 1999	Initiated discussion of how the excess profits derived from resources might be appropriated by various stakeholders
Combs & Ketchen, 1999	Examined how to reconcile competing predictions from RBV and organizational economics about the choice of organizational form
Maturity stage	
Alvarez & Busenitz, 2001	Explained the contributions of RBV to entrepreneurship research and articulated further contributions that could be made
Priem & Butler, 2001a, 2001b; Barney, 2001	Debated the usefulness of RBV as a theory of strategy and organization
Wright, Dunford, & Snell, 2001	Explained the contributions of resource-based theory (RBT) to human resource management research and articulated further contributions that could be made
Barney, Wright, & Ketchen, 2001	Identified the impact of RBV on related subject areas
Makadok & Barney, 2001	Built theory about the information firms should emphasize as they attempt to purchase scarce resources
Makadok, 2001	Synthesized ideas on excess profits offered by RBV and theory on dynamic capabilities
Lippman & Rumelt, 2003	Initiated discussion of the micro-foundations of RBV by introducing a payments perspective
Ireland, Hitt, & Sirmon, 2003	Introduced strategic entrepreneurship as recognizing the resources required to exploit growth opportunities in order to create and sustain competitive advantage
Winter, 2003	Introduced and explained the concept of higher order capabilities
Gavetti, 2005	Built theory about the micro-foundations of dynamic capabilities by emphasizing the roles of cognition and hierarchy
Foss & Foss, 2005	Built conceptual bridges between RBT and property rights theory
Teece, 2007	Specified the nature and micro-foundations of the capabilities necessary to sustain superior enterprise performance in an open economy with rapid innovation and globally dispersed sources of invention, innovation, and manufacturing capability
Sirmon, Hitt, & Ireland, 2007	Built theory about the underexplored processes (i.e., the "black box") that lie between resources on the one hand and superior profitability on the other
Armstrong & Shimizu, 2007	Reviewed and critiqued the research methods used in resource-based inquiry
Crook, Ketchen, Combs, & Todd, 2008	Used meta-analysis to establish that strategic resources explain a significant portion of variance in performance across extant evidence
Kraaijenbrink, Spender, & Groen, 2010	Considered the merits of prominent critiques of RBT

Twenty years after the 1991 issue, there are strong indications that RBT has reached maturity as a theory. First, scholars are increasingly using the term *resource-based theory* instead of *resource-based view*.[1] This reflects the fact that resource-based research has reached a level of precision and sophistication such that it more closely resembles a theory than a view. Second, RBT has given rise to prominent spin-off perspectives, most notably the knowledge-based view (Grant, 1996), the natural-resource-based view (NRBV) of the firm (Hart, 1995), and dynamic capabilities (Teece, Pisano, & Shuen, 1997). Third, RBT's insights have been integrated with those of other perspectives, such as institutional theory (Oliver, 1997) and organizational economics (Combs & Ketchen, 1999). Finally, resource-based inquiry has evolved to the point where retrospective assessments have been warranted, including a meta-analysis of the empirical evidence related to the RBT's core tenets (Crook, Ketchen, Combs, & Todd, 2008), critical examination of the methodology surrounding RBT (Armstrong & Shimizu, 2007), and a review of critiques of the RBT (Kraaijenbrink, Spender, & Groen, 2010). Collectively, these developments—the transition from RBV to RBT, the emergence of conceptual spin-offs, the integration of RBT's insights with those of other perspectives, and the publication of assessments of the collective body of RBT work—suggest that RBT has reached maturity as a theory.

In assembling this third RBT special issue to mark the 20th anniversary of the 1991 issue, we were mindful of the life cycle and its possible implications for RBT. Specifically, although the maturity stage of the life cycle can last for many years, it is generally followed by one of two stages: revitalization or decline. Thus, our goal was to assemble a set of papers that would provide a strong basis for extending RBT in meaningful new directions and to steer clear of decline.

First, six scholars who have made landmark contributions to RBT (Russ Coff, Nicolai Foss, Stu Hart, Richard Makadok, Margaret Peteraf, and Birger Wernerfelt) were invited to provide their thoughts on RBT's accomplishments and prospects. Second, we solicited proposals from the academic community at large to provide discussions of RBT's accomplishments, its challenges, and important directions for future theory development and testing. The proposal process was adapted from that used by the *Journal of Management* to assemble its annual review issue. After reviewing the 42 proposals we received, we selected 5 proposals; these authors were invited to provide full papers. These papers were subject to double-blind developmental review.

In the next section, we summarize and synthesize some of the contributions made by the articles presented in this issue, with particular attention to how the ideas offered can help ensure that RBT has a bright future. Our aim is not to fully capture all of the value-added provided by the articles but, rather, to address briefly how they give rise to five emergent broad themes that offer promise for future inquiry. As these themes, of necessity, given space constraints, go beyond the scope of the presented articles, we also offer a few of our own thoughts on possible ways to further revitalize RBT-grounded research.

Building on 1991 and 2001: Resource-Based Theory's Accomplishments and Challenges

The 11 articles in this special issue each provide unique perspectives and insights. Viewed as a set, their contributions extend RBT along five themes: interlinkages with other perspectives, processes of resource acquisition and development, the micro-foundations of RBT, RBT and sustainability, and method and measurement issues.

Interlinkages With Other Perspectives

A theme that was evident in both the 1991 and 2001 issues concerned the relationship between RBT and other theoretical perspectives (Conner, 1991; Mahoney, 2001). Two articles in this special issue continue this exploration. The first considers different explanations of the sources of profit. Makadok (2011) argues that although the RBT's focus on competitive advantage has been useful in helping to understand some sources of interfirm profit differentials, it is limiting because competitive advantage is not the only causal mechanism by which profit can be generated. He considers three other mechanisms—rivalry restraint, information asymmetry, and commitment timing—that have been extensively studied as sources of profit. Rather than continuing to examine each of these four mechanisms' main effects on profit in isolation, and thereby generate increasingly incremental knowledge over time, Makadok proposes an agenda for future research that involves synthesizing multiple mechanisms in order to focus on their relatively unexplored interaction effects on profit. In an effort to guide future scholars, Makadok outlines some logical next steps for further development.

A second article considers the rationale for and effects of diversification. As Wan, Hoskisson, Short, and Yiu (2011) note, RBT has made a considerable contribution to the diversification literature. These authors provide a historical review of this research using RBT and related concepts. They assess the overall significance of this stream of research, discuss its main contributions, and identify open issues. They go on to suggest opportunities for future contributions and describe ways that the resource-based perspective on diversification could be further enriched by integration with ideas from organizational economics, new institutional economics, and industrial organization economics.

More broadly, these two articles that contribute to integrating RBT with other perspectives demonstrate how such integration can shed new light on fundamental issues within RBT and the strategic management field in general. From our perspective, market footholds and transitional identity are two additional concepts that could benefit from integration of RBT insights. In particular, adding RBT to the theoretical milieu surrounding these concepts can enhance understanding of the concepts as well as their relationships with other concepts.

Competitive dynamics research examines the moves and countermoves that rivals make in an effort to gain advantageous and lucrative positions in the market (Ketchen, Snow, & Hoover, 2004). Resources have been depicted as one of the important drivers of firms' decisions about making moves and countermoves from various market positions (e.g., Young, Smith, Grimm, & Simon, 2000). Yet, key opportunities remain. Footholds, for example, are a type of market position that has yet to be examined via RBT.

A foothold is "a small position that a firm intentionally establishes within a market in which it does not yet compete" (Upson, Ketchen, Connelly, & Ranft, in press). A firm can use a foothold as a competitive weapon in a variety of ways. One is to use a foothold as the launching point for an attack on rivals, such as by introducing radically new products or making an acquisition. Perhaps more interesting is the opportunity to simply maintain a foothold to discourage aggressiveness by competitors. A foothold is uniquely suited as a weapon of deterrence—a firm that owns a foothold can punish rivals who own bigger shares of a particular market by taking actions (such as slashing prices) that undermine profitability in the market. Wise rivals will recognize that a firm will be quite willing to absorb losses within a foothold as a means to discourage rivalry in markets that they depend upon heavily. Complex deterrence relationships can evolve, such as a "mutual foothold equilibrium" wherein two firms each own a small share of a market that the other dominates and each firm's foothold offers "a stick with which to discipline" the other (Karnani & Wernerfelt, 1985: 90).

Left unaddressed by the literature on footholds is the role of resources. If a small market position is bolstered by resources, this would seemingly enhance the foothold's merit as both a launching point for expansion (because the foothold is more likely to achieve a sustained competitive advantage) and a deterrent to others (because the resources enhance the foothold's potential potency). Yet, once a foothold is expanded, the threat that it will be used vindictively disappears and its value as a deterrent to rivals is largely surrendered. Thus, for situations wherein footholds enjoy resources, identifying the contingencies that lead firms to engage in foothold attacks and those that lead firms to maintain their footholds appears to be a promising research topic. Another issue is that firms may choose to withdraw from certain footholds, particularly since maintaining a foothold can be costly. One logical hypothesis is that firms will be more likely to abandon those footholds that are not bolstered by resources than those that are. More generally, it seems likely that RBT offers important implications for how firms use their footholds within competitive dynamics.

Organizational identity can be defined as those features of an organization that its members believe are central, distinctive, and enduring (Albert & Whetten, 1985). These three descriptors overlap with the characteristics of resources (valuable, rare, inimitable, and nonsubstitutable; Barney, 1991), thereby providing a strong fit between RBT and identity. Indeed, the juxtaposition of RBT and research on organizational identity can be traced back to the 1991 special issue (i.e., Fiol, 1991; see also Fiol, 2001). This work asserts that organizational identity can serve as a core competency that leads to sustained competitive advantage.

Over the past decade, the processes surrounding changes in organizational identities have been a central focus of research attention (e.g., Corley & Gioia, 2004; Ravasi & Schultz, 2006), but examining organizational identity change from the perspective of RBT remains an opportunity. For example, Clark, Gioia, Ketchen, and Thomas (2010) recently introduced "transitional identity" as a key concept for understanding identity change during mergers and other major organizational shifts such as spin-offs (Corley & Gioia, 2004). Transitional identity can be defined as members' interim sense of what their organization will become after a major, pending event. In the merger studied by Clark et al. (2010), the emergence of a transitional identity allowed the merging organizations to set aside their existing identities and move toward a new, shared identity. From the perspective of RBT, if and how synergies arise from the resources that each side brings to a merger are key questions. An RBT approach to the transitional identity concept therefore calls attention to whether a transitional identity helps organizations preserve or even enhance those aspects of identity that are valuable, rare, inimitable, and nonsubstitutable. If, for example, a transitional identity helps organizations to merge but leads them to abandon valuable past identities in favor of a new identity that lacks unique value, the merged organization may be less likely to enjoy future success. Overall, augmenting research on organizational identity with insights from RBT promises to reveal much about transitional identity in particular and identity change in general.

Processes of Resource Acquisition and Development

The early years of RBT's development were focused on establishing theoretical and empirical relationships between the presence of resources and the development of sustained competitive advantage. More recently, the central issue of where resources come from has begun to attract attention. In the current issue, Wernerfelt (2011) considers the processes through which a firm can acquire resources, and he argues that its current stock of resources create asymmetries in competition for new resources. Wernerfelt develops two simple models to illustrate how this can work through linkages on the demand and/or cost side. The normative implication is that firms should expand their resource portfolios by building on their existing resources. Different firms will then acquire different new resources, and small initial heterogeneities will amplify over time.

Maritan and Peteraf (2011) focus upon how the heterogeneous resource positions that lie at the core of RBT come into existence. They build upon two separate mechanisms described in the literature—resource acquisition in strategic factor markets and internal resource accumulation. They propose that considering these mechanisms jointly can generate insights and lay the groundwork for future work, and they discuss several issues that are critical to developing a more complete theoretical and practical understanding of the creation of heterogeneous resource positions.

Sirmon, Hitt, Ireland, and Gilbert (2011) contribute to the RBT literature by focusing on what they term *resource orchestration*, which explicitly addresses the role of managers' actions in effectively structuring, bundling, and leveraging firm resources. The authors compare and integrate two related frameworks (resource management and asset orchestration) to obtain a more precise understanding of managers' roles within RBT. They identify three areas where the concept of resource orchestration can be used to extend RBT: breadth (resource orchestration across the scope of the firm), life cycle (resource orchestration at various stages of firm maturity), and depth (resource orchestration across levels of the firm).

Overall, these three articles that build understanding of resource acquisition and development call attention to the vital yet seldom observed processes that underlie the linkages posited by RBT. This is important because the heterogeneity of firm contexts that influence the nature of these processes is beginning to be recognized (Combs, Ketchen, Ireland, & Webb, in press). Sirmon et al. (2011) explore resource orchestration processes during the start-up, growth, maturity, and decline stages of firm development. A further dimension of heterogeneity concerns different ownership regimes, which are only partially related to the stage of development of firms. For example, firms may be family owned throughout their life cycles. Mature firms may be listed on a stock market or privately owned, with or without private equity investment. Start-up and growing firms may be wholly owned by their founders or have involvement from angel investors and venture capitalists. Studies to date have not explicitly compared the different processes of resource and capability development in these different ownership contexts, yet these processes appear likely to vary across contexts.

Ownership is only one aspect of corporate governance. Past inquiry has recognized the potential role of other corporate governance mechanisms, such as board composition and executive compensation, in helping create sustained competitive advantages (Barney et al., 2001). The processes underlying governance, however, are also critical. These processes may differ according to the different stages of a firm's development because the role of governance at one stage may shift between providing supplemental resources to founders in order to add value and providing monitoring expertise. Zahra, Filatotchev, and Wright (2009) develop a framework that provides insights into the conditions where each may be appropriate and where there may be complementarity or substitution effects. However, the processes by which this governance takes place and how the relative importance of each aspect shifts or does not shift at different life cycle phases have not been examined. Governance aspects that may interact with the cognitive attributes of managers and entrepreneurs also remain to be explored. For example, endowment effects involve individuals placing a greater value on what they own than on what they do not own and thus being reluctant to divest underperforming, low-value resources (King, Garbuio, & Lovallo, 2011). However, strong governance mechanisms may play a complementary role in ensuring that timely divestment does take place.

A process perspective underlies Maritan and Peteraf's (2011) and Sirmon et al.'s (2011) insights about resource accumulation and resource orchestration. Beyond these notions, a process perspective also has implications for the distribution and appropriation of the excess profits that arise from resources. The bargaining power of executives may enable them to appropriate a disproportionate share of the rents generated. However, a central issue concerns how much of the payments to managers reflect their disproportionate firm-specific investments. The process by which rents that are generated are appropriated has so far largely been neglected (Alvarez & Barney, 2004; Coff, 1999). Sun, Wright, and Mellahi (2010) provide a theoretical examination of the bargaining process for rents in the context of privatization of management buyouts in China. They emphasize the implications of the different bargaining powers of politicians and managers in this process and that this is heavily influenced by the contribution of each party's human and social capital to previous rent generation. Hopefully, this study will be just the first in a series of efforts to empirically capture the rent distribution process.

In addition to understanding whether resources are acquired or developed, the process of resource and capability development also involves a need to examine the paths and sequences of their evolution. These aspects are only beginning to be understood. Ahuja and Katila (2004) build upon evolutionary arguments to examine the origins of heterogeneous resource positions. Rasmussen, Mosey, and Wright (2010) extend their arguments to the context of spin-offs from universities and highlight the challenges of shifting from noncommercial to commercial environments in developing human and social resources.

As we have noted, the interaction between resource acquisition through strategic factor markets and resource building based on human capital and bricolage is an important research agenda (Maritan & Peteraf, 2011; Markman, Gianiodis, & Buchholtz, 2009). An important issue that has received some attention concerns the distinction between tradable and nontradable resources and the process by which tradability occurs. An aspect that warrants closer attention is the distinction between the buying and selling of resources per se and the acquisition and divestment of legal entities containing those resources. Hence, the difficulties in trading brands and culture (Wan et al., 2011) may be addressed by selling the legal entity in its entirety (Brauer, 2006). The challenge then becomes one of understanding the appropriate processes of integrating the new subsidiary or division into the acquiring organization.

The Micro-Foundations of Resource-Based Theory

The past decade has seen the emergence of efforts to establish the micro-foundations for RBT as part of a wider agenda to examine the micro-foundations of strategic management. Kraaijenbrink et al. (2010) conclude from their recent review that there is a need for analysis within firm boundaries of the internal processes of managing resources. A key aspect is the recognition that heterogeneous human capital is a critical underlying mechanism for capabilities. Foss (2011) clarifies the nature of the micro-foundations project, discusses what it may add in terms of additional explanatory leverage, and addresses micro-foundations in the context of knowledge-based value creation, a key theme in RBT. Importantly, Foss points out that a limiting factor in the development of micro-foundations is that it has no unified model of people but, rather, different models ranging from the hyper-rational model of people offered by game theory to the stimulus-response puppets of some versions of behavioralism in management. Foss suggests that what are proper micro-foundations depends to a large extent on the problem at hand.

One pathway to identifying micro-foundations involves the integration of literature about the management of human capital. Coff and Kryscynski (2011) identify individual- and firm-level components that interact to grant some firms unique capabilities in attracting, retaining, and motivating human capital. For example, Coff and Kryscynski argue that up-and-coming stars may be willing to accept lower wages to work with other stars. However, we would note that competitors may be able to observe that such individuals are rising stars and tempt them away by paying way over their marginal revenue productivity.

King et al. (2011) examine the psychological underpinnings that affect the basic resource management subprocesses of acquisition, accumulation, and divestment of a firm's resources. They draw on behavioral decision research to gain insights into how psychological factors influence a firm's profitability potential by looking only inside an organization. Specifically, they seek to better understand how heuristics and biases influence internal information acquisition and processing challenges faced by managers. The detrimental influence of six heuristics and biases on the economic value and scarcity potential of a firm's resource portfolio are examined.

In the acquisition and divestment subprocesses, King et al. (2011) consider the roles of extremeness aversion, which drives decision makers to prefer "average" rather than more "extreme" resources, and the endowment effect, which leads managers to hold onto resources for longer than would be optimal, in divestment decisions. They then examine the familiarity effect, which explains how decision makers' experiences with certain types of resources increase their propensity to allocate funds to familiar rather than unfamiliar resources. In the accumulation subprocess, previous allocation decisions that serve as anchors of decisions at hand are examined in terms of the endowment effect given by the ownership of resources (from the previous allocation decisions) and the anchoring given by the presence of a cue. They suggest that as a result of these heuristics, allocations to existing resources tend to be equally spread across these resources and tend to be excessively stable over time.

Taken together, these three articles that contribute to work on the micro-foundations of RBT highlight the value of taking what is known about people from other areas of inquiry such as psychology and applying it within RBT. Interest in this area has been slowly percolating for at least a decade,[2] and now a critical mass of inquiry seems to be building. Recent work has begun to examine the cognitive aspects of entrepreneurs and especially the ability of repeat or habitual entrepreneurs to learn from prior experience to identify and exploit opportunities that will generate greater competitive advantage (Baron & Ensley, 2006; Ucbasaran, Westhead, & Wright, 2009, in press). This research has tended to focus upon founders and owners of independent businesses, with little attention to the contexts of corporate entrepreneurship (Wiklund & Shepherd, 2008) or secondary buyouts (Wright, Hoskisson, Busenitz, & Dial, 2000), which also warrant attention. The interaction between human and social capital resources has also been recognized (Davidsson & Honig, 2003), and there is considerable scope for further research that examines the interaction between these cognitive aspects of human resources and social capital resources. Furthermore, research that has focused on learning has paid limited attention to how the process and effects of learning differ according to whether prior experience was an actual (or perceived) success or failure (Ucbasaran et al., in press). But corporate and start-up entrepreneurs may have had different experiences of prior success and failure that may influence the learning process. For example, does a run of failures lead to more risk-averse behavior than a sequence of alternating successes and failures?

More recent work has also attempted to move beyond cognition to neuroscience and genetics in attempting to understand the behavior of individuals who engage in entrepreneurship (Nicolaou, Shane, Cherkas, Hunkin, & Spector, 2008). Hodgkinson and Healey (in press) revisit Teece's framework of the psychological underpinnings of dynamic capabilities and argue that dynamic capabilities are based on a mix of effortful forms of analysis and the skilled utilization of less deliberative, intuitive processes, which enables firms to harness managers' cognitive and emotional capacities. Additional theoretical and empirical research is needed to extend these insights.

Further understanding of the boundary conditions of the micro-foundations of the RBT also needs to take into account the environment in which individuals find themselves, since entrepreneurial behavior is conditioned by context (Shane & Venkataraman, 2000). At present, there is little systematic analysis of the links between different environmental contexts, how entrepreneurs recognize opportunities, and how they access the resources and capabilities needed to exploit those opportunities. Entrepreneurs may also need to adapt to dynamic environmental contexts. This adaptation may mean mobility from one context to another as they perceive better opportunities elsewhere and likely involves new search processes for requisite resources and capabilities. This mobility may be geographical as they move from one region or country to another. It may also be organizational as entrepreneurs either leave their existing organization to start a firm or spin out part of it.

For example, there is a growing phenomenon of entrepreneurs, scientists, and engineers returning to start up new ventures in their native emerging countries, such as China and India, after several years of business experience and/or education in Organization for Economic

Cooperation and Development countries (Liu, Wright, Filatotchev, Dai, & Lu, 2011). The tacit academic knowledge from general education and scientific and technical training and the practical business human capital from working in a commercial environment or starting a business in a developed economy can be transferred to the emerging economy. We know little about the cognitive processes engaged in by returnee entrepreneurs in terms of identifying opportunities in their home countries. We also know little about how they assemble the resources and capabilities to create their ventures in their home countries. By having been abroad, they may have lost critical social and political capital and need to find substitute ways to rebuild them.

Relatedly, transnational entrepreneurs engage in the formation and maintenance of business firms whose activities span home and host countries (Drori, Honig, & Wright, 2009). How are transnational entrepreneurs able to access resources and capabilities by embedding themselves in multiple settings and actively shaping, modifying, and reinforcing those domains? To what extent and how do transnational entrepreneurs embed themselves in different social spaces? What are their cognitive attributes for exploring and exploiting business opportunities in different international spaces? How do they configure their organizations between the home and host countries?

Resource-Based Theory and Sustainability

Hart (1995) argued that models of sustainable competitive advantage need to be expanded to include the constraints and challenges that the natural environment places on firms, and how resources and capabilities rooted in the firm's interaction with its natural environment can lead to competitive advantage. Hart and Dowell (2011) revisit this earlier approach in light of a number of important developments that have emerged in recent years in both RBT and research on sustainable enterprise. First, the NRBV of the firm is considered in the light of dynamic capabilities. Second, the NRBV's role is examined to understand how firms incorporate environmental sustainability in their quest for competitive advantage. Third, the resources and capabilities required to enter and succeed in base-of-the-pyramid (BoP) markets are discussed. BoP remains an intriguing and fertile ground for organizational research—roughly one sixth of the world's population lives on one dollar per day or less, yet little inquiry has examined these individuals' interactions with organizations, and theory development within this realm has been minimal (Webb, Kistruck, Ireland, & Ketchen, 2010).

McWilliams and Siegel (2011) analyze the creation and capture of private and social value by firms that adopt corporate social responsibility (CSR) strategies. Strategic CSR is defined as any "responsible" activity that allows a firm to achieve a sustainable competitive advantage, regardless of motive. To provide insights into how managers can accomplish this objective, McWilliams and Siegel integrate the RBT framework with concepts and tools from economics, notably hedonic pricing, contingent valuation, and the new literature on the economics of industrial organization. By linking CSR, RBT, and economic models of the private provision of public goods, McWilliams and Siegel provide a structure for determining the strategic value of CSR. They go on to discuss the conditions under which CSR can contribute to a strategic competitive advantage. In sum, the two articles that explore RBT and sustainability provide conceptual rigor that future scholars can leverage in order to build knowledge about RBT that extends beyond pure profit motives.

In thinking about future research opportunities, we note that McWilliams and Siegel (2011) stress the importance of CSR as a resource that can lead to rent generation and competitive advantage and also allude to potential downsides of irresponsible behavior. However, the impact of CSR may not necessarily be wholly within the control of the focal corporation. For example, when corporations subcontract activities to other corporations or engage in alliances, there is the potential for adverse CSR behavior by partner firms to reduce the value of the focal firm (and indeed vice versa). The recent, at the time of writing, example of the oil spill in the Gulf of Mexico involving BP raises, inter alia, important implications for the link between CSR and RBT. For example, there is a need to understand the mechanisms that firms can put in place to ensure that contractual partners do not engage in negative CSR behavior.

Method and Measurement Issues Within Resource-Based Theory

As we noted a decade ago in the second RBT special issue (Barney et al., 2001), methodological challenges are recurrent themes in the RBT literature. A key issue we discussed was the ongoing challenge of measuring resources, because many of them are intangible (Godfrey & Hill, 1995). Molloy, Chadwick, Ployhart, and Golden (2011) pick up on the theoretical disconnect between the RBT and measurement of intangibles that they argue leaves central questions unaddressed, undermines confidence in empirical tests purportedly supporting the RBT, and constricts the fruitfulness of future research. They identify the disconnect through a content analysis of how scholars examined 186 intangibles in recently published tests of the RBT. They find that intangible resource assessment and construct validation are often enacted as a mechanical, empirical, and unidisciplinary and unilevel process rather than as a conceptual, multidisciplinary, multilevel, and theoretical process.

To better link RBT and measurement concerning intangibles, Molloy et al. (2011) present a theory-driven multidisciplinary assessment process (MAP) that integrates the complementary perspectives of economics and psychology and that provides a context-specific theory of intangibles for empirical studies. Specifically, the MAP approach is seen as linking RBT and intangibles by clarifying how and why a particular intangible underlies value creation and capture for firms. We look forward to discovering how future scholars apply the MAP approach to better capture resources, and we hope that Molloy et al.'s efforts to develop an innovative measurement approach will inspire others to do so.

In the 2001 special issue, we encouraged scholars to craft studies that incorporated multiple approaches to measuring resources. As the article by Molloy et al. (2011) in this special issue notes, a lack of mixed method approaches remains. We see a need for further development here. But a major issue likely concerns the way in which quantitative and qualitative approaches are combined. There is a need for papers to justify such a combination and the role it plays in a particular study.

A further methodological issue for RBT researchers arises from the emergence of work on micro-foundations. The integration of individual- and firm-level attributes calls for the development of multilevel data sets and methodological approaches (Hitt, Beamish, Jackson,

& Mathieu, 2007). Foss (2011) notes that scholars are increasingly familiarizing themselves with the statistical methods that can handle the multilevel issues that micro-foundations evoke. Studies in this area remain limited, however, and further research is needed.

Conclusion

A popular aphorism warns companies that they must "innovate or die!" This aphorism appears to offer insights for theories of organization as well. In the case of RBT, the conceptual and empirical innovations made in the 20 years since the first special issue devoted to the theory have been remarkable. It cannot be assumed, however, that such progress will necessarily continue. Instead, scholars who are interested in discovering how and to what extent RBT explains important relationships among organizational phenomena need to be mindful of the need to further innovate, both within the five themes that we outlined above and elsewhere. Making such improvements will help ensure that RBT achieves revitalization and avoids decline.

Notes

1. Although the term *resource-based theory* can be traced back at least to Conner (1991), this term seldom appeared in print in the 1990s.

2. In two articles in the second special issue, in 2001, for example, the importance of individual behavior and cognitions in developing human capital resources and hence the competitive advantage of firms was recognized (Alvarez & Busenitz, 2001; Castanias & Helfat, 2001).

References

Ahuja, G., & Katila, R. 2004. Where do resources come from? The role of idiosyncratic situations. *Strategic Management Journal*, 25: 887-907.

Albert, S., & Whetten, D. A. 1985. Organizational identity. *Research in Organizational Behavior*, 7: 263-295.

Alvarez, S. A., & Barney, J. B. 2004. Organizing rent generation and appropriation: Toward a theory of the entrepreneurial firm. *Journal of Business Venturing*, 19: 621-635.

Alvarez, S. A., & Busenitz, L. W. 2001. The entrepreneurship of resource-based theory. *Journal of Management*, 27: 755-776.

Amit, R., & Schoemaker, P. 1993. Strategic assets and organizational rent. *Strategic Management Journal*, 14: 33-46.

Armstrong, C. E., & Shimizu, K. 2007. A review of approaches to empirical research on the resource-based view of the firm. *Journal of Management*, 33: 959-986.

Barney, J. 1986. Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, 32: 1231-1241.

Barney, J. B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17: 99-120.

Barney, J. B. 2001. Is the resource-based view a useful perspective for strategic management research? Yes. *Academy of Management Review*, 26: 41-54.

Barney, J. B., Wright, M., & Ketchen, D. J. 2001. The resource based view of the firm: Ten years after 1991. *Journal of Management*, 27: 625-43.

Baron, R. A., & Ensley, M. D. 2006. Opportunity recognition as the detection of meaningful patterns: Evidence from comparison of novice and experienced entrepreneurs. *Management Science*, 52: 1331-1344.

Brauer, M. 2006. What have we acquired and what should we acquire in divestiture research? A review and research agenda. *Journal of Management*, 32: 751-785.

Castanias, R. P., & Helfat, C. E. 1991. Managerial resources and rents. *Journal of Management*, 17: 155-171.

Castanias, R. P., & Helfat, C. E. 2001. The managerial rents model, theory and empirical analysis. *Journal of Management*, 27: 661-678.

Clark, S. M., Gioia, D. A., Ketchen, D., & Thomas, J. B. 2010. Transitional identity as a facilitator of organizational identity change during a merger. *Administrative Science Quarterly*, 55: 397-438.

Coff, R. 1999. When competitive advantage doesn't lead to performance: The resource-based view and stakeholder bargaining power. *Organization Science*, 10: 119-133.

Coff, R., & Kryscynski, D. 2011. Drilling for micro-foundations of human capital based competitive advantages. *Journal of Management*, **[PE: From current issue; please add information.]**

Combs, J. G., & Ketchen, D. J. 1999. Explaining interfirm cooperation and performance: Toward a reconciliation of predictions from the resource-based view and organizational economics. *Strategic Management Journal*, 20: 867-888.

Combs, J. G., Ketchen, D. J., Ireland, R. D., & Webb, J. in press. The role of resource flexibility in leveraging strategic resources. *Journal of Management Studies*.

Conner, K. R. 1991. A historical comparison of resource-based theory and five schools of thought within industrial organization economics: Do we have a new theory of the firm? *Journal of Management*, 17: 121-154.

Conner, K. R., & Prahalad, C. K. 1996. A resource-based theory of the firm: Knowledge versus opportunism. *Organization Science*, 7: 477-501.

Corley, K. G., & Gioia, D. A. 2004. Identity ambiguity and change in the wake of a corporate spin-off. *Administrative Science Quarterly*, 49: 173-208.

Crook, T. R., Ketchen, D. J., Combs, J. G., & Todd, S. 2008. Strategic resources and performance: A meta-analysis. *Strategic Management Journal*, 29: 1141-1154.

Davidsson, P., & Honig, B. 2003. The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18: 301-331.

Dierickx, I., & Cool, K. 1989. Asset stock accumulation and the sustainability of competitive advantage. *Management Science*, 35: 1504-1511.

Drori, I., Honig, B., & Wright, M. 2009. Transnational entrepreneurship: An emergent field of study. *Entrepreneurship Theory and Practice*, 33: 1001-1022.

Fiol, C. M. 1991. Managing culture as a competitive resource: An identity-based view of sustainable competitive advantage. *Journal of Management*, 17: 191-211.

Fiol, C. M. 2001. Revisiting and identity-based view of sustainable competitive advantage. *Journal of Management*, 27: 691-700.

Foss, K., & Foss, N. J. 2005. Value and transaction costs: How property rights economics furthers the resource-based view. *Strategic Management Journal*, 26: 541-556.

Foss, N. 2011. Micro-foundations for the resource-based view? *Journal of Management*, **[PE: From current issue; please add information.]**

Gavetti, G. 2005. Cognition and hierarchy: Rethinking the microfoundations of capabilities' development. *Organization Science*, 16: 599-617.

Godfrey, P. C., & Hill, C. W. L. 1995. The problem of unobservables in strategic management research. *Strategic Management Journal*, 16: 519-533.

Grant, R. 1996. Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(Winter Special Issue): 109-122.

Harrison, J., Hitt, M., Hoskisson, R., & Ireland, D. 1991. Synergies and post acquisition performance: Differences versus similarities in resource allocations. *Journal of Management*, 17: 173-190.

Hart, S. 1995. A natural resource-based view of the firm. *Academy of Management Review*, 20: 986-1014.

Hart, S., & Dowell, G. 2011. A natural resource-based view of the firm: Fifteen years after. *Journal of Management*, **[PE: From current issue; please add information.]**

Hitt, M. A., Beamish, P., Jackson, S., & Mathieu, J. 2007. Building theoretical and empirical bridges across levels: Multilevel research in management. *Academy of Management Journal*, 50: 1385-1400.

Hodgkinson, G. P., & Healey, M. P., in press. Psychological foundations of dynamic capabilities: Reflexion and reflection in strategic management. *Strategic Management Journal*.

Hoskisson, R. E., Hitt, M. A., Wan, W. P., & Yiu, D. 1999. Theory and research in strategic management: Swings of a pendulum. *Journal of Management*, 25: 417-456.

Ireland, R. D., Hitt, M. A., & Sirmon, D. G. 2003. A model of strategic entrepreneurship: The construct and its dimensions. *Journal of Management*, 29: 963-989.

Karnani, A., & Wernerfelt, B. 1985. Multiple point competition. *Strategic Management Journal*, 6: 87-96.

Ketchen, D. J., Snow, C. C., & Hoover, V. 2004. Research on competitive dynamics: Recent accomplishments and future challenges. *Journal of Management*, 30: 779-804.

King, A. W., Garbuio, M., & Lovallo, D. 2011. Looking inside: Psychological influences on structuring a firm's portfolio of resources. *Journal of Management*, **[PE: From current issue; please add information.]**

Kogut, B., & Zander, U. 1992. Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3: 383-397.

Kraaijenbrink, J., Spender, J. C., & Groen, A. J. 2010. The resource-based view: A review and assessment of its critiques. *Journal of Management*, 36: 349-372.

Levitt, T. 1965. Exploit the product life cycle, *Harvard Business Review*, 43(November-December): 81-94.

Lippman, S. A., & Rumelt, R. P. 1982. Uncertain imitability: An analysis of interfirm differences in efficiency under competition. *Bell Journal of Economics*, 13: 418-438.

Lippman, S. A., & Rumelt, R. P. 2003. The payments perspective: Micro-foundations of resource analysis. *Strategic Management Journal*, 24: 903-927.

Liu, X., Wright, M., Filatotchev, I., Dai, O., & Lu, J. in press. Human mobility and international knowledge spillovers: Evidence from high-tech small and medium enterprises in an emerging market. *Strategic Entrepreneurship Journal*.

Lockett, A., & Thompson, S. 2001. The resource-based view and economics. *Journal of Management*, 27: 723-754.

Mahoney, J. T. 2001. A resource-based theory of sustainable rents. *Journal of Management*, 27: 651-660.

Mahoney, J. T., & Pandian, J. R. 1992. The resource-based view within the conversation of strategic management. *Strategic Management Journal*, 15: 363-380.

Makadok, R. 2001. Towards a synthesis of the resource-based and dynamic capabilities views of rent creation. *Strategic Management Journal*, 22: 387-404.

Makadok, R. 2011. The four theories of profit and their joint effects. *Journal of Management*, **[PE: From current issue; please add information.]**

Makadok, R., & Barney, J. B. 2001. Strategic factor market intelligence: An application of information economics to strategy formulation and competitor intelligence. *Management Science*, 47: 1621-1638.

Maritan, C., & Peteraf, M. A. 2011. Building a bridge between resource acquisition and resource accumulation. *Journal of Management*, **[PE: From current issue; please add information.]**

Markman, G. D., Gianiodis, P. T., & Buchholtz, A. K. 2009. Factor market rivalry. *Academy of Management Review*, 34: 423-441.

McWilliams, A., & Siegel, D. 2011. Creating and capturing value: Strategic corporate social responsibility, resource based theory and sustainable competitive advantage. *Journal of Management*. **[PE: From current issue; please add information.]**

Miller, D., & Shamsie, J. 1996. The resource-based view of the firm in two environments: The Hollywood Film Studios from 1936 to 1965. *Academy of Management Journal*, 39: 519-543.

Molloy, J., Chadwick, C., Ployhart, R., & Golden, S. 2011. Making intangibles "tangible:" A multidisciplinary critique and validation framework. *Journal of Management*, **[PE: From current issue; please add information.]**

Nicolaou, N., Shane, S., Cherkas, L., Hunkin, J., & Spector, T. 2008. Is the tendency to engage in entrepreneurship genetic? *Management Science*, 54: 167-179.

Oliver, C. 1997. Sustainable competitive advantage: Combining institutional and resource-based views. *Strategic Management Journal*, 18: 697-713.

Peng, M. 2001. The resource-based view and international business. *Journal of Management*, 27: 803-829.

Penrose, E. T. 1959. *The theory of the growth of the firm*. New York: Wiley.

Peteraf, M. A. 1993. The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14: 179-191.

Porter, M. 1980. *Competitive strategy*. New York: Free Press.

Priem, R. L., & Butler, J. E. 2001a. Is the resource-based view a useful perspective for strategic management research? *Academy of Management Review*, 26: 22-40.

Priem, R. L., & Butler, J. E. 2001b. Tautology in the resource-based view and the implications of externally determined resource value: Further comments. *Academy of Management Review*, 26: 57-66.

Rasmussen, E., Mosey, S., & Wright, M. 2010. The evolution of entrepreneurial competencies: A longitudinal study of university spin-off venture emergence. *Journal of Management Studies*.

Ravasi, D., & Schultz, M. 2006. Responding to organizational identity threats: Exploring the role of organizational culture. *Academy of Management Journal*, 49: 433-458.

Shane, S., & Venkataraman, S. 2000. The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25: 217-226.

Sirmon, D. G., Hitt, M. A., & Ireland, R. D. 2007. Managing firm resources in dynamic environments to create value: Looking inside the black box. *Academy of Management Review*, 32: 273-292.

Sirmon, D., Hitt, M. A., Ireland, R. D., & Gilbert, B. A. 2011. Resource orchestration to create competitive advantage: Breadth, depth, and life cycle effects. *Journal of Management*. **[PE: From current issue; please add information.]**

Srivastava, R., Fahey, L., & Christensen, H. K. 2001. The resource-based view and marketing: The role of market-based assets in gaining competitive advantage. *Journal of Management*, 27: 777-802.

Sun, P., Wright, M., & Mellahi, K. 2010. Is entrepreneur–politician alliance sustainable during transition? The case of management buyouts in china. *Management and Organization*, 6: 101-121.

Teece, D. J. 2007. Explicating dynamic capabilities: The nature and micro-foundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28: 1319-1350.

Teece, D. J., Pisano, G., & Shuen, A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal*, 18: 509-534.

Ucbasaran, D., Westhead, P., & Wright, M. 2009. The extent and nature of opportunity identification by experienced entrepreneurs. *Journal of Business Venturing*, 24: 99-115.

Ucbasaran, D., Westhead, P., & Wright, M. in press. Entrepreneurial optimism and experience: Does the nature of experience matter? *Journal of Business Venturing*.

Upson, J. W., Ketchen, D. J., Connelly, B. L., & Ranft, A. L. in press. Competitor analysis and foothold moves. *Academy of Management Journal*.

Wan, W., Hoskisson, R., Short, J., & Yiu, D. 2011. Resource-based theory and corporate diversification: Accomplishments and opportunities. *Journal of Management*. **[PE: From current issue; please add information.]**

Webb, J., Kistruck, G., Ireland, R. D., & Ketchen, D. J. 2010. The entrepreneurial process in bottom of the pyramid markets: The case of multinational corporation/non-government organization alliances. *Entrepreneurship: Theory and Practice*, 34: 555-581.

Wernerfelt, B. 1984. A resource-based view of the firm. *Strategic Management Journal*, 5: 171-180.

Wernerfelt, B. 2011. The use of resources in resource acquisition. *Journal of Management*. **[PE: From current issue; please add information.]**

Wiklund, J., & Shepherd, D. 2008. Portfolio entrepreneurship, habitual and novice founders, new entry and mode of organizing. *Entrepreneurship Theory and Practice*, 32: 701-725.

Winter, S. G. 2003. Understanding dynamic capabilities. *Strategic Management Journal*, 24: 991-995.

Wright, M., Hoskisson, R., Busenitz, L., & Dial, J. 2000. Entrepreneurial growth through privatization: The upside of management buyouts. *Academy of Management Review*, 25: 591-601.

Wright, P. M., Dunford, B. M., & Snell, S. A. 2001. Human resources and the resource-based view of the firm. *Journal of Management*, 27: 701-721.

Young, G., Smith, K. G., Grimm, C. M., & Simon, D. 2000. Multimarket contact and resource dissimilarity: A competitive dynamics perspective. *Journal of Management*, 26: 1217-1236.

Zahra, S., Filatotchev, I., & Wright, M. 2009. How do threshold firms sustain corporate entrepreneurship? The role of boards of directors and knowledge. *Journal of Business Venturing*, 24: 248-260.