

**Entrepreneurial Resourcefulness:
Theoretical Origins, Integrative Review, and Research Agenda**

TRENTON ALMA WILLIAMS
Associate Professor of Entrepreneurship
Entrepreneurship Group | Management Department
BYU Marriott School of Business
Marriott School of Business Campus Dr.
Provo, UT 84602
trentonwilliams@byu.edu
940.368.6017

JOANNA MINGXUAN LI
Assistant Professor
Strategy, Entrepreneurship and Management Department
Alberta School of Business
University of Alberta
116 St & 85 Ave, Edmonton, AB T6G 2R3
joanna.li@ualberta.ca

ERIC YANFEI ZHAO
Associate Dean for Research and Professor of Strategy
Saïd Business School & St Hugh's College
University of Oxford
Park End St.
Oxford, UK OX1 1HP
eric.zhao@sbs.ox.ac.uk

Corresponding Author: Trenton Williams (trentonwilliams@byu.edu)

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ABSTRACT

Entrepreneurial resourcefulness is frequently invoked as an essential quality needed to succeed in the entrepreneurship processes. As such, recent years have seen a proliferation of a diverse body of scholarship on entrepreneurial resourcefulness. While this diversity demonstrates the promise and depth of entrepreneurial resourcefulness, this research is fragmented across disciplines, theories, and levels of analysis, which limits our understanding of when, why, and how entrepreneurial resourcefulness occurs and its effect on the entrepreneurial process. This study reviews and integrates the literature on entrepreneurial resourcefulness, providing a common foundational grounding that coheres diverse yet related streams of research. As an outcome of the review, we offer a definition of entrepreneurial resourcefulness that is anchored in its diverse theoretical origins and synthesize relevant research. In building on the foundation offered by the review, we identify the most critical areas for future research with the potential to build upon and extend the theoretical insights derived from the review.

INTRODUCTION

“This is a hard truth for some [entrepreneurs] to accept: That a lack of resources may not be their true constraint, just a lack of resourcefulness.” — David Burkus

“If I were running a startup, this would be the phrase I’d tape to the mirror. ‘Making something people want is the destination, but being relentlessly resourceful is how you get there.’” — Paul Graham

Resourcefulness is commonly invoked in the practitioner and scholarly entrepreneurship literatures when describing essential qualities needed to succeed in launching, growing, and sustaining entrepreneurial ventures. In the practitioner literature, entrepreneurial resourcefulness (ER) is often described as a “pragmatic process” whereby individuals open their minds to redefine what is possible and achieve more with less (Baldoni, 2010). Others define it as the capacity to imagine unique and clever uses for resources, such as knowledge, objects, and human capital, to enact entrepreneurial solutions (Tiyou, 2023). ER is thus considered an invaluable success factor both for everyday entrepreneurs and for iconic figures like John D. Rockefeller, Cornelius Vanderbilt, Elon Musk, and Jeff Bezos, all of whom frequently acknowledged the role of ER in fueling their paradigm-shifting successes (Chernow, 2007; Vance, 2015).

In parallel to the practitioner literature, academic scholarship has acknowledged that resourcefulness is important (Feldman, 2004; Ganz, 2000; Rosenbaum, 1990) because it has implications for critical entrepreneurial processes (Davidsson and Gruenhagen, 2021; Frese and Gielnik, 2023). Specifically, research on ER has examined its influence on opportunity imagination (Chiles et al., 2010; Kier and McMullen, 2018), resource-opportunity alignment (Feldman, 2004; Starr and MacMillan, 1990), resource mobilization for new venture creation (Burt, 2005; Lounsbury and Glynn, 2001), unorthodox resource-replacement practices (Baker and Nelson, 2005; Winborg and Landström, 2001), and venture survival or change despite constraints (Powell and Baker, 2014; Sonenshein and Nault, 2024; Steffens et al., 2023). Given

its wide-spanning influence, ER is an essential concept to understand and account for to advance management and entrepreneurship theory (Corbett and Katz, 2013).

Despite being linked to central entrepreneurship processes and outcomes, the ER literature has grown across independent, fragmented, and unintegrated research streams (Williams et al., 2021). This fragmentation has mainly arisen from differences in each stream's theoretical origins, such as cognitive, behavioral/practice, social capital, and social identity/sociology theories, as well as assumptions about contextual dependencies and levels of analysis. The problem with this fragmentation is that while each independent stream is valuable, it provides only a partial understanding of ER and how, when, and why it influences entrepreneurial processes and outcomes. Therefore, this study aims to collect, analyze, and integrate the fragmented streams of ER research through an integrative review.

To accomplish these goals, we organize this integrative review into four sections. The first section explains our methodological approach, including how we used an existing conceptualization of ER from Williams et al. (2021) to guide our literature search and the systematic process we followed to examine the theories, methods, and measures in ER studies. Second, we present the findings of the review, beginning with an elaboration of the definition of ER as derived from the review: *ER is a social-cognitive process of bringing resources into use for an entrepreneurial schema that challenges and extends normative boundaries*. In elaborating on this definition, we integrate the cognitive and behavioral components of ER, its theoretical origins, and then differentiate ER from similar concepts. Third, we structure the detailed findings of the review around our definition and develop an integrative framework that demarcates ER's cognitive/behavioral components and outcomes. Finally, in synthesizing the literature, we

spotlight critical areas for future research, aligning them with key features of the entrepreneurial process (Shepherd et al., 2015).

Overall, this first-of-its-kind integrative review on ER provides a critical, heretofore neglected perspective that differs from yet complements the dominant stream of entrepreneurship research focused on resource seeking (Lim et al., 2020). Whereas resource-seeking practices emphasize accessing, accruing, and soliciting resources (i.e., financing, patents, novel information, etc.) that are assumed to possess inherent value for venturing (Feldman, 2004), ER provides a broader lens. Specifically, ER accounts for the wide range of ways entrepreneurs interpret value in potential resources for venturing and dynamically (re)arrange resources to exploit opportunities (Chiles et al., 2007; Foss et al., 2007). This review and research agenda therefore seeks to invigorate scholarship on entrepreneurial resourcing by drawing attention to ER. We organize this integrative review of ER scholarship across its cognitive and behavioral components and how they affect critical decisions and outcomes of the entrepreneurial process—including new venture emergence, growth, adaptation, and persistence.

REVIEW METHODOLOGY

We started our integrative review with a broad focus on the variety of literatures relevant to ER. Our goals in starting broadly were to identify and systematically trace the diverse streams of ER research back to their roots, forming a common theoretical foundation for achieving integration. As is common in integrative reviews (Elsbach and van Knippenberg, 2020), we began by specifying a working conceptualization of ER to guide and bound the review. To achieve this end, we used a recent conceptualization of ER offered by Williams and colleagues (2021) to guide article screening for the review: “A boundary-breaking behavior of creatively bringing resources to bear and deploying them to generate and capture new or unexpected

sources of value in the process of entrepreneurship.” As we progressed in the literature review, we remained open to new insights that emerged from our inductive analysis. We followed four analytical steps to search for and code articles on ER, which we briefly summarize here. In Appendix 1, we offer additional details on how we progressed from an initial conceptualization of ER to arrive at our definition and article-coding scheme.¹

In the first step, we employed a criterion-sampling design to identify articles relevant to our topic using the Web of Science database. We used Williams and colleagues’ (2021) definition as a starting point to inductively collect and group studies relevant to ER. Following previous research (Shepherd et al., 2015; Zhao et al., 2017), we searched the titles and abstracts of FT-50 journal articles containing keywords related to resourcefulness and entrepreneurship. This search yielded 1,041 articles. The objective of this broad first step was to cast a wide net to capture the full scope of ER articles (Elsbach and van Knippenberg, 2020).

The second step involved a rigorous, systematic screening process of each article using a standard rubric for inclusion and exclusion (see Appendix 1, Table 1). This was an important step to narrow down the initial search results given our broad-scoped article search. As this process unfolded, we noted that many articles mentioned “resources” and/or “entrepreneurship” but did not align with our topical focus on ER. After excluding articles that were clearly misaligned with our focus, we assessed each remaining paper to classify its central arguments, conceptualization of ER, theoretical underpinnings, hypotheses or propositions, and findings. Following this procedure, we reduced the number of papers in our sample to 122.

In the third step, we followed established inductive analytical techniques to uncover the underlying themes across the remaining papers in our sample (Shepherd et al., 2015; Zhao et al., 2017). In organizing the coding, we followed Whetten’s (1989) seminal piece on theory building

and adopted the essential building blocks of a theoretical construct (what, how, why, who, when, and where) as a template. Specifically, we coded each study for ER's antecedents, moderators, and consequences (see Appendix 2). We then used this coding to facilitate a systematic process of identifying, defining, and refining emerging themes (Shepherd et al., 2015). Notably, this coding process confirmed our intuition that much of the scholarship on ER assumes a common definition without explicitly defining it and/or acknowledging related theories or concepts. Indeed, we noted that these shortcomings are fundamental drivers of the lack of integration in ER research.

In the fourth step, we inductively developed an integrated conceptual and theoretical framework of ER to organize and interpret the literature review. This process involved two substeps. In the first substep, we refined our conceptualization of ER by iterating between Williams and colleagues' (2021) definition and the emerging themes derived from the review. In doing so, we recognized the need for a definition that accounts for the social-cognitive components of ER (Michaelis et al., 2022) and how they influence individuals' subjective interpretations of (a) potential resources (Feldman, 2004; Penrose, 1959) and (b) the fit between potential resources and a future-looking entrepreneurial opportunity (Lachmann, 1986).

In the second substep, we demarcated ER's conceptual boundaries by comparing it with other concepts in the literature that are sometimes used synonymously with ER (Appendix 1, Table 2). We identified nine concepts related to resourceful behaviors through an expert survey and the Q-sort methodology. We then linked these concepts with different aspects of our definition, which allowed us to identify the necessary features of ER and its relationship to similar constructs. Through this iterative comparison process, we gained a clearer understanding of ER's boundary conditions. For example, research examining behaviors of applying new

combinations of existing resources to problems or opportunities (e.g., bricolage [Baker and Nelson, 2005], resource mobilization [Jenkins, 1983], and effectuation [Sarasvathy, 2001]) allowed us to better understand the behavioral aspect of ER in bringing resources into use for an entrepreneurial schema. Similarly, research highlighting “unorthodox” behaviors, such as hustling (Fisher et al., 2020), improvising (Miner et al., 2001), and bootstrapping (Ebben & Johnson, 2006), helped us understand behaviors that challenge or extend normative boundaries. Finally, concepts like frugality (Michaelis et al., 2020) and the subjective interpretation of potential resources (Feldman, 2004; Lachmann, 1986) helped us recognize the social-cognitive dynamics underlying and interacting with ER behaviors.

Building on these inductive findings and insights, we updated Williams and colleagues’ (2021) definition of ER, which we then used to structure our integrative review. In Appendix 2, we provide a complete listing and coding summary of all studies used in the review.

DEFINING ENTREPRENEURIAL RESOURCEFULNESS

In this section, we unpack the definition of ER by specifying its theoretical origins. In doing so, we create an integrated theoretical scaffolding that then structures our findings and organizes our proposed research agenda. By offering a definition that is both influenced by prior efforts *and* derived from our review, we aim to clarify the distinctive definitional meaning of ER to cohere and advance ongoing scholarship.

We define *entrepreneurial resourcefulness* as a *social-cognitive process of bringing resources into use for an entrepreneurial schema that challenges and extends normative boundaries*. This definition encompasses *cognitive* and *behavioral* components and is based on a perspective of resources that differs from the traditional resource-seeking approach (Barney, 1991; Wernerfelt, 1984). The traditional resource-seeking approach emphasizes the *innate*

qualities of resources that make them valuable in the entrepreneurial process (Foss et al., 2008). In contrast, the ER ontology adopts a more dynamic stance toward resources at the intersection of cognitions and behaviors. This process unfolds as individuals subjectively imagine different possibilities for future-focused entrepreneurial opportunities (Chiles et al., 2010) and continuously identify novel ways to bring potential resources into use for those opportunities (Lachmann, 1986; Foss et al., 2007). The ER perspective suggests that resources *become such* when actors identify their relevance to an imagined entrepreneurial schema—a mental map for organizing and interpreting information about a potential opportunity (Chiles et al., 2007).

In the following subsections, we specify the theoretical origins underpinning the three aspects of our review-derived conceptualization of ER: (1) social cognitive process, (2) bringing resources into use in alignment with an entrepreneurial schema, and (3) challenging and extending normative boundaries. In doing so we identify and integrate common theoretical origins across ER studies, which helps cohere extant research and frame a research agenda.

Socially Embedded Cognitive Process

This first aspect of our conceptualization of ER involves socially embedded *cognitive processes* for interpreting information about the environment, other social actors, and potential resources (Baron and Henry, 2010; Chiles et al., 2010). ER scholarship has drawn on social-cognitive theory (SCT) (Bandura, 2001; Fiske and Taylor, 2013), which argues that human behavior is shaped by the interaction between individual beliefs, interpretations of the environment, and predictions about how actions will affect an individual in relation to others. In drawing on this literature, we argue that ER begins as subjective, heterogenous cognitive interpretations of environmental stimuli (Lachmann, 1986). These interpretations are then explored through imaginations of what is possible and with whom (Feldman, 2004; Kier and

McMullen, 2018). Our classification of ER's cognitive component integrates foundational SCT theory with psychology research on learned resourcefulness, which explores the use of cognitions and self-instructions as problem-solving strategies that embrace an openness to possibilities beyond normative repertoires (Rosenbaum, 1990; Rosenbaum and Ben-Ari, 1985).

ER research anchored in SCT has also explored the social-cognitive factors that facilitate an actor's ability to imagine and execute changes that challenge or extend normative boundaries in the environment (Lachmann, 1986). In building on this research, we argue that ER involves not only interpreting and responding to the environment but also reimagining and redesigning it in ways that align with an entrepreneurial schema (Bandura, 2001; Fiske and Taylor, 2013). (Re)imagining possibilities in the environment that fit a future-focused entrepreneurial opportunity is achieved through an actor's cognitive ability to be self-reflexive about what they perceive in the environment (Chiles et al., 2010). Therefore, differences in entrepreneurs' cognitions contribute to the prevalence of alternative interpretations of the 'same' environmental conditions when seeking to understand "What is going on here?" and "What should I do as a result?" (Bandura, 1991). Specifically, ER studies have explored how, through metacognition, individuals can create, challenge, and alter their perspectives on taken-for-granted beliefs regarding potential opportunities (Haynie et al., 2010; Michaelis et al., 2022).

Bringing Resources into Use for an Entrepreneurial Schema

The second aspect of our conceptualization of ER involves bringing resources into use for an entrepreneurial schema. This aspect of our conceptualization highlights the dynamic interdependence between the *behavioral* and *cognitive* components of ER: namely, (a) recognizing potential value in things as potential resources while putting them into use (Feldman,

2004) in relation to (b) how they could be utilized for one's entrepreneurial schema (i.e., mental map of a future-focused opportunity) (Chiles et al., 2010; Kier and McMullen, 2018).

Bringing resources into use. Bringing resources into use involves the dynamic interplay of behavior and cognition (Williams et al., 2021). Bringing resources into use is also a central phenomenon of interest in studies on related topics, including bricolage (Baker and Nelson, 2005; Steffens et al., 2023) and resource orchestration (Sirmon et al., 2007) and creative resourcing (Feldman, 2004; Sonenshein, 2014). These arguments build on foundational economic theories, which argued that a “central function” of the resourceful entrepreneur is to continually imagine ways to “reshuffle” resources into new combinations that align with their subjective expectations of the future (Lachmann (1956: 13).

Entrepreneurship scholarship has conceived bringing resources into use as a process involving co-opting potential resources through social contracting in support of an unfolding entrepreneurial endeavor (Stevenson and Jarillo, 1990; Venkataraman, 1997). Specifically, the process of bringing resources into use includes cognitive aspects of challenging assumptions about possible applications of resources for entrepreneurship, and behavioral aspects of testing assumptions regarding “market needs, product specifications, resource availability and production” (Starr and MacMillan, 1990: 81). What makes bringing resources into use so essential for entrepreneurship more generally is that entrepreneurs “rarely possess all the resources and capabilities required to seize an opportunity” and because “the exact resources that will be needed are unknown” given the uncertainty surrounding the needs of a yet-to-be-established entrepreneurial venture (Starr and MacMillan 1990: 81).

In building on these theoretical origins, scholars have examined the cognitive and behavioral factors influencing heterogeneity in individuals' ability to bring resources to use for

entrepreneurship (Penrose, 1959). This heterogeneity is due to differences in how individuals cognitively perceived relevance of potential resources to their endeavor (Feldman, 2004; Sonenshein, 2014, 2017; Sonenshein and Nault, 2024) and arises because “each individual in each moment of time may imagine different future economic situations” (Gloria-Palermo, 1999: 9). Similarly, Baker and Nelson (2005) found evidence of heterogeneity in “bricoleur” entrepreneurs’ social-cognitive ability to recognize and deploy new combinations of resources that apply to opportunities or problems in resource-constrained contexts. Indeed, Baker and Nelson (2005: 353) found that for those who fail to notice such combinations, this ability to locate relevant resources under extreme constraints may appear as if the focal entrepreneurs somehow “created something from nothing.”

Alignment with entrepreneurial schema. As indicated earlier, ER involves bringing resources into use *in alignment with* and in support of an entrepreneurial schema. The notion of an entrepreneurial schema is anchored in SCT and entrepreneurial cognition theories and, as defined earlier, refers to a mental map for organizing and interpreting information related to a potential opportunity (Baron, 2007). Mental maps of potential opportunities involve uncertain, subjective, and dynamically evolving expectations for an imagined future (Lachmann, 1986). While the forward-looking features of individuals’ entrepreneurial schema drive innovative market changes by imagining what might be, it also complicates the process of accurately identifying and effectively deploying resources that are appropriately matched to these imagined opportunities (Chiles et al., 2010).

Foundational research on entrepreneurial cognition (Gregoire et al., 2011) has indicated that even when resource bases are similar, actors differ in their perceptions of potential uses for those resources for their own entrepreneurial schemas (Foss et al., 2008). Matching potential

resources to one's entrepreneurial schema requires a cognitive and then physical structure. This perspective is consistent with structuration theory (Sewell, 1992), which argues that a recursive relationship between action and structure provides rule-based (i.e., schema-based) resource sets that can be employed to shape further action and revised structures. The process is recursive as both the potential resources and entrepreneurial schema change over time (Sonenshein and Nault, 2024). This view of potential resources for shifting entrepreneurial situations accommodates the dynamic process perspective of entrepreneurship (Baron, 2007; McMullen and Dimov, 2013) as it plays an important role in framing the interactive aspects of perceived resource availability *and* entrepreneurial schemas across the iterative stages of the entrepreneurial process (Frese and Gielnik, 2023). For example, ER shapes opportunity identification (prelaunch; Williams and Shepherd, 2016a), venturing (launch and adaptation; Steffens et al., 2023), and organizational renewal (postlaunch; Sonenshein and Nault, 2024).

Challenging and Extending Normative Boundaries

The final aspect of our conceptualization of ER involves challenging and extending normative boundaries. Challenging and extending normative boundaries includes cognitive and behavioral components of ER: the *cognitive* capacity to envision opportunities and the possible relevant of resources in ways that go beyond or even violate accepted norms; and the *behavioral* capacity to act against or even contravene established norms at the individual, firm, or environmental level. Research in this domain has drawn on resource dependence theory (RDT) and institutional theory (IT), which theorize that individuals are nested in broader environmental structures that bound their cognitions and behaviors (Pfeffer and Salancik, 2003). Facing these structures, resourceful actors imagine and implement alternative practices and solutions to challenge conventional rules (Penrose, 1959). They also function as a disequilibrating force,

extending normative boundaries by imagining novel, forward-thinking ways to create new ideas, resources, and markets (Lachmann, 1986; Chiles et al., 2010). In doing so, these actors refuse to accept limitations on how potential resources can be used as well as normative assumptions about the (non)value of certain resources for an entrepreneurial schema.

We argue that ER fundamentally involves a cognitive capacity for questioning assumptions about norms in one's broader environment (McMullen, 2023; Williams & Shepherd, 2016a, b), as doing so opens new possibilities for bringing resources into use for entrepreneurship. The cognitive challenging and extending of normative boundaries component of ER also helps explain how entrepreneurship is pivotal in catalyzing changes in broader markets, industries, institutions, and resource environments (Lachmann, 1956; Williams, 2022). Specifically, ER can explain how new conceptualizations of potential resources and entrepreneurial schemas lead to boundary-shifting ideas, practices, and innovations that reshape resource environments (Scott, 1995).

From a behavioral perspective, challenging and extending normative boundaries involves *appropriately* adhering to and deviating from normative boundaries through explorative action (Chiles et al., 2010; Lachmann, 1986). Achieving an 'appropriate' balance between norm adherence and deviance is a critical feature of ER such that actors disrupt the status quo by questioning conventional practices and norms while simultaneously maintaining legitimacy by fulfilling audience expectations for what is appropriate for their roles within their resource environments (Davis and Greve, 1997; Lounsbury and Glynn, 2001; Nigam and Ocasio, 2010; Ocasio et al., 2015). Challenging boundaries expands opportunities for new interpretations and meaning in one's environment in that it reveals nonobvious alternatives that deviate from conventional behaviors and that allow for new ideas to come to life (Chiles et al., 2010).

Furthermore, expanding normative boundaries introduces new perspectives on potential resources for entrepreneurship, which helps ward off organizational (Sonenshein and Nault, 2024) and societal (Desa, 2012; Mair and Marti, 2009) stagnation. ER research has explored how entrepreneurs achieve the balance between adhering to/challenging boundaries (Steffens et al., 2023) and the costs of going too far (Ge et al., 2019; Williams and Shepherd, 2016a).

In Table 1, we summarize the primary streams of research related to ER, highlighting their theoretical origins and identifying how each fragmented stream offers valuable insights when combined into an integrative model. In the following sections, we build on the definitional section of the review to explore the literature, examining how, why, and when ER is employed in the entrepreneurial process and with what results. We organize our findings in a process model (Figure 1), which is designed to display the cognitive and behavioral components, moderating mechanisms, and outcomes of ER.

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INTEGRATIVE MODEL OF ENTREPRENEURIAL RESOURCEFULNESS

In line with our overarching definition of ER, we found that the literature can be portrayed as encompassing *cognitive* and *behavioral* components. Specifically, actors differ in their perceptions of potential resources and in the ways they bring resources into use for an entrepreneurial schema that challenge and extend normative boundaries. As portrayed in our model, the components of ER interrelate dynamically: the cognitive component of ER frame possible behaviors, and the behavioral component of ER expand cognitive horizons by introducing new potentialities.

Cognitive Component of ER

ER research has specifically built on SCT by exploring how the social embeddedness of individuals' cognitive abilities, mental maps, and structures shape entrepreneurial action. Our review revealed three prominent groups of studies related to ER's cognitive component.

Imagining boundary-challenging action. Building on SCT, the first group of studies has emphasized the cognitive abilities that facilitate the (re)imagining of boundaries surrounding potential and existing resources. A major question that research in this domain has sought to understand is how and why some individuals recognize and interpret opportunities in a given context whereas others might not (Sarasvathy, 2001). For example, Mosakowski (1998) theorized that a set of cognitive abilities (creativity, foresight, intuition, and alertness) shape differences in how individuals recognize new possibilities outside existing opportunity schemas, enabling entrepreneurs to see possible connections between a potential opportunity and potential assets for that opportunity. Similarly, Fultz and Hmieleski (2021) demonstrated that the cognitive ability to improvise allows for challenging established boundaries regarding products and markets and leads to creative, serendipitous breakthroughs. The implication is that differences in cognitive ability profiles (i.e., openness to improvisation, exploration, etc.) influences boundary-breaking behaviors (i.e., achieving 'novel breakthroughs') that are central to ER.

Another group of studies have explored the cognitive mechanisms that catalyze reflexivity about one's environment, individual role, and possible actions. Reflexivity involves the cognitive ability to reflect on one's thoughts, beliefs, and actions and how they relate to the entrepreneurial process (Chiles et al., 2010). Cognitive reflexivity enables new, altered, and more expanded perspectives on what is possible in the environment, which can help expose novel resource-opportunity connections (Brinckmann et al., 2019; Keating et al., 2014). For instance, Desa (2012) and Desa and Basu (2013) found that institutional change may be achieved when

entrepreneurs imagine new possibilities for reconfigured institutional resources and then convey these possibilities to other actors (see also Foss et al., 2007; Williams, 2022). As a more specific example, Garud and Karnøe (2003) found that Danish wind turbine producers imagined new industry structures and then employed bricolage behaviors to utilize resources in support of the newly imagined context. Doing so allowed them to compete effectively against US firms who possessed significantly more intellectual and financial resources. Eventually, by employing ER to challenge industry priors, these Danish windfarms disrupted the industry and came to dominate global markets.

Mentally questioning the environment in which one is operating is a critical aspect of ER yet can be disorienting and even result in a loss of functioning as it involves reevaluating one's sense of reality. For this reason, research explores how entrepreneurs disrupt their worldview to see new opportunities (Foss et al., 2008) in ways that balance maintaining cognitive stability regarding 'what is' with extending the horizons of what 'might be' (Chiles et al., 2010). For example, Mair and Marti (2009) found that institutional entrepreneurs' creative cognitive approaches to imagining potential resources are often blocked by both the inertia and inherent contradictions associated with institutionalized practices and behavioral patterns. Specifically, they found that disrupting collective cognitive norms is difficult. However, they also highlighted how resourceful entrepreneurs balance these 'challenges' by questioning existing norms, communicating a vision of a different future, and then facilitating action to enact changes.

Generating new mental maps. The second group of studies has centered on a key aspect of ER, which is generating new mental maps for future opportunities (Baron and Henry, 2010) while simultaneously identifying, bundling and deploying matching resources (Foss et al., 2008; Haynie et al., 2010). Entrepreneurs form mental maps of possibilities based on their subjective

knowledge, expectations, and imagined ‘futures’ (Lachmann, 1986). However, they differ in their cognitive abilities to construct meaningful maps to guide future plans, which are needed to mobilize stakeholders and identify necessary combinations of resources (Chiles et al., 2007).

Research has found that heterogeneity in entrepreneurs’ mental models influences how they perceive and arrange resources to achieve their entrepreneurial goals (Shirokova et al., 2020). These differences occur between entrepreneurs (Michaelis et al., 2020), but also among members of an entrepreneurial team. For example, Foss and colleagues (2008: 80) argued that heterogeneous mental models among members of an entrepreneurial team “lead to differential recognition of the economic value of existing uses of resources [and also] to the creation of new resource uses in the process of entrepreneurial imagination and enactment.” Thus, resourceful teams and organizations that leverage heterogeneous mental models are more likely to generate novel entrepreneurial ideas than individuals and/or teams with homogenous mental models. This line of theorizing is consistent with related work on group-based transactive memory systems, which has shown that shared mental models facilitate interpretations and actions related to potential resources (Lewis and Herndon, 2011). Similarly, Gras and Nason (2015) found evidence of this cognitive component of ER when studying the relationship between different types of resourceful mental models among family business teams and their ability to garner appropriate resources. They observed that moderate degrees of resourceful mental maps among entrepreneurial teams are beneficial in the creative application of resources.

Recognizing potential combinations of resources. The final group of studies has focused on how individuals engage in entrepreneurial bricolage to support ventures under resource constraints (Baker and Nelson, 2005). While bricolage research often emphasizes behaviors such as pursuing second-best solutions, tinkering, and compromising (Steffens et al.,

2023), it also involves an important cognitive component (Desa and Basu, 2013). Specifically, bricolage involves reimagining the normative functions of resources, which in turn shapes perceptions about the possible uses and combinations of resources for entrepreneurship (Penrose, 1959). Thus, a cognitive feature of bricolage is that entrepreneurs refuse to accept external limitations in how they might apply and/or combine potential resources (Baker and Nelson, 2005). This refusal to accept normative constraints on what is possible enables actors to imagine and enact new combinations of physical, social, and institutional resources for their objectives (Desa, 2012; Garud and Karnøe, 2003).

In extending this scholarship, additional bricolage-themed research has revealed how imagining possible ways of utilizing resources allows entrepreneurs to imagine and pursue opportunities (Busch and Barkema, 2021). For example, Reypens et al. (2021) found that a bricolage cognitive frame interacts with more traditional resource-seeking venturing frameworks. Specifically, they found that entrepreneurs capable of dynamically shifting between cognitive frames and maintaining high levels of bricolage and resource-seeking activities are more likely to achieve positive firm performance outcomes. This study contributed to an important and underdeveloped stream of scholarship regarding the cognitive mechanisms shaping ER, demonstrating that the value of ER varies depending on how it is used in combination with other resourcing orientations. In a related study, Steffens and colleagues (2022) argued that bricolage orients decision-makers to “second-best solutions” and “tinkering,” which can be detrimental to mature ventures’ competitiveness yet beneficial to early-stage ventures. These findings reinforce the interconnectedness between resource approaches, the entrepreneurial schemas actors are striving to enact, and firm outcomes.

Integrating the ER literature on the cognitive component. In integrating the research on ER's cognitive component, we draw several conclusions. First, this research has investigated how differences in individual and group cognitive frames influence entrepreneurship processes such as pre-venture opportunity pursuit, new venture founding, venture transitions (turning points, pivots, etc.), and persistence (Davidsson and Gruenhagen, 2021; McMullen and Dimov, 2013). Second, a set of studies has examined the interaction between the individual and the environment in shaping the cognitive mechanisms of ER. For example, research has highlighted how the *perceived* hostility of the environment leads to different resourcefulness behaviors (Michaelis et al., 2022), showing that the more hostile the perceived environment is, the more likely entrepreneurs will engage in self-reliant resourcing behaviors, such as bootstrapping (Michaelis et al., 2020). Finally, research has shown that there are trade-offs in persisting with ER-related mental models as firms evolve over time (e.g., second-best vs. optimal solutions, high vs. low growth potential, etc.) (Desa and Basu, 2013; Steffens et al., 2023). Thus, when celebrating short-term resourceful solutions, entrepreneurs should also acknowledge the downstream limitations of ER, such as for scaling a venture over time (Shepherd et al., 2020). In sum, our review presents a dynamic, complex picture of the cognitive component of ER and demonstrates the need for a continued nuanced exploration of its occurrence and consequences.

Behavioral Component of ER

The second prominent body of research in the ER literature has examined the behavioral component of ER (see Figure 1). We grouped these studies under two subthemes—cultural and sociopolitical behaviors—each of which can be further broken down into several streams.

Cultural behaviors. Research on ER-related cultural behaviors has largely been anchored in theories of the sociology of culture (Swidler, 1986) and cultural entrepreneurship

(Lounsbury and Glynn, 2001; Rindova et al., 2011). This research has argued that there is heterogeneity in how entrepreneurs creatively identify and use cultural “tools” (e.g., symbolic actions, stories/narratives, visual artifacts, and so forth) as resources in the symbolic construction of their enterprises (Lounsbury and Glynn, 2019). While the research on cultural entrepreneurship is broader than ER, we found a robust stream of research that aligns with our definition of ER. Specifically, cultural tools such as storytelling, rhetorical practices, use of symbol and symbolic actions, and identity claiming functioned as resource proxies, temporarily substituting resources entrepreneurs did not yet possess (i.e., profitability, strong operating revenue, etc.), to convince audiences of a firm’s possible future (i.e., entrepreneurial schema). The primary target outcome of cultural ER behaviors is to secure legitimacy or to signal the future value of an emerging entrepreneurial schema to potential stakeholders. Our review uncovered three prominent groups of studies focused on ER cultural behaviors.

Meaning making to enact entrepreneurial schemas. One group of studies has focused on resourceful practices to ascribe meaning to a venture’s proposed entrepreneurial schema and potential resource alignment as a means for garnering legitimacy. Broadly speaking, this group of ER studies have drawn upon the sociology of culture and linguistic framing theories to explain how entrepreneurs deal with discrepancies between the current state and imagined future potential of their ventures (Lounsbury and Glynn, 2001; Swidler, 1986). The ER behaviors are important as they infuse venture activities with meaning and value that facilitate the engagement of team members, employees, and resource providers (Lounsbury and Glynn, 2001). For example, Kannan-Narasimhan and Lawrence (2018) examined how entrepreneurs reframe the meaning of their firms’ current resource positions to influence external audience perceptions by associating firms with “innovativeness” despite lacking evidence. Similarly, McDonald and Gao

(2019) found that entrepreneurs employing ‘cultural tools’ to promote their ventures had to balance the incongruity between the aspirational future-focused stories they use to solicit resources and reality. These arguments and findings are consistent with the ‘boundary breaking’ aspect of ER, where actors must balance conforming to with bending/breaking norms. Other research (Martens et al., 2007) similarly found that the content of entrepreneurial storytelling helped manage tensions surrounding breaking of boundaries. Specifically, Martens and colleagues (2007) observed that compelling stories can be a source of meaning for resource providers despite inconsistencies with a firm’s performance reality and that adaptation of the story vis-à-vis progress is possible through purposeful justification to targeted audiences.

In building on these themes, other research has revealed how entrepreneurs use stories to convey new interpretations of institutional (Lee and Hung, 2014; Moss et al., 2018) and entrepreneurial (Fisher et al., 2016; Garud et al., 2014) possibilities to relevant audiences. Through storytelling, entrepreneurs can include customizing messages to address the needs of diverse audiences (Park and Zhang, 2020; Fisher et al., 2021) and broadcasting value-laden narratives about what a firm hopes to achieve that align with the personal values of potential resource providers (Nielsen and Binder, 2021).

Identity crafting to align with and extend boundaries of entrepreneurial norms. A second group of studies has drawn upon cultural entrepreneurship and organizational identity theories to show how rhetorical practices and collective identity narratives facilitate claims of legitimacy. These rhetorical and identity-claiming practices stretch the boundary between what is (i.e., current state of the nascent firm) and what can be (i.e., imagined future for the venture), which helps firms recruit and mobilize resources in the entrepreneurial process (Powell and Baker, 2014). In their foundational article on cultural entrepreneurship, Lounsbury and Glynn (2001)

argued that stories enable entrepreneurs to craft new venture identities, which provide a coherent structure upon which audience can confer legitimacy. A coherent venture identity is especially helpful as a potential resource during the emergent stages of a venture (Wry et al., 2011), when firms lack evidence of operational performance and therefore need to leverage collective identity claims as an alternative resource.

Identity crafting has been shown to help entrepreneurs progress in their venturing journey by facilitating access to support from resource providers, employees, and customers (Moss et al., 2021). While identity crafting is most commonly explored during emergent stages of venturing, other research has highlighted how entrepreneurs modify their identity claims over time to ensure alignment between their evolving identities and their organizations' performance trajectories (Fisher et al., 2016; Martens et al., 2007). These identity-claiming behaviors are part of a broader effort to bring a firm's emerging identity into use as a resource by signaling alignment with the expectations of investors or other stakeholders (Moser et al., 2017; Tauscher et al., 2021). The ability to match identity claims with the expectations of potential resource providers is critical to retain their engagement over time (Grimes et al., 2019), which makes this aspect of ER relevant across entrepreneurial processes (Fisher et al., 2016; Sonenshein, 2014).

Symbolic actions and conformity with normative boundaries. The third set of studies has drawn on cultural entrepreneurship theory and has examined the performative function of symbolic actions (e.g., planning processes and strategies) and representations (e.g., certifications, visual symbols, use of physical artifacts) in enabling firm emergence and legitimation (Stone and Brush, 1996). As with other cultural ER behaviors, these serve as replacement resources that allow firms to continue emerging and growing. For example, Zimmerman and Zeitz (2002) theorized the notion of "strategic legitimation," which involves specific behaviors used to obtain

audience support, such as performatively complying with industry norms, selecting a favorable environment to cater to, and curating audiences' expectations and values. Zott and Huy (2007) argued that use of symbolic actions may be helpful when an entrepreneurial venture lacks historical performance as an indicator of trustworthiness during the emergence stage of the entrepreneurial process. This argument was supported by Symeonidou and Nicolaou (2018), who found that symbolic actions conveying a founder's credibility, organizing capabilities, and stakeholder relationships facilitate the acquisition of needed resources.

Symbolic ER behaviors are especially important as they help achieve seemingly incompatible objectives: to signal conformity to normative expectations and to differentiate from norms to make the case for boundary-breaking value creation (see Williams et al., 2021; see Zhao, 2022, and Zhao et al., 2017, for reviews focused on this tension). Indeed, some research has explored how and when symbolic actions are effective based on efforts to “fit in versus stand out” relative to existing institutional arrangements (De Clercq and Voronov, 2009). Balancing decisions for when to align actions with or break away from existing norms is difficult, and entrepreneurs can get this wrong by misinterpreting institutional tolerance for boundary-breaking actions (Zhao et al., 2017) or getting the timing wrong (within the venture life cycle) for norm compliance/violation signals (Tian et al., 2019).

Integrating the ER literature on cultural behaviors. In integrating the insights from the ER research on cultural behaviors, we draw several conclusions. First, in relation to the entrepreneurial process, nearly all studies under this subtheme have focused on the early stages of venture, industry, and market emergence (Frese and Gielnik, 2022), in which obtaining legitimacy while simultaneously communicating something “new” is critically important. However, balancing signals of “new” and “legitimate” remains relevant throughout multiple

stages of the entrepreneurial process, such as during transitions and pivots (Davidsson and Gruenhagen, 2021), when actors must adjust narratives that align with their firms' shifting reality (Fisher et al., 2016). Second, research has shown how individuals and firms employ cultural behaviors to align actions with internal and external audience expectations (Lounsbury and Glynn, 2019). However, meeting heterogeneous audience preferences often requires sending contradicting messages to different audiences (Majzoubi and Zhao, 2023). Sending contradicting messages can result in accusations of inauthenticity—which undermines legitimacy.

Finally, research shows that different audiences value different things, and that ER may help entrepreneurs effectively address these different needs. For example, for external audiences, it is commonly believed that conformity leads to legitimacy. However, Tauscher et al. (2021) showed that for novelty-seeking audiences, such as crowdfunders, the distinctive nonconformity of entrepreneurial stories has a positive effect on new ventures' resource acquisition, demonstrating how distinctiveness can become a source of legitimacy. Similarly, Moser et al. (2017) found that new ventures may appear more attractive to potential employees based on how well they balance normative boundary conforming and challenging claims regarding founders' transactional, relational, and ideological attributes. These findings highlight the importance of examining the content and outcomes of cultural behaviors in relation to diverse internal and external audiences across the full range of the entrepreneurial process.

Sociopolitical behaviors. The second of the two subthemes relating to the behavioral component of ER involves sociopolitical behaviors. This research has drawn on social capital and social network theories (Birley, 1985; Burt, 2005) to explain how actors identify and bring resources they do not control into use in pursuit of an entrepreneurial opportunity (Burt, 2005;

Pfeffer and Salancik, 2003; Stevenson and Jarillo, 1990). Our review revealed three prominent groups of studies exploring the sociopolitical-behavioral component of ER.

Social skills for enacting environmental resources. This group of studies has emphasized how heterogeneity in entrepreneurs' social skills influences their effectiveness in converting social connections into resources in support of their entrepreneurial schemas. ER-related social skills involve mobilizing "unspecified, diffuse, future personal obligations, trust, and gratitude" in pursuit of an entrepreneurial opportunity (Starr and MacMillan, 1990: 80). Research has revealed several ER-related social skills that facilitated efforts to initiate and grow entrepreneurial firms. For example, an entrepreneur's social skills, including their perception (i.e., ability to effectively understand people), adaptation (i.e., ability to adjust social interaction tactics), and expression (i.e., ability to communicate with diverse social actors), positively influence firm emergence and performance (Baron and Tang, 2009). In building on those insights, Snihur and colleagues (2017) showed how *social timing* skills, or the ability to appropriately time interactions with audiences, increases the effectiveness of entrepreneurs' engagement with external actors in the opportunity-development process.

Other research examined how social skills in relation to power and/or authority structures enabled individuals to identify and mobilize resources for their entrepreneurial ventures. For example, in studying Haitian entrepreneurs operating in the wake of a natural disaster, Williams and Shepherd (2016a) found that entrepreneurs who have social skills related to understanding and conveying authority within an informal social hierarchy can successfully acquire resources in the short term to sustain an emerging organization. Similarly, Lashley and Pollock (2020) described the ability to informally mobilize 'authority' as 'soft power,' and they found that women and minority business owners often leveraged their 'soft power' social skills to seek and

obtain positions in buyers' supply chains by effectively curating "cognitive centrality" with those affecting buyers' decisions. Taken together, this research has highlighted the value of ER-related social skills in helping entrepreneurs effectively deploy a portfolio of social relationships across multiple stages of their ventures (Kerr and Coviello, 2020).

Leveraging network connections. Next, several studies have explored how network connections shape the assembly and mobilization of resources for venturing and help overcome barriers to accessing resources (Aarstad et al., 2010; Maurer and Ebers, 2006). For example, in a case study, Hite (2005) found that the degree of an entrepreneur's network embeddedness influences the opportunity recognition, firm governance, and subsequent resource acquisition needed to sustain a venture. Network embeddedness benefits entrepreneurs in that it facilitates trust and social leverage with key stakeholders, which is positively related to a firm's progress through entrepreneurial stages. Several studies have also demonstrated other network-resource linkages, showing how entrepreneurs' positions in industry clusters (Libaers and Meyer, 2011), successful firms (Aarstad et al., 2010), and customer-related (Tolstoy, 2009) networks enable them to bring appropriate resources into use across venturing stages (Dimitriadis, 2021; Williams and Shepherd, 2018). Importantly, this research has found that the strategic development of network ties provides unique advantages for firms, such as facilitating the customization and speed of a response to address customer needs (Williams and Shepherd, 2018) and ensuring the durability of venturing activities over time (Dimitriadis, 2021).

ER research on leveraging one's network in entrepreneurial processes has also revealed that network cultivation *and* use is not a costless exercise. When entrepreneurs choose to develop and maintain social ties that align with their entrepreneurial schemas, they trade off other ER or resource-acquisition efforts (Birley, 1985; Burt, 2005). For example, Hanlon and Saunders

(2007) found that entrepreneurs vary in their ability to identify, assemble, and deploy social resources toward their objectives depending on their effectiveness in managing quality-quantity and efficiency-effectiveness trade-offs within their networks. Therefore, effectively bringing network resources into use involves cultivating and curating network connections in ways that exceed the value of alternatives, which requires actors to dynamically reevaluate the fit between their networks and entrepreneurial schemas over time (Williams and Shepherd, 2016b, 2018).

Several studies have also focused on trade-offs associated with cultivating political connections as a specific approach to bringing a social network into use for an entrepreneurial endeavor. Forging political connections is a primary pathway to bringing resources into use for organizational founding, launch, and growth, particularly in situations involving a weak institutional environment or institutional voids (Armanios et al., 2017; Ge et al., 2019; Hiatt et al., 2018). However, ER-related political activities may involve morally questionable and even illegal creative actions, which are likely to have long-term consequences (Williams and Shepherd, 2016a). For example, Ge et al. (2019) found that developing political ties serves as a means of filling institutional voids and mobilizing resources, but it can also pose risks should an entrepreneur go too far in exceeding the normative boundaries of political engagement (i.e., get labeled as “corrupt”). In a related study, de Jong et al. (2012) revealed that bribery—an organization’s payment of cash to influence a public official’s actions—may be an investment entrepreneurs must make to operate successfully, but it may crowd out alternative investments and erode incentives for innovation or other activities, such as training and marketing.

Eddleston and colleagues (2020) similarly uncovered what they call the “bribery paradox,” showing that entrepreneurs gain an immediate benefit from paying bribes but that bribes become an obstacle-ridden new normal in the long term that is difficult to overcome. In a

related study, Baron and colleagues (2018) found that “underdog” entrepreneurs, or those disadvantaged due to discrimination based on gender, race, age, and ethnicity, use bribes to control the limited resources available to them. However, underdogs’ perceptions of bribe effectiveness in accessing limited resources hamper other decisions, such as when to close a failing venture. Overall, this research has examined trade-offs associated with ER when taken to an extreme or when involving illegal behaviors.

Capturing and mobilizing resources from higher-order institutions. The final group of papers under this subtheme has drawn on the idea that different types of collective groups, such as social and cultural communities, often function as informal and ambiguous sources of potential resources for entrepreneurship (Hertel et al., 2021; Moss et al., 2021; Williams and Shepherd, 2021). Moss and colleagues (2021) found that entrepreneurs often mobilize the support and trust of their communities for venturing activities, which results in both firm and community benefits. Other research has found that entrepreneurs’ ability to socially engage with a community (Murray et al., 2020), solicit member identification with their firms, and gain financial support (Grodal, 2018) can be a vital pathway to sustain their ventures through the early stages of emergence until they can access traditional resources (Hertel et al., 2021; McNamara et al., 2018; Williams and Shepherd, 2021).

Integrating the ER literature on sociopolitical behaviors. To date, much of the ER research on the sociopolitical behaviors has emphasized the importance of network relationships. However, less is known about how entrepreneurs balance network development with other ER or resource-acquisition practices. Similarly, a small body of research has examined the importance of social skills, which are seemingly essential for recognizing how and when to convert relationships to resources. However, this research stream is relatively small as the mechanisms

and processes for transitioning relationships to resources have often been assumed as given. Finally, most studies on entrepreneurs' political relationships have focused on emerging economies like China, Vietnam, and South America (Armanios et al., 2017; de Jong et al., 2012; Hiatt et al., 2018). These studies have assumed that government officials significantly influence markets, making political relationship building critical to venture success (Li and Zhang, 2007). However, this assumption should be tested by examining differences in the political components of ER in different contexts.

Outcomes of ER

ER most often involves identifying resource alternatives to initiate or sustain an entrepreneurial venturing, where a commonly studied outcome of ER is access to more resources. However, studies examining the outcomes of ER have revealed a diverse range of effects spanning individual, organizational, and institutional levels.

Individual outcomes. First, a small set of studies has explored individual-level outcomes of ER. Research in this area has seen a resurgence in recent years as scholars have considered the manifold benefits beyond economic returns accrued through the entrepreneurship process (Williams and Shepherd, 2016b). For example, Welter and colleagues (2017) found that individuals living in unstable circumstances employ ER to facilitate individual coping. They found that ER helps individuals retain agency in the face of instability and difficult life changes (see also Desa and Basu, 2013). Similarly, other research has noted that variation in ER influences founder identities (Powell and Baker, 2014) and motivations (Stenholm and Renko, 2016), which together enable persistence with entrepreneurship despite adversity.

Organizational outcomes. Second, organizational outcomes are the most widely studied outcomes of ER and include three primary areas of focus: resource acquisition, performance, and

adaptation. Resource acquisition includes obtaining tangible (e.g., finance and other hard resources; Keating et al., 2014; Murray et al., 2020) and intangible resources (e.g., reputation; McGrath and MacMillan, 1992). For example, studies have revealed that ER facilitates firms' access to new resources (Ebben and Johnson, 2006; Lounsbury & Glynn, 2001) across different stages of the entrepreneurship process (Davidsson and Gruenhagen, 2021). Put differently, ER has been framed as an approach to bridging the gap between a firm's capabilities based on existing resource stocks and its need to access new or different resources (Steffens et al., 2023).

Regarding performance, research has investigated organizational performance outcomes, including the survival of nascent firms (Baron et al., 2018; Chatterji et al., 2019) and the survival of entrepreneurial firms facing significant environmental or institutional constraints (Hiatt et al., 2018). Studies have also explored the ER–venture growth relationship, including movement toward an initial public offering (Chatterji et al., 2019), expansion to new markets, and increased market power (Khaire, 2010; Zimmerman and Zeitz, 2002). Finally, research has explored organizational adaptation as an outcome of ER, showing how ER enables organizations to adapt to new resource conditions (Foss et al., 2008; Tolstoy, 2009). This includes adaptation to industry adversity (Powell and Baker, 2014) as well as the generation of new products, services, and markets (Chiles et al., 2010; Lachmann, 1986).

Institutional outcomes. Third, ER research has also explored institutional outcomes of ER. This small body of research has examined how ER enables firms to catalyze change in the broader environments in which they are embedded. This research has built on foundational scholarship (Lachmann, 1956, 1986) theorizing that institutional and environmental conditions do not spring up in isolation but are instead the “outcomes of contests among various social actors trying to mold the institutional environment to their advantage” (Pfeffer and Salancik,

2003: xv). ER has been shown to facilitate the development of community-level resource availability (Williams and Shepherd, 2021) and to promote community-level resilience (Williams and Shepherd, 2016a, b) and well-being (Shepherd et al., 2020). Similarly, ER fuels the development of novelty within society more generally, which enhances the stocks of resources available to actors embedded in those environments (Chiles et al., 2010; Lachmann, 1986). Other research has shown that ER facilitates crafting and legitimizing new institutional arrangements and structures (Mair and Marti, 2009), including new market categories (Wry et al., 2011) and industries (Garud and Karnøe, 2003). Finally, research has explored how ER enables existing institutionalized rules and beliefs to be altered to make way for new opportunities (Gurses and Ozcan, 2015; Nigam and Ocasio, 2010; Ocasio et al., 2015).

Cross-Level Moderators of ER and its Outcomes

Examining moderators is helpful in revealing the conditions under which relationships between ER and its outcomes are altered. Our review identified three moderator categories: contextual attributes (where), temporal dynamics (when), and subject attributes (who).

Contextual attributes (where). The places where organizations operate and the associated resource bases have been shown to moderate ER processes (Fathallah et al., 2024). For example, many ER studies have focused on rural, resource-poor firms that are more likely to leverage ER over resource-seeking activities due to their embedded context of resource scarcity (Busch and Barkema, 2021; Garud and Karnøe, 2003; Mair and Marti, 2009; Moss et al., 2021; Reypens et al., 2021; Shepherd et al., 2020). However, some work has begun examining how differences in macroenvironmental conditions influence organizations' decisions to pursue ER or resource seeking resource-mobilization approaches. For example, Desa and Basu (2013) found that ER was more often employed at the extremes of environmental conditions—very low and

very high munificence, offering a ‘glimpse’ into the relative importance of ER under different conditions. Similarly, a smaller body of research has found that firms with larger resource bases may still engage in ER activities to stimulate creativity in hopes of spurring internal entrepreneurial activities (Sonenshein, 2014, 2017) or out of necessity when facing temporary crises that disrupt the organizations’ operations (Sonenshein and Nault, 2024).

Beyond general environmental conditions, other studies have examined the influence of industry norms on the prevalence and impact of ER in shaping entrepreneurial processes. For example, Symeonidou and Nicolaou (2018) found that normative industry legitimacy requirements attenuate the effectiveness of cultural and sociopolitical ER behaviors in the development of ventures. In contrast, Hiatt and colleagues (2018) found that a developing institutional context enhances the effectiveness of sociopolitical mechanisms for accessing resources, such as venture security and the right to operate (see also Khaire, 2010). Broader social norms regarding gender roles have similarly been found to influence ER’s use in the entrepreneurship process. Uzuegbunam and Uzuegbunam (2018) found that cultural norms regarding gender roles lead women to resort to ER more frequently than men given their disproportionate constraints. Similarly, family-related institutional structures have been shown to facilitate access to and the deployment of a variety of resources (Ge et al, 2019; Gras and Nason, 2015) as well as shape perceptions of certain types of ER practices, such as innovation and tradition cultivation and bribery (Eddleston et al., 2020).

Temporal dynamics (when). A group of studies has examined how dynamic macro-level factors moderate ER relationships. For example, more dynamic institutional contexts (e.g., hostile; Grichnik et al., 2014; Michaelis et al., 2022; Williams and Shepherd, 2016a) have been shown to introduce uncertainty regarding the relevance of resources for organizing. This

uncertainty influences customer and audience preferences for how firms approach resources and the value of ER-related behaviors (Ebben and Johnson, 2006; Jonsson and Lindbergh, 2013; Kerr and Coviello, 2020). Similarly, other research has shown that the degree of upheaval (or not) in an industry influences ER's effect across various entrepreneurial stages (Gurses and Ozcan, 2015). Finally, several studies have emphasized how the life cycle of a market (emergent, mature, changing) affects the type of resourcing activities needed for advancement. Specifically, ER may foster innovation to help an emergent market take root yet may be less effective in more mature markets (Desa and Basu, 2013; Grodal, 2018; Lee and Hung, 2014).

Another set of studies has examined the relevance of organizational timing (i.e., life cycle) in relation to ER processes and outcomes. Much of this research has assumed that ER is most prevalent and influential when firms are in their earliest stages (Baker and Nelson, 2005; Chiles et al., 2010; Perkmann and Spicer, 2014). This focus on early stages in the organizational life cycle is understandable as ER has traditionally been assumed to be most useful during organizational emergence when firms lack access to broader resources in the market (Hite, 2005; Lo, 2015; Moser et al., 2017; Reypens et al., 2021). However, more recent research has explored ER's influence across different stages of the entrepreneurship process, such as for firm growth (Busch and Barkema, 2021; Chatterji et al., 2019), transition (Sonenshein and Nault, 2024), and/or professionalization (Fisher et al., 2016; Steffens et al., 2023).

Subject attributes (who). Our review revealed a small number of studies that have examined how a subject's (i.e., individual, organization, etc.) attributes shape ER processes and outcomes. Traits like frugality (Michaelis et al., 2022) and hustle (Fisher et al., 2020) have been shown to increase individuals' use of ER when engaging in entrepreneurship. Other research has found that differences in individuals' perceptions of environmental uncertainty and the

availability of personal resources influence their use of ER for entrepreneurship (Grichnik et al., 2014; Williams and Shepherd, 2018). In particular, individuals' or organizations' identities have been linked to ER: an entrepreneurs' or organizations' identity influences perceptions of possible resources for venturing (Powell and Baker, 2014) and perceived agency to act (Michaelis et al., 2020; Michaelis et al., 2022).

CRITICAL ISSUES—AGENDA FOR FUTURE RESEARCH

In this section, we illustrate the most pressing areas for future research, which correspond to the model we developed to structure the review (Figure 1). Table II details a research agenda highlighting important questions for future research rooted in ER's foundational theories.

INSERT TABLE II ABOUT HERE

The Influence of ER Across the Entrepreneurial Process

Our review underscores that ER scholarship has predominantly focused on the incipient stages of new ventures, industry categories, and market emergence. Nonetheless, the review also points to multiple subthemes within the cognitive and behavioral components of ER that may be applicable across various phases of the entrepreneurial process. In taking a process approach, future research on ER can incorporate two primary viewpoints on progression in the entrepreneurial process: a gestation-based sequential perspective and a nonlinear winding perspective (Davidsson and Gruenhagen, 2021; Fathallah et al., 2024).

Historically, entrepreneurship scholars have drawn parallels with the staged-gestation model to frame critical events in the entrepreneurship process (Davidsson and Gruenhagen, 2021). While this analogy does not perfectly reflect the iterative and nonlinear nature of entrepreneurship in practice (McMullen and Dimov, 2013), it is useful for capturing key “stage gates” that indicate *progress* in the process. From this perspective, there are significant

opportunities to explore the role of ER across multiple stages of the entrepreneurial journey and if/how it impacts ‘progress.’ Future research could examine the role of ER in the professionalization of an emerging firm, transitions/pivots, exit, “resurrection” after failure, and so forth. Specifically, research could examine the relevance of ER across different transition points, including when it is helpful versus detrimental. This line of inquiry could examine the value of certain components of ER (e.g., cognitively challenging one’s assumptions about the environment to imagine new alternative futures) relative to others (e.g., tinkering and/or persisting with a resource replacement behaviors) across different points in the entrepreneurial process. In particular, the theory of entrepreneurial action (McMullen and Shepherd, 2006) might be instrumental in charting the varied stages of entrepreneurial evolution and their interconnected dynamics over time (Frese and Gielnik, 2023). Studying ER through this lens can push the envelope of our understanding, especially since there is a dearth of knowledge about how ER manifests after the start-up phase (cf. Sonenshein, 2014; Sonenshein and Nault, 2024).

Furthermore, ER can provide insights into how entrepreneurs skillfully tread through winding and iterative entrepreneurial trajectories (Fathallah et al., 2024; Thorgren and Williams, 2023), including their different modes of opportunity search and experimentation, evaluation, and refinement. Indeed, ER could be an especially helpful lens given its emphasis on aligning cognitive perceptions of potential resources with an emerging and evolving entrepreneurial schema. Finally, recent research on the entrepreneurial process has urged scholars to focus not just on entrepreneurs’ progression but also on the intricacies of the dynamic entrepreneurship process itself (Davidsson and Gruenhagen, 2021; Williams and Fathallah, 2024). It could be theoretically revelatory to investigate the interplay between ER and processual aspects, such as speed, intensity, flexibility, complexity, duration, and iteration cycles.

Antecedents of ER—What Shapes the Cognitive and Behavioral Components of ER?

To date, research has scarcely delved into the antecedents of ER, particularly its internal roots, whether at the individual or organizational level (cf. Michaelis et al., 2022). Our review suggests that this gap largely stems from an emphasis in prior research on the external environmental factors that catalyze resourcefulness (Ge et al., 2019; Welter et al., 2017). While environmental penury has, until recently, been assumed to be vital in shaping ER, there have been increasing calls for scholars to explore this phenomenon across a wider range of contexts (Baker and Nelson, 2005; Powell and Baker, 2014; Steffens et al., 2023; Williams et al., 2021).

Building upon the theoretical roots in SCT (Bandura, 1991; Fiske and Taylor, 2013), scholars can investigate antecedents of the cognitive component of ER by studying its individual level microfoundations. This investigation could include exploring differences in entrepreneurial decision-making processes (Shepherd et al., 2014) and, especially, differences in how individuals perceive the potentiality of a common set of resources for entrepreneurial resourcing (Lachmann, 1986). Furthermore, studies have highlighted that individual traits, such as thriftiness and frugality (Michaelis et al., 2020), shape ER through metacognitive processes (Michaelis et al., 2022). Such insights pave the way for analyzing how individual variations in personality (Baum et al., 2014) and social identity (Powell and Baker, 2014) influence ER components and outcomes. More recent research has delved into the microfoundational sensemaking process of resourcefulness enactment (Fisher, 2024; McMullen, 2023). A deeper dive into how metacognitive mechanisms (Haynie et al., 2010) influence ER is crucial. For example, as entrepreneurs attempt to forge and maintain their entrepreneurial self-identities, they interpret and act upon social structures differently, further (re)shaping these structures (Powell and Baker, 2014; Wry and York, 2017).

On a broader scale, there is potential in investigating how organizational and institutional factors influence ER. For example, future research can explore the organizational structures, practices, and routines that encourage different ER cognitions and behaviors. This research can build on the scant research (Sonenshein, 2014) examining tactics organizations employ—such as manufacturing constraints in munificent resource contexts—to cultivate ER in existing organizations. Similarly, research can explore factors triggering opportunity-cost evaluations of ER versus other approaches to bringing and deploying resources for venturing. Are there interactions across levels that are more likely to shape one set of practices over others—if so, why and how? Finally, research on institutional logics (Thornton et al. 2012) has focused on how sets of institutionally derived assumptions, values, and beliefs shape individual behaviors but are also *influenced* and *altered* by individual and organizational actors (Soublière and Lockwood, 2022; Williams, 2022). Therefore, it could be fruitful to examine institutional logics (across multiple levels of institutions) as antecedents of ER. Overall, we call for more research on the antecedents of ER, how they manifest across ER's components, and the degree to which they impact critical relationships across the stages of entrepreneurial process.

Components of ER—Why and How Does ER Occur?

While a substantial body of research has analyzed the cognitive and behavioral components of ER, there are still considerable opportunities to further unpack them and provide greater clarity, especially considering the dynamic relationship between bringing resources into use and applying them to an associated entrepreneurial schema (Chiles et al., 2010).

Cognitive component. On the *cognitive* front, transactive memory system theory offers one promising perspective to build on the cognitive foundation of ER. A transactive memory system is a shared cognitive system among a group of individuals used for capturing, storing,

and retrieving knowledge based on the collective awareness of different resources (knowledge, abilities, etc.) embedded in unique individuals (Hollingshead, 1998). This concept can elucidate how ER operates within teams or larger groups as it defines how distributed and differentiated knowledge influence performance outcomes (Wegner, 1986). This theory thus has implications for how founders use ER.

Future scholarship can also explore how actors (individually or in groups) dynamically model the environment and associated opportunities and then bring them into being. Such research would involve drawing on longitudinal data and capturing differences in the dynamics of ER-opportunity coproduction processes. SCT offers an extremely rich and broad theoretical foundation to draw upon as it explores key concepts, such as embedded agency, forethought, efficacy, and related topics, that are central to explaining how sociostructural influences interact with intrapersonal factors in directing behavior (Bandura, 2001). Accordingly, the following questions could be pertinent for future studies: Do the (meta)cognitive mechanisms of ER persist over time, and if so, with what impact? How do these mechanisms evolve or prevail over time?

Behavioral component. From a *behavioral perspective*, future research can develop and test theory on the processes and consequences of regulating rule-adherence behaviors (drawing on SCT and DRT). This research might examine how entrepreneurs manage the tensions between *fitting in* to attain legitimacy with *standing out* through appropriate deviations that lead to alterations or improvements in firms, markets, and industries (Bacco and Dalpiaz, 2022; Dalpiaz et al., 2016). Research can explore how entrepreneurs identify and navigate the ‘permissible boundaries’ of ER across different contexts and stages of the entrepreneurial process. This research could examine how actors recognize when they have gone too far in violating societal and/or social norms or shared values, the costs/benefits associated with going

too far, and whether and how they can return to audience members' good graces following violations. Research examining when and how ER is employed to redefine boundaries could draw on several theoretical traditions. For example, entrepreneurs use cultural toolkits to gain legitimacy by claiming association with a future, not-yet-realized reality of their entrepreneurial schemas (Lounsbury and Glynn, 2001; Soublière and Lockwood, 2022). When are these claims seen as inappropriate (Dalpiaz and Cavotta, 2021) or even outright deceptions as opposed to creative foresight on what is possible for future organization, market, or product opportunities? Similarly, theory on social skills, including political skills, such as lobbying government officials takes various forms and involves different 'boundaries' for acceptable behavior across contexts. Future research could draw on this literature to explore how entrepreneurs operate within political and legal norms while also expanding or altering those norms.

Intersection of cognitive and behavioral components. We anticipate that many contributions will come from research that incorporates ER's cognitive and behavioral components. Future research can explore how ER processes effectively balance the adherence to and extension of normative standards across individual, organizational, and/or institutional logics (Thornton et al., 2012). For example, future research could explore the processes through which actors disrupt their own world view (i.e., individual, organizational, and/or institutional) and how they manage the incongruity of breaking certain norms while adhering to others. How do individuals sustain these seemingly incompatible mental models while preserving valuable stakeholder relationships? What behaviors (tactics, strategies, and/or practices) are sustainable over time and how do individuals cope with the potential distress involved in embracing dualistic and contradicting cognitive frames of reality?

Theories like deviance regulation theory (DRT; Blanton and Christie, 2003) that relate to social-identity theories (Tajfel and Turner, 1979) offer insights in this regard. DRT suggests that people maintain a positive reputational persona by choosing desired ways to deviate from social norms. Indeed, early entrepreneurship scholarship highlighted how ER could fundamentally be a “deviant behavior in which individuals try to ‘catch up’ to others through innovation in business” (McGrath and MacMillan, 1992: 421). The work of French sociologists Boltanski and Thévenot (2006) may also be useful, in which they developed a typology of major value sets or ‘worldviews’ held by different stakeholders. In recognizing heterogeneity in how individuals interpret and respond to common situations, they argued for the importance of studying “capable actors” who can (a) learn about different stakeholder values, (b) bridge those values, and then (c) find compromises that satisfy incompatible features of necessary stakeholders’ different value sets in entrepreneurial situations. It is likely that ER could help explain why some are more capable than others in orchestrating value-generating compromises across diverse stakeholders.

Moderating Mechanisms: When, Where, and for Whom Is ER Valuable?

The behavioral and cognitive components of ER are likely influenced by various contingencies, yet the specifics of when, where, and for whom ER proves beneficial or detrimental remains underdeveloped. Research on bootstrapping (Winborg and Landström, 2001), for instance, has highlighted a shift in audience expectations regarding how ventures acquire resources as they grow with a tilt toward equity-backed financing over bootstrapping (Ebben and Johnson, 2006; Jonsson and Lindbergh, 2013). This shift aligns with studies pointing to decreasing returns of ER over a venture’s life cycle (Steffens et al., 2023). However, significant gaps remain concerning ER’s role and implications during other firm phases, such as during venture growth, pivoting, harvesting, and renewal. Pertinent questions for future research

may include the following: Does ER bolster a firm's image of responsible and sustainable growth? How does the transition from ER to resource seeking influence audience perceptions of the consistency or authenticity of venture's identity claims (Grimes et al., 2019)?

Moreover, most ER studies have been embedded within the context of emerging industry categories. Future research could broaden this scope to investigate ER's impact during various phases of an industry's life cycle. Employing life cycle theories (Mintzberg, 1984; Peltoniemi, 2011) across the product, organization, market, and industry levels of analysis could help unpack the conditional factors shaping ER. Doing so will improve clarity on the boundaries and scope of ER. It is also necessary to specify a broader range of contextual contingencies in models to theorize and test how they differentially influence ER and its outcomes. Studies have rarely examined how contingencies like environmental munificence (Tushman and Anderson, 2018) or personal resources, such as power and influence (Anderson and Brion, 2014), shape ER processes and outcomes. Indeed, the significant absence of ER research in more munificent organizational and societal contexts makes it one of the most compelling opportunities to study ER and its influence across the entrepreneurial process.

Consequences of ER—What Does ER Do?

Intrapsychic outcomes. Most ER research has focused on firm-centric performance outcomes like resource acquisition, venture growth, and survival. However, some scholars have noted that certain actors engage in ER behaviors not solely for external rewards but also for intrinsic fulfillment (Baker and Nelson, 2005; Michaelis et al., 2022; Steffens et al., 2023). Recent research on entrepreneuring has highlighted the value entrepreneurs derive from entrepreneuring as an end in itself, detaching it from venture creation and/or performance results (Fathallah et al., 2024). The inherent 'value derived from venturing' might manifest as asserting

personal agency amid uncertain transitions (Thorgren and Williams, 2023; Williams and Fathallah, 2024) and/or aligning with one's entrepreneurial ideals, such as craftsmanship (Thurnell-Read, 2021). Thus, there is a need to deepen our understanding of the intrinsic and extrinsic rewards actors glean from ER and entrepreneuring.

The Dark side of ER. With few exceptions, ER has predominantly been construed as positive. The lack of studies on ER's potential downsides is partly due to limited research on the moderators and antecedents that shape variance in ER's effects. An important question thus arises: what are the opportunity costs and downsides of ER? Indeed, any virtue, when taken to the extreme, can turn counterproductive (Grant and Schwartz, 2011). ER demands considerable energy and effort, which potentially detracts from other activities like resource search or solicitation (Lim et al., 2020). Future research could examine how and when individuals choose ER over other resourcing options, the trade-offs they accept in such choices, and the repercussions of overcommitting to ER strategies. Doing so could help explain the costs of ER over time, including the costs of failing to disengage from ER behaviors when they become damaging to individuals or organizations. Such scholarship could help enhance our understanding of situations where ER is considered the "only option" (Morris et al., 2022; Sutter et al., 2023) and the conditions under which ER is deemed the most or least effective. For example, how might a bias toward ER hamper a firm's progress in the entrepreneurship process? How and when do entrepreneurs shift from an ER approach to resource-seeking, efficiency-oriented norms, and with what consequence?

Similarly, the cultural-behavioral component of ER helps organizations test multiple iterations of their self-concepts and generate additional resources, but this approach could be seen as duplicitous to stakeholders, giving the impression that these organizations are insincere

or inauthentic (Lounsbury and Glynn, 2001). To this end, future research can engage scholarship on deviance regulation (Blanton and Christie, 2003) to examine how, when, and why deviant behaviors are accepted; where the “line” is that should not be crossed; and the long-term implications of deviant behaviors (positive and negative) for individuals and firms. For example, ER might be perceived as positive for “underdog” firms doing everything they can to fight off incumbents (Baron et al., 2018). However, as a firm progresses or grows, it might lose its ability to claim an underdog identity, potentially altering audience perceptions of its actions (Mathias et al., 2020). Finally, the sociopolitical-behavioral components of ER are not without their trade-offs. While maintaining and sustaining relationships directed toward an entrepreneurial schema is important, overcommitting to certain relationships might constrain a firm’s evolution and potential for growth. Therefore, there is a need to explore the counterproductive aspects of ER.

Conclusion

Entrepreneurs and scholars increasingly recognize ER’s relevance in entrepreneurship theory and practice. Our review presented an integrative framework that delineates what ER is and how and why it is relevant at different stages of the entrepreneurial process. Building on this review, we outlined critical topics requiring further attention among scholars and practitioners to provide momentum to this growing and important body of work.

NOTE

1. Please follow the link to view our supplementary materials:
<https://resourcefulnessadvantage.weebly.com>.

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Table I. Fragmented streams of research related to entrepreneurial resourcefulness*

ER: A social-cognitive process of bringing resources into use for an entrepreneurial schema that challenges and extends normative boundaries

Theoretical Origins	Relevance to ER	Phenomenological Perspectives	Illustrative Papers
Cognitive and metacognitive	<i>Fragmented component of ER.</i> Captures the psychological factors explaining differences in how individuals perceive potential resources in relation to entrepreneurial opportunities.	Improvisation, frugality, and thriftiness —embedded cognitive processes for imagining how potential resources can be brought into use for entrepreneurship.	Baron and Henry, 2010; Feldman, 2004; Michaelis et al., 2022; Penrose, 1959; Starr and MacMillan, 1990
	<i>Problem with fragmentation.</i> Does not adequately integrate behavioral features of ER, including feedback between cognitions, behaviors, and the environment.	Learned resourcefulness —using cognitions and self-instructions to solve problems in novel, nonnormative ways.	Rosenbaum, 1988, 1990
Behavioral and practice theories	<i>Fragmented component of ER.</i> Examines behaviors employed, typically under conditions of resource constraint, to bring resources into use for entrepreneurship.	Bricolage —pursuing opportunities with resources on hand by refusing to enact limitations for the potential of novel resource combinations.	Baker and Nelson, 2005; Steffens et al., 2023
	<i>Problem with fragmentation.</i> Predominantly emphasizes “making do” with physical resources on hand as opposed to reimagining potential resources for new entrepreneurial schemas (cognitive factors), intangible resources that could be brought to bear (e.g., social relationships, cultural tools), and a broader approach to challenging normative boundaries.	Effectuation —taking existing resources and then selecting possible effects given those means.	Sarasvathy, 2001
		Entrepreneurial hustle —engaging in urgent, unorthodox actions that are intended to be useful in addressing immediate challenges and opportunities under uncertainty.	Fisher et al., 2020
		Bootstrapping —meeting venture resource needs without relying on equity or debt-based financing.	Ebben and Johnson, 2006; Winborg and Landström, 2001
Social capital	<i>Fragmented component of ER.</i> Explores how social capital is leveraged as a potential resource that could be brought into use for entrepreneurship.	Social skills/resource orchestration —converting social relationships into a resource for entrepreneurial endeavors.	Blau, 1964; Star and MacMillan, 1990
	<i>Problem with fragmentation.</i> Does not adequately integrate cognitive factors that shape perceptions of the value of social connections for an entrepreneurial schema and predominantly explores network structures over social behaviors.	Resource orchestration/mobilization —efficiently mobilizing resources toward one’s strategic or entrepreneurial objectives.	Jenkins, 1983; Sirmon et al., 2011
		Network optimization —leveraging network connections to bring in and configure resources.	Burt, 2005; Hite, 2005; Williams and Shepherd, 2018
Social identity and sociology theories	<i>Fragmented component of ER.</i> Emphasizes identity practices and “cultural toolkits” employed to bring the critical resource of entrepreneurial legitimacy into use. Includes practices for balancing the challenging of/conforming to normative environmental boundaries. <i>Problem with fragmentation.</i> Does not integrate cognitive factors involved in imagining possible identity/cultural resources and how those relate to future-focused entrepreneurial schemas. Also does not integrate other behavioral practices for mobilizing tangible resources.	Cultivating legitimacy —building legitimacy as a resource through cultural practices (e.g., narratives, symbolic representation) and/or identity crafting that aligns with an entrepreneurial schema.	Hirsch and Lounsbury, 1997; Lounsbury and Glynn, 2001, 2019; Lounsbury et al., 2018; Powell and Baker, 2014, 2017; Soublière and Lockwood, 2022; Wry et al., 2011

* We acknowledge that some of the theories/literatures highlighted here have relevance beyond ER. For example, there are other studies on “cultural toolkits” that, while sharing a common theoretical foundation, do not directly relate to our focal study. Similarly, other research on cognition relates to decision-making and other related topics. Our review focused on papers where the core concepts overlapped with key features of ER.

Table II. Summary of future research

Insights Derived from the Review	Critical Issues to Address in Future Research	Theoretical Perspectives
The influence of ER across the entrepreneurship process—When and how does ER enhance or inhibit progress in the entrepreneurial process?		
<p>1. <i>Deepen the exploration of ER across the entrepreneurial process.</i> ER is most often used to examine processes of emergence, with almost no research examining how and when ER shapes other critical processes.</p>	<ul style="list-style-type: none"> • Theorize and examine the influence of ER across entrepreneurship process sequences or stages to include phases of new venture creation journey (e.g., emergence from nonexistence to existence, professionalization, growth, pivoting, reinvention, exit, resurrection, and so forth). • Incorporate theory examining the role of ER helping actors navigate iterative, nonsequential, and serendipitous steps in moving from opportunity pursuit to entry (e.g., idea search, refinement, etc.). • Examine the relationship between ER and characteristics of the entrepreneurial process itself, including its speed, intensity, flexibility, complexity, breadth, duration, iterative cycles, etc. 	<ul style="list-style-type: none"> ▪ Entrepreneurship process theory ▪ Theories of entrepreneurial action
Antecedents of entrepreneurial resourcefulness—What shapes the cognitive and behavioral components of ER?		
<p>2. <i>Clarify the internal origins of ER.</i> Existing theory leans heavily on external triggers of ER, with almost no research directly investigating the internal (individual and organizational) antecedents of ER.</p>	<ul style="list-style-type: none"> • Build theory around the individual-level concepts preceding ER, including cognitive (decision-making, sensemaking, perception), agency, personality, and social identity (self-assessment). • Examine internal organizational structures, practices, and routines that cultivate ER. • Identify interactions between individual and environmental antecedents of ER. • Explore potential decision-making biases for ER: Are some individuals more prone to pursue and maintain an ER process over resource acquisition? Why, when, and how do those differences occur? 	<ul style="list-style-type: none"> ▪ Social cognitive theory ▪ Metacognitive theories ▪ Decision-making ▪ Personality and learned resourcefulness
<p>3. <i>Identify the factors influencing ER choice sets.</i> ER is most often construed as a necessary response to constraints; a systematic investigation of the antecedents shaping ER pathways (and why) over alternatives is lacking.</p>	<ul style="list-style-type: none"> • Theorize and elaborate factors triggering different ER components and their interactions. • Investigate opportunity cost evaluations of ER vs. alternatives, including if/how actors assess trade-offs between ER and other approaches. • Explore how actors justify ER over other practices—is ER seen as an alternative to planning/structure? 	<ul style="list-style-type: none"> ▪ Resource dependence theory ▪ Social capital, social skill, and social network theories ▪ Institution theory—logics
Components of entrepreneurial resourcefulness—Why and how does ER occur and with what consequence?		
<p>Cognitive component 4. <i>Expound on the dynamic ER/opportunity co-production.</i> There is a lack of research exploring the dynamic, reciprocally derived processes of cognitive opportunity mapping and ER.</p>	<ul style="list-style-type: none"> • Investigate how actors dynamically model (via mental maps) the environment and associated opportunities and then derive (i.e., bring into being) map-based resources. • Explore mental maps at multiple levels of analysis, including organizational cognitive processes for mentally mapping entrepreneurial schema and conveying that to internal stakeholders. • Examine how actors differentially update and/or alter cognitive maps of entrepreneurial schema in reaction to feedback from ER behaviors and how is this effective? • Elaborate how actors create and relinquish opportunity-resource models and their consequences—how does one transition from an ER cognitive frame to alternatives? When can/should actors revert to an ER cognitive frame, and how does this help/hurt? In what ways (and with what effect) can actors oscillate between ER/alternative cognitive frames? • How can organizations cultivate an ER frame in the presence of alternatives? 	<ul style="list-style-type: none"> ▪ Resourcing theory ▪ Social capital, skill, and network theories ▪ Social cognitive theory ▪ Attention-based view ▪ Locus of control ▪ Deviance regulation theory ▪ Moral foundations theory ▪ Transactive memory systems ▪ Sociology of culture ▪ Resource dependence theory ▪ Institutional logics
<p>Behavioral component 5. <i>Examine tradeoffs in regulating adherence to vs. breaking of boundaries.</i> Prior work has highlighted various mechanisms for extending boundaries but does not examine how individuals regulate decisions regarding how, when, and for how long they can break normative standards.</p>	<ul style="list-style-type: none"> • Build theory around processes and consequences of regulating rule-adherence behaviors/practices (to fit in) with rule-breaking ones (to extend boundaries of what is possible). • Examine the limits of normative-breaking activities and the costs of overutilizing ER—cultural practices and/or identity claims overexaggerating reality, violating limits of sociopolitical connections, etc. • Explore ER behavior on a continuum, measuring, testing, and exploring different degrees of ER behaviors, how and when they occur, and if/when actors can toggle between ER and other behaviors. 	

Table II. Summary of future research

Insights Derived from the Review	Critical Issues to Address in Future Research	Theoretical Perspectives
<p>6. <i>Integrate theoretical perspectives.</i> Very little ER research has explicitly theorized and studied cross-disciplinary mechanisms despite clear linkages and nesting.</p>	<ul style="list-style-type: none"> • Theorize and test ER components that incorporate nested concepts across levels—cognitive, cultural, and sociopolitical. • Expand the concept of ER beyond influential foundational concepts to examine its various forms and the potentially compounding impact of actors engaging in high degrees of cognitive and behavioral ER. 	
Moderating mechanisms of entrepreneurial resourcefulness—when, where, and for whom is ER valuable (or not) across its <i>cognitive</i> and <i>behavioral</i> components		
<p>7. <i>Incorporate the wide range of temporal contingencies across entrepreneurial stages.</i> Nearly all ER research has focused on the early stages of venture emergence (as a context), leaving considerable opportunities to understand its influence across a host of temporal contingencies.</p>	<ul style="list-style-type: none"> • Investigate when and how ER is useful across various stages of the organization life cycle <i>beyond</i> emergence stages—growth, pivots, harvesting, renewal, etc.—to clarify its boundaries. • Theorize and investigate the durability of ER over time: Does it diminish in relation to firm growth, size, and/or professionalization? What conditions enable vs. inhibit the persistence of ER? • Examine inflection points for if, when, and how ER becomes detrimental to individuals (career development, well-being?), firms (expansion into new products/markets?), and institutions (e.g., informal economy thriving through ER but inhibiting needed structural reforms?). • Test how ER operates under broader environmental temporal contingencies <i>beyond emergent stages</i>, such as various industry/market life cycle stages. 	<ul style="list-style-type: none"> ▪ Entrepreneurial action ▪ Process theories ▪ Life cycle theories ▪ Contextual contingencies ▪ Organizational slack ▪ Practice theories ▪ Personal slack resources (power and influence)
<p>8. <i>Expand the scope of contextual contingencies.</i> Moderating effects are rarely specified but rather implied by research context, suggesting significant opportunities for more explicit theorizing and empirical investigation.</p>	<ul style="list-style-type: none"> • Develop and test theoretical models for contingencies across levels and how they influence the occurrence and outcomes of ER: institutional/industry (e.g., munificence, hostility, dynamism, structure [void], formal/informal balance, etc.) and organizational (e.g., governance, place, slack resources, cultural, identity) 	
Consequences of entrepreneurial resourcefulness—what does ER do?		
<p>9. <i>Increase and deepen knowledge on the intrapsychic/internal outcomes of ER.</i> There is a lack of research exploring how ER shapes individual (intrapsychic) and organizational (internal) outcomes, as almost all research has focused on performance outcomes.</p>	<ul style="list-style-type: none"> • Examine the psychological outcomes of ER, such as job satisfaction, underdog identity, self-efficacy, well-being, and meaning at work. • Explore if, when, why, and how ER is an end in itself: Does it produce a sense of accomplishment, emancipatory defiance/resistance, preservation of autonomy and independence, and other valued outcomes for individuals or organizations? • Study the internal outcomes for organizations, such as culture, resilience, adaptability, etc., due to ER at different levels (top management team engaging in ER, CEO, etc.). 	<ul style="list-style-type: none"> ▪ Entrepreneurship ▪ Psychological value and well-being ▪ Resilience, theories of stress ▪ Locus of control
<p>10. <i>Acknowledge and expand on the dark side of ER.</i> Nearly all ER scholarship has highlighted its benefits, neglecting (almost entirely) the potential downside costs of ER.</p>	<ul style="list-style-type: none"> • Investigate the downsides of ER across mechanisms and levels of analysis: What is traded off when employing ER and at what cost? • Explore how ER enables/constrains progress in the entrepreneurial process at different firm stages and relevant metastages: pre-emergence, emergence, professionalization, growth, differentiation, transitioning, pivoting, renewal, resurrection, and exit. 	<ul style="list-style-type: none"> ▪ Conservation of resources ▪ Resource solicitation ▪ Identity theories (formation, change, renewal)

Figure 1. Integrative process model of the entrepreneurial resourcefulness literature

