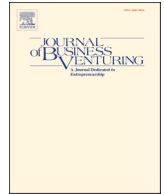




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Breaking boundaries to creatively generate value: The role of resourcefulness in entrepreneurship

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ABSTRACT

Entrepreneurial resourcefulness is a concept that resonates with practitioners and scholars alike from a diverse set of theoretical and empirical backgrounds. Despite the prevalence and promise of this concept, the literature on entrepreneurial resourcefulness is fragmented and lacks cohesion in how it is labeled, conceptualized, measured, and deployed. In many cases, it appears that bringing resources to bear for entrepreneurial purposes is taken for granted, which limits theoretical development of if and how ventures emerge and grow. In this editorial, we explore the theoretical underpinnings of resourcefulness, offer a definition, and provide a roadmap for future scholarship. In addition, we introduce the six articles that comprise the Special Issue on entrepreneurial resourcefulness, discuss their contributions, and explore how they relate to our overall perspective on resources and resourcefulness. It is our hope that this Special Issue will mobilize additional scholarship to enhance our knowledge on resourcefulness, which we view as a fundamental part of entrepreneurship.

1. Introduction

A key concern of entrepreneurship scholars is explaining how actors creatively use resources to pursue opportunities regardless of whether they control the resources (Stevenson and Jarillo, 1990). One concept that has been linked to explaining this fundamental feature of entrepreneurship is resourcefulness (Bradley, 2015; Ganz, 2000; Rosenbaum, 1988; Starr and MacMillan, 1990). It is in acknowledging the importance of entrepreneurial resourcefulness that we initiated this special issue. The result is a set of articles that examine resourcefulness at different levels of analysis, across contexts, and draw upon varied methodological approaches that deepen our theoretical and empirical understanding of this important concept. As with any developing field, there is plenty more work to do. We position this special issue as the start of a wider conversation about entrepreneurial resourcefulness, rather than its decisive conclusion.

As we prepared this special issue, we recognized a key challenge for authors was a *general lack of cohesion* around how entrepreneurial resourcefulness is defined and used in the literature (Bradley, 2015; Ganz, 2000, 2005; Little, 1987; Misra and Kumar,

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2000). The cliché that “necessity is the mother of invention” seems to underpin much of our thinking about resourcefulness: when people are pushed to the brink, they find resourceful ways to achieve a goal or overcome obstacles. A key challenge in building scholarship on resourcefulness, however, is its near-ubiquitous and broad representation in the practitioner literature and its disconnected representation in the academic literature. The practitioner literature is full of examples describing entrepreneurs engaged in a “scrappy approach to doing more with less” (Schwantes, 2021) and “every day ‘underdog’ entrepreneurial behaviors ... that expose opportunities, ignite ambition, and cultivate the creative and critical thinking, the resilience and resourcefulness that the world now demands” (Schoeniger, 2021). Described in this way, resourcefulness as a concept lacks specificity to help encourage and guide entrepreneurial behavior.

The academic research also lacks cohesion due to the diverse nature of much of the foundational work which have each emphasized different themes. The intellectual underpinnings of resourcefulness trace back to an inter-disciplinary body of literature, starting with the economist Edith Penrose (1959: 52), who introduced the idea of “wide scope for judgment” in how actors perceive the potential value and productivity of resources. Building on this idea, key organizational outcomes such as firm emergence, growth, and persistence have been explained by differences in actor’s abilities to imagine the potential of objects and then put those objects to use (Feldman, 2004; Mahoney and Pandain, 1992; Rubin, 1973). Resourcefulness is also frequently associated with the anthropologist Claude Lévi-Strauss who introduced the concept of the bricoleur (Lévi-Strauss, 1966) as a person who cobbles together the resources on hand to solve problems. In related research in sociology, Ganz (2000: 1041) conceptualized resourcefulness as a creative strategy, which is “a function of access to a diversity of salient information, heuristic facility, and motivation.” Arguing that the power of resourcefulness is “memorialized in tales of David and Goliath or Odysseus and the Trojans,” Ganz highlights how resourceful entrepreneurial actors can obtain unique advantages compared to incumbent firms by mobilizing “resources in ways [incumbent firms] do not recognize” (Ganz, 2005: 218).

In building on the diverse foundational literature on resourcefulness, research on entrepreneurial resourcefulness has developed in fragmented, parallel streams. The result has been the development and use of different but related concepts (e.g., bricolage, resourcing, creative adaptation, cultural entrepreneurship) to explain how actors resourcefully launch, grow, and re-invigorate entrepreneurial ventures (Baker and Aldrich, 2000; Baker and Nelson, 2005; Baron and Henry, 2010; Feldman and Worline, 2012; Garud and Karnoe, 2003; Lounsbury and Glynn, 2001; Sonenshein, 2014; Williams and Shepherd, 2016a; Zhao et al., 2013). Furthermore, scholarship on resourcefulness often starts from the assumption that resourceful actors suffer from liabilities of newness (Bruderl and Schussler, 1990; Freeman et al., 1983; Stinchcombe, 1965), placing a significant emphasis on the need to acquire resources. Therefore, despite any object, as a potential resource, not having a “fixed use” (Sonenshein, 2014: 816), the literature is often silent on the process of converting these objects to valuable resources, and also the degree to which this behavior occurs (and with what consequence) in penurious and/or abundant resource contexts. In this light, entrepreneurial actors might differ markedly in their actions to bring valuable resources to bear, continue to be resourceful once an entrepreneurial organization is operational, and resourcefully re-invigorate organizations that are well established (Sonenshein, 2014, 2017).

In the remainder of this editorial we seek to accomplish three objectives. First, in response to the lack of cohesion surrounding the concept of entrepreneurial resourcefulness, we offer a definition of resourcefulness to provide a framework that incorporates the different-but-related strands of research. We elaborate on three components of our definition and how they relate to other attempts to conceptualize resourcefulness. Second, we draw upon our definition to frame and integrate the articles that constitute this special issue and highlight how they contribute to a more cohesive foundation of scholarship on entrepreneurial resourcefulness. Finally, we develop an agenda to guide future research.

2. Resources and resourcefulness—ontology and definition

While we recognize that definitions can be both enabling and limiting, we offer one that incorporates distinct features of the concept to promote theoretical depth, while also allowing for general features that encourage breadth. Indeed, our objective in offering a definition to frame the special issue is promote future scholarly development while avoiding further fragmentation. For this reason, we offer a definition that (1) builds on prior efforts to conceptualize resourcefulness and (2) seeks to promote and guide future scholarship that taps into the depth and breadth of scholarship on entrepreneurial resourcefulness. We define entrepreneurial resourcefulness in the following way, highlighting three central components of the definition:

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.

This definition makes a contribution to advancing scholarship in three ways. First, it provides flexible boundaries that allow for diverse manifestations of entrepreneurial resourcefulness across multiple levels (individual, team, organization) and in different entrepreneurial contexts (e.g., start up, corporate entrepreneurship, etc.). Second, it covers three critical elements relating to fundamental entrepreneurial concepts that cut across different theoretical perspectives—cognitive, social capital, cultural entrepreneurship, and resourcing—offering a bounded scope that allows for theoretical integration across multiple domains. Finally, it provides a set of sub-components that, when taken together, capture the essence of resourcefulness while allowing for a “big tent” point of view that binds the related sub-components.

In this section we delve deeper into our definition of resourcefulness by examining the ontological foundations of resources that are predominantly employed in extant literature, which form the basis for varying conceptualizations of resourcefulness in the literature.

Building on these foundations, we then elaborate on the three components of our definition: (1) A boundary-breaking behavior of (2) creatively bringing resources to bear and deploying them to (3) generate and capture new or unexpected sources of value in the process of entrepreneurship.

2.1. What is a resource?

Exploring the ontological underpinnings of *what a resource* is shapes arguments about how resources are brought to bear and then deployed in entrepreneurship. While definitions of resources vary, much of the literature has drawn upon conceptualizations originating from the resource-based view (RBV) of the firm (Barney, 1991; see Kraaijenbrink et al., 2010 for review; Wernerfelt, 1984, 1995) where resources are defined as “those attributes of a firm’s physical, human, and organizational capital that ... enable a firm to conceive of and implement strategies that improve its efficiency and effectiveness” Barney (1991: 102). Resources are therefore typically seen as objectively valuable due to their innate qualities, for which firms and actors must compete if they seek to achieve a sustainable competitive advantage.

Others (Bourdieu, 1986; Emerson, 1962; Pfeffer and Salancik, 2003) have broadened the scope of resources to include not only economic but also political and cultural (or moral) assets that actors can deploy to realize their goals (Lounsbury and Glynn, 2001). While likely fitting into the broad definitions of resources above, the notion of political and cultural resources suggests that the value of the resource is determined in many ways by an actor’s ability to recognize value in a relationship or tactic that other actors may/may not. The resourcing perspective, which builds on early organization theory (Penrose, 1959; Rubin, 1973), helpfully delineates between objects (a tangible or intangible asset that one must act on) and a resource (an object that has to be acted on to make it useful (Feldman, 2004; Feldman and Worline, 2012)). That is, the value of objects (used broadly here to include the relationships and tactics mentioned above) are in the “eye of the beholder”. This subjective view of resources is consistent with Sonenshein (2014, 2017) who argues that an actor imbues meaning and value on an object whereby it is converted to a resource.

In building on this ontological perspective, entrepreneurship studies seeking to explain variance in the pursuit of opportunities (Stevenson and Jarillo, 1990) have emphasized how actors differentially identify and deploy resources “on hand” (Baker and Aldrich, 2000; Baker and Nelson, 2005). Indeed, the explicit or implicit grounding framework for resourcefulness as a concept involves a range

Table 1
Conceptualizations of resourcefulness in the literature.

Conceptualizations: resourcefulness as—	Definition	Key papers and anchoring theories	Level(s) of analysis
Bricolage	“Making do by applying combinations of resources at hand to new problems and opportunities” (Baker and Nelson, 2005: 333).	<i>Papers:</i> Baker and Nelson, 2005; Garud and Karnøe, 2003 <i>Theories:</i> Concept of bricolage (Lévi-Strauss, 1967); and theory of the growth of the firm (Penrose, 1959)	Individual and organization (predominantly new ventures)
Narratives, identity, and storytelling	The explicit use of narratives and identity signaling to shape resource acquisition and mobilization, which includes storytelling techniques to project an identity and frame the organization in optimally distinctive ways.	<i>Papers:</i> (Lounsbury and Glynn, 2001; Martens et al., 2007; Navis and Glynn, 2011; Wry et al., 2011; Zhao et al., 2013) <i>Theories:</i> Cultural entrepreneurship (Lounsbury and Glynn, 2001; 2019); and optimal distinctiveness (Zhao, 2021; Zhao et al., 2017; Zhao et al., 2018)	Individual and organization
Cognitive creativity	Individuals’ creative and creative abilities (e.g., perception, mentalism, subjectivism) used to solve problems and identify alternatives (for objects to be converted to resources, problems to be addressed) in pursuit of an entrepreneurial opportunity.	<i>Papers:</i> (Baron and Henry, 2010; Feldman, 2004; Feldman and Worline, 2012; Foss et al., 2008; Mosakowski, 1998; Sonenshein, 2014, 2017) <i>Theories:</i> Cognitions in social psychology (Fiske and Taylor, 1991)	Individual and organization
Psychological and social adaptation	Adaptation to small or significant environmental shifts by leveraging social “slack” (e.g., community members, strong ties, loose connections) to achieve new entrepreneurial gains.	<i>Papers:</i> Autio et al., 2013; Williams and Shepherd, 2016a, 2016b, 2018 <i>Theories:</i> Strategic capacity for resourcefulness Ganz, 2000, 2005; Turner, 1976	Individual (primarily) and organization
Orchestration and mobilization	The ability to effectively mobilize (e.g., structure, bundle, and leverage) firm resources and capabilities to create a competitive advantage. Largely focused on efficient distribution of resources.	<i>Papers:</i> (Kerr and Coviello, 2020; Rindova et al., 2012; Sirmon et al., 2011) <i>Theories:</i> Resource-based theory (Wernerfelt, 1984; Barney, 1991); contingency theory (Donaldson, 2001); and organizational learning (Zahra and George, 2002)	Organization
Social resilience	The societal factors that influence available repertoires to sustain well-being in the face of social change (Hall and Lamont, 2013).	<i>Papers:</i> Hall and Lamont, 2013; Putnam, 2001 <i>Theories:</i> Sociology of culture (Swidler, 1986); broken bonds and disconnected social structures in certain societies due to neoliberalism (Putnam, 2001)	Communities, social groups, and nations

of factors (e.g., psychological (Rosenbaum, 1980, 1988), sociological (Ganz, 2000, 2005)) that influence one's ability to be more effective in overcoming constraints and identifying and converting objects for firm outcomes.

2.2. Resourcefulness: how the literature treats it and how we define it

The lack of cohesion highlighted earlier partly stems from the fact that conceptualizations of resourcefulness tend to vary across literatures, are often implicitly defined, and are rooted in differing organizational theories. In Table 1 we highlight a number of conceptualizations that appear in entrepreneurship and management studies as well as provide a summary of key papers and theories that relate to these conceptualizations. In addition, we identify the focal level of analysis employed using these specific conceptualizations of resourcefulness. As Table 1 illustrates, the treatment of resourcefulness as a construct in related, but different domains, has led to a quite diverse set of concepts that share some features but lack a unifying cohesion. For example, the notion of entrepreneurial bricolage (Baker and Nelson, 2005) is often invoked as a resourceful behavior, but has predominantly been explored in the context of a penurious resource environment where the bricoleur cobbles together solutions due to resource constraints. In contrast, institutional theorists have studied cultural entrepreneurship to explain how actors generate legitimacy by telling stories and symbolic actions, when they lack resources (Lounsbury et al., 2019). While invoking similar concepts as bricolage (e.g., doing the best with what you have), cultural resourcefulness also suggests that entrepreneurs attract and mobilize resources they do not possess by using rhetorical means—which differs from the more physical-resource orientation of bricolage. Still other conceptualizations draw upon cognitive approaches to explain the recognition of resources in objects where others do not (Baron and Henry, 2010; Sonenshein, 2014, 2017), while others have defined resourcefulness as a strategic behavior and/or guerilla tactic to enable rapid adaptation for resourceful actors to fight off better resourced opponents in competitive environments (Ganz, 2000, 2005). Finally, conceptualizations such as resource orchestration emphasize the variance in how actors deploy resources (Sirmon et al., 2011) and/or generate resources to sustain organizations (Feldman, 2004), whereas another body of scholarship considers macro-level resourcefulness factors that influence community and society well-being (Hall and Lamont, 2013).

In summary, previous conceptualizations of resourcefulness reveal the relevance of resourcefulness across fields (e.g., psychology, sociology), but also highlight the challenge of consolidating theorizing to provide a clearer understanding of this concept. Despite these differences, there appears to be a degree of commonality amongst the definitions that might allow for better theoretical development. Indeed, while conceptualizations vary, the concept of entrepreneurial resourcefulness is either explicitly or implicitly referenced as a behavior that allows actors to get more for less (i.e., more productively use resources), by identifying novel and creative ways to bring, assemble, and transform resources to launch, grow, and sustain ventures (Bradley, 2015; Busch and Barkema, 2021; Ganz, 2000, 2005; Little, 1987; Misra and Kumar, 2000; Reypens et al., 2021; Starr and MacMillan, 1990). We build on this notion with a focus on three common themes represented in our definition that are present to varying degrees in prior conceptualizations of resourcefulness: a (1) boundary-breaking behavior of (2) creatively bringing to bear and deploying resources to (3) generate and capture new or unexpected sources of value in the process of entrepreneurship.

2.2.1. Boundary-breaking behavior

The first aspect of our definition addresses creative means of breaking boundaries of a shared institutional structure and expectations. Examples of resourcefulness to overcome established, institutionalized limitations are rife in societal changes (e.g., US Civil Rights movement; women's movement), in historical conflicts (e.g., Lawrence of Arabia; Haitian liberation), and in business (e.g., Netflix vs. Blockbuster; Guerrilla marketing, etc.). Breaking boundaries involves the innovative, creative, and often guileful exercise of agency (Westley and Mintzberg, 1988), employing symbolism, identity and actions to overcome barriers and constraints and achieve legitimacy and advantage (Lounsbury and Glynn, 2001; Zhao et al., 2013; Zott and Huy, 2007). While established institutional structures and expectations can help develop routines, foster organizational efficiency, and guide market transactions (Scott, 2013), they are often not conducive to the emergence and creation of new ideas and opportunities, which require more flexible organizational structures and more fluid organizational boundaries (Wry et al., 2014).

Resourcefulness can function as a creative, boundary-breaking mechanism to alter the seemingly objective resource endowments one possesses and enact one's environment to break established boundaries (Ganz, 2000; Van de Ven et al., 1999; Weick, 1995). For example, Ganz (2005: 216) argues that insurgent organizations can overpower opponents by "thinking about the battle differently", imagining different boundaries, norms, and "rules of engagement" that favor the insurgent. Having fewer knowledge resources might also convey a surprising advantage by viewing problems without the entrenchment of being an expert (Dane, 2010).

Breaking boundaries may also lead to seemingly devious actions (Williams and Shepherd, 2016a) to bend or break "rules" or norms to access or deploy resources. For example, entrepreneurs might coordinate their efforts with military leaders to ensure their business thrives despite changing political leadership (Hiatt et al., 2018). Similarly, entrepreneurial actors may "bend" rules during the startup process (Williams and Shepherd, 2021), failing to adequately report earnings, paying workers "under the table," or engaging in clearly illegal or "gray area" ethical actions to access resources (Harris et al., 2009; Webb et al., 2009; Welter et al., 2015). A less extreme example may include an entrepreneur's willingness to tell stories (with little backing in reality) to encourage investment in their firm (Garud et al., 2014; Martens et al., 2007). While some forms of breaking boundaries are clearly illegal, resourcefulness inherently involves imagining alternative rules and structures of the way things work to enact new solutions.

2.2.2. Creatively bringing resources to bear and deploying resources

The second aspect of our definition centers around creatively bringing and deploying productivity from a common set of baseline objects and resources (Penrose, 1959). Creatively *bringing resources to bear* involves noticing the potential in objects or raw materials to be converted into entrepreneurial resources (Sonenshein, 2014). In this way, creatively bringing resources to bear is a critical aspect of entrepreneurial resource access and includes identifying the potential in seemingly “useless” objects as well as combining and/or transforming objects to achieve an entrepreneurial objective (Baker and Nelson, 2005; Feldman, 2004). Bringing resources to bear—seeing the potential for a resource in the first place in ways that others may not (Penrose, 1959)—could be seen as an antecedent to resource deployment and/or repurposing.

Beyond bringing resources to bear, resourcefulness involves *creatively deploying* resources in ways that achieve full resource productivity. Deploying resources involves combining and transforming resources to pursue entrepreneurial opportunities. Consistent with the resourcing perspective (Feldman, 2004), research has explored how entrepreneurial actors employ creative tactics, such as bricolage (Baker and Nelson, 2005) and effectuation (Sarasvathy, 2001), to overcome liabilities of newness by turning unproductive resources into (more) valuable firm resources. Therefore, explaining how resourceful entrepreneurial actors interpret and maximize benefits from resources is an important element of understanding the creative deployment of resources (Feldman and Worline, 2012; Sirmon et al., 2011). For example, Sonenshein (2017) describes how a physician treated a patient with a punctured lung on an airplane with a coat hanger, empty bottle of water, brandy, and first-class towels. Without the proper tools, he repurposed ordinary materials to get an additional use out of them.

2.2.3. Generating and capturing new or unexpected sources of value in the process of entrepreneurship

The final aspect of our definition involves the generation of new or unexpected value in the process of entrepreneurship (i.e., the activities of launching, growing, and sustaining ventures). New or unexpected sources of value refers to the advantages resourcefulness brings to bear throughout the entrepreneurial process. These advantages can be unexpected as resourceful entrepreneurs may be considered at a disadvantage for not possessing seemingly essential financial, social, or other resources (Ganz, 2005) needed for launching and sustaining a venture (Stinchcombe, 1965). This theme is clearly reflected in scholarship on bricolage, which often highlights cases of under-resourced actors achieving firm emergence and persistence in a penurious environment (Baker and Nelson, 2005; Garud and Karnøe, 2003). However, other research also emphasizes how the *lack* of resources can motivate creative actions that effectively stretch one’s current assets to achieve more innovative outcomes (Sonenshein, 2017). We also note that the extent to which resourcefulness generates more than what is expected from its stock of resources and/or objects is different from concepts such as lean manufacturing management, where the focus is on maximizing the probability of efficiency from one’s operating system (Shah and Ward, 2003). Specifically, lean thinking emphasizes reducing waste in a system in hopes of creating more efficiency rather than generating creative solutions and/or novel ideas to enhance innovation. Similarly, methodologies such as the lean start-up framework focus on prioritization of opportunities and the validation of ideas (Ries, 2011; Shepherd and Gruber, 2020) rather than the resourcefulness associated with converting objects to resources to create unexpected sources of value that might underpin them.

Resourcefulness and its potential for generating unexpected value are not dependent on a resource constrained environment. An individual or firm can improve productivity with few resources, but also with many resources. Indeed, psychology research shows that, independent of actual resources, individuals can put themselves into a scarcity mindset to reap the psychological advantages of less (Mehta and Zhu, 2016; Rosenbaum, 1988). Simply thinking about having fewer resources grants people the freedom to do things unexpectedly, break norms and act creatively. Therefore, it is likely that we can stimulate resourcefulness behaviors to achieve unexpected outcomes even in more resource rich contexts—such as for corporate innovation (Sonenshein, 2014) or within well-resourced entrepreneurial firms. Our definition builds on this psychology research to suggest that achieving unexpected entrepreneurial outcomes is not context specific (i.e., de novo firm facing liabilities of newness), and therefore could be an advantage captured by firms facing the liabilities of senescence (Ganz, 2005).

In summary, the definition we offer of entrepreneurial resourcefulness is intended to provide adequate scope for a broad application across organizational contexts involving entrepreneurship, while simultaneously offering some guardrails that allow for theoretical depth. In the next section, we discuss each paper included in this special issue and demonstrate how our guiding definition can provide a powerful organizing framework for synthesizing the key insights embedded in these papers.

3. Integration of papers—special issue

Having explored the ontological foundation of resourcefulness and proposed a unifying definition, we now turn to a review of the manuscripts that constitute the special issue. In reviewing these papers, we identify where they have made substantial contributions to our overall understanding of resourcefulness and its associated sub-components. We also provide integrative comments to elaborate on how the papers are united by demonstrating how they connect to the sub-components of resourcefulness highlighted above.

3.1. Highlights from the special issue articles

Our special issue comprises six articles that showcase the diversity of entrepreneurial resourcefulness research—including different levels of analysis, entrepreneurial settings, and methodological approaches. Michaelis et al. (2021) draw upon socio-cognitive theory,

and its tenets of personal and collective agency, to explain *different choices of resourcefulness behavior*. Drawing on data from their survey of 178 entrepreneurs and supported by their supplementary qualitative interviews with 15 entrepreneurs, the authors argue and find that the choice of resourcefulness behavior is shaped by individual dispositions and perceptions of the environment. Specifically, they argue that individuals differ in their preference for direct personal agency (whereby people seek to personally control their actions) versus collective agency (involving some giving up of personal control in favor of the collective) and that these preferences can influence resourcefulness behavior. The authors contribute to our understanding of resourcefulness by distinguishing between two types of resourcefulness behavior—‘self-reliant’ resourcefulness (i.e. behaviors that bring, assemble, and deploy resources that are solely within firm boundaries or under the entrepreneur’s complete control; operationalized as customer-related and internal self-financing bootstrapping) and ‘joint’ resourcefulness (i.e., behaviors that bring, assemble and deploy resources that are owned by other actors or (will be) under shared ownership with other actors; operationalized as joint and temporary resource bootstrapping). Further, they help us understand why entrepreneurs select certain resourceful behaviors in lieu of others by revealing the joint effects of individual dispositions (in this case frugality) and the environment (through perceptions).

Hertel et al. (2021) develop concepts related to “joint resourcefulness” but consider resourcefulness as mobilizing different types of resources *from their local communities*. They introduce the idea of *community resourcefulness* as a concrete set of activities entrepreneurs use to combine, mobilize and deploy financial, human, physical and social resources from their local communities. In their two-year, qualitative study of seven community-based enterprises in Europe, the authors develop a framework for community resourcefulness, one where resourcefulness involves recognizing and seizing “situational resource potentials” such that entrepreneurs can meet or even exceed their resource mobilization goals thereby “getting more from many”. The authors highlight two aspects of “getting more from many.” First, with respect to the “many” they observed how entrepreneurs were able to meet their resourcing goals by “mobilizing as many of the required non-financial resources as possible directly from multiple informal resources providers, instead of raising money to purchase them.” Second, with respect to the “more”, they observed how entrepreneurs could exceed their resourcing targets through a multiplier effect enabled by ongoing efforts to nurture a sense of identification and ownership in their community of supporters. They suggest that with comparatively little effort, engaging the community throughout the entrepreneurial process can encourage existing and new supporters to provide further resources, “rendering additional potentially costly or time-consuming mobilization campaigns unnecessary.”

Reypens, Bacq and Milanov (this issue) extend the debate on the relationship between resourcefulness and other resource mobilization behaviors by contributing to our understanding of “selective bricolage” (Baker and Nelson, 2005), whereby bricolage is used selectively or occasionally and potentially alongside other resource mobilization behaviors. Their argument is consistent with core tenets of Conservation of Resources Theory (COR) (Hobfoll, 2011), which argues that resources “travel in packs,” and should therefore not always be considered in isolation. The authors examine the resource mobilization behaviors of seven early-stage medical technology ventures in Kampala, Uganda over a nine-month period, revealing two distinct resource mobilization trajectories. Of particular note is that higher performing ventures (in terms of technology development outcomes) increased their resource seeking behavior over time but also alternated between engaging in higher and lower levels of bricolage, opting back into bricolage when they had achieved substantial resource acquisition. In contrast, another group of ventures maintained consistently high levels of bricolage, coupled with relatively lower levels of resource seeking, leading to lower technology development outcomes. Reypens and colleagues’ (this issue) work highlights the importance of examining bricolage alongside other resource mobilization behaviors. As the authors put it: “If we had reduced selective bricolage to the ‘occasional’ usage of bricolage and had only evaluated the average levels of respective resource mobilization behaviors in ventures’ early development, the nuance of their interplay and how they enable each other would have been lost, and the differences in respective groups’ development outcomes hard to discern.” The authors therefore lend support to the idea that resourcefulness might be viewed as a capability to strategically select from (and opt out of) alternative resource mobilization behaviors (Bradley, 2015; Desa and Koch, 2014).

Fultz & Hmieleski (this issue) focus on a particular resourcefulness behavior—organizational improvisation—and its effects. While prior studies have studied improvisation as a resourceful means of exploiting opportunities directly contributing to venture survival and performance, Fultz & Hmieleski (this issue) set out to identify pathways and contingencies through which improvisation may be a resourceful means for start-ups to identify new opportunities. Drawing on data from a survey of 326 US start-ups, they find support for the argument that improvisation facilitates serendipity—the “unexpected discovery of opportunity brought about by purposeful action”—but this is particularly so when organizations face resource constraints. In turn, serendipity is positively associated with venture performance, particularly when the organization’s structure is more informal. Fultz & Hmieleski’s (this issue) work helps enhance our understanding of how, and under what conditions, improvisation as a form of resourceful behavior can confer organizational performance advantages, revealing that these advantages stem from the positive association between improvisation and the serendipitous discovery of opportunities.

Moss et al. (2021) extend our knowledge of the effects of resourcefulness by highlighting the need to examine its impact on the prosocial dimensions of performance. They also highlight that the focus to date has been on singular actors (individuals or organizations), overlooking resourcefulness at other levels, such as partnerships which involve multiple actors. Using a grounded theory approach, they examine 11 partnerships where small enterprises partnered with the same resource-rich prosocial organization in a developing economy—Mexico. Their analysis introduces the notion of *partnership-based resourcefulness* as distinct from other forms of individual-based resourceful behaviors such as bricolage, effectuation, bootstrapping etc. Partnership-based resourcefulness is conceptualized as “doing more with less through novel and clever ways to bring, assemble, or deploy resources *through multiple actors*

working together” (p. 8, emphasis added) and where resourcefulness is enacted at the level of the partnership. Their analysis suggests that resourcefulness can be usefully conceptualized as a process that involves both the development of a capacity to be resourceful (i.e., ability or power to behave resourcefully) and then the execution of resourcefulness, which then enables the attainment of positive sustainable outcomes for both partners (beyond the outcomes of individual-based resourcefulness). Accordingly, both resource-rich and resource-poor actors can benefit from building a partnership-based resourcefulness capacity by nurturing trust, a sense of togetherness and flexibility.

Finally, Fisher, Neubert and Burnell (this issue) develop theory on resourcefulness narratives, which they define as “a discursive, temporal account of past or ongoing entrepreneurial actions, whereby an entrepreneur is presented as using, assembling, or deploying resources in creative ways in order to overcome an impediment.” Distinct from other types of entrepreneurial narratives (such as identity, opportunity, failure, and pivot narratives), resourcefulness narratives serve as proactive resourcing mechanisms for entrepreneurs. By taking resourceful actions in the past or present, entrepreneurs can then convert prior experiences into resourcefulness narratives and use them to attract more resources from external resource providers by appealing to their emotions and cognitions. Fisher et al. (this issue) articulate two features of a resourcefulness narrative needed to compel resource providers to support the entrepreneur deploying the narrative: the creativity of the actions presented and the significance of the impediment overcome within the narrative. Fisher et al. (this issue) argue that a specific set of emotional (invoking surprise, interest, and admiration) and cognitive (signaling competence, commitment, and credibility) pathways serve as channels through which resourcefulness narratives can influence resource holders’ decisions to provide support. The authors also present several contingencies that might shape these resource holders’ perceptions including the resource environment, uncertainty, the entrepreneurs’ level of experience, and the recency of resourceful behaviors.

3.2. Integration

A few noteworthy themes emerge from the papers assembled in the special issue that relate to our definition of resourcefulness. First, the *creative, boundary breaking* aspect of resourcefulness is captured in the wide range of resourceful *behaviors* we see in the articles (bootstrapping (Michaelis et al., 2021); bricolage (Reypens et al.); improvisation (Fultz & Hmieleski); construction and use of resourcefulness narratives (Fisher et al.); community resourcefulness (Hertel et al., 2021); individual and partnership-based resourcefulness capacity building and execution (Moss et al., 2021)).

Second, creative efforts to bring resources to bear and deploy resources is captured in the *choices* actors make by selecting from and using (sometimes in conjunction) resourcefulness behaviors [e.g., choosing between self-reliant or joint resourcefulness (Michaelis et al., 2021); individual and/or partnership-based resourcefulness (Moss et al., 2021); choosing when to and when not to use bricolage (in conjunction with other resource seeking behaviors) (Reypens et al.)].

Third, we see creatively bringing resources to bear and deploying of resources enacted in the *relational* elements of resourcefulness behaviors. Fultz and Hmieleski highlight that improvisation is a *collective* endeavor involving joint activities of individuals and the pooling of resources. Michaelis et al.’s (2021) ‘joint’ resourcefulness involves behaviors that bring, assemble and deploy resources that are owned by other actors or (will be) under shared ownership *with other actors*. While Hertel et al. (2021) describe community resourcefulness behaviors as being individual (or team based), they explicitly view this behavior as relational “in the sense that entrepreneurs can only fully leverage community resources through close and repeated interactions with members of the local community”. In deploying resourcefulness narratives, Fisher et al. emphasize the need to construct narratives that will be emotionally and cognitively compelling to resource holders. By doing so, they highlight the relational dimension that is required to enact resourcefulness. Finally, as a partnership level construct, partnership-based resourcefulness (Moss et al., 2021) is inherently relational.

Several articles support the idea that actors imbue meaning into objects, resources and resource spaces, which allows many entrepreneurs to *bring resources to bear and deploy resources* in ways that *capture new or unexpected sources of value*. Collectively, these articles highlight that resourcefulness involves perceptions of what constitutes a resource as well as the resource environment, underscoring a cognitive dimension of resourcefulness. For example, while Michaelis et al. (2021) highlight how individual dispositions toward frugality can shape perceptions of the resource environment and in turn the choice of resourceful behaviors, Hertel et al.’s (2021) work suggest that an important aspect of resourcefulness involves recognizing and seizing “situational resource potentials”—in their case seeing the resource potential of the local community. Reypens et al. also highlight the importance of subjective perceptions of the resource space, demonstrating how the entrepreneurs they studied “actively (re-)defined the boundaries of their resource context by refusing to confine themselves to their local environs’ constraints when their resource mobilization required it”. All the ventures in their study reinterpreted their resource space, expanding it from their local environment to a more global context leading the authors to question “the very meaning of a ‘resource-scarce context’”.

The notion of “*boundary-breaking behavior*” is also rendered particularly visible in the resourceful behaviors examined in Moss and colleagues’ and Fultz and Hmieleski’s papers. In Moss and colleagues’ work, there are many examples of the resourcefulness behaviors of both parties in the partnerships that deviate from social expectations. For example, in order to help build a partnership-based resourcefulness capacity, the resource-rich partner had to, somewhat paradoxically, “do less with more” before partnership-based resourceful behaviors could occur. Further, we see that the resource-poor partner can learn from the partnership and behave like the resource-rich partner in future partnerships despite being relatively resource poor; in so doing, helping build a virtuous cycle of community capacity building. The focal resourcefulness behavior examined by Fultz and Hmieleski—improvisation—involves

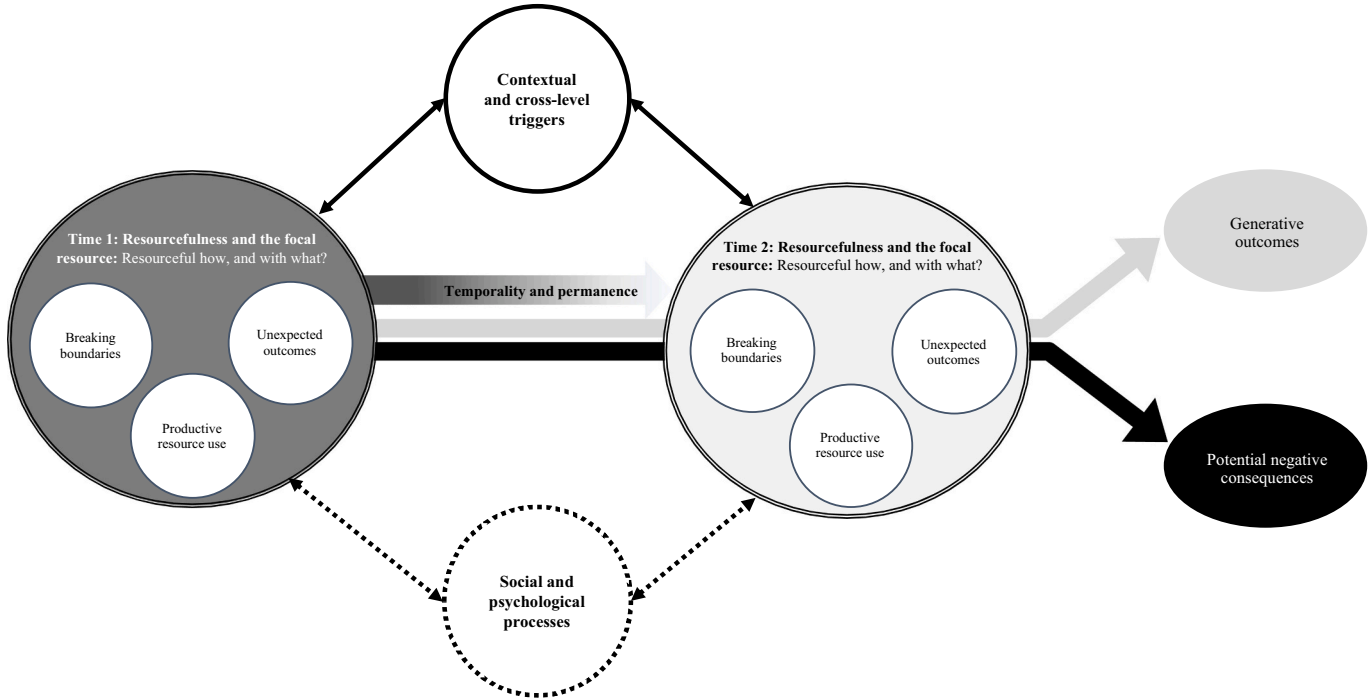


Fig. 1. Future research agenda for entrepreneurial resourcefulness.

breaking boundaries almost by definition since it involves “structured deviation. That is, improvisation is novel action that departs from given templates or standards”. However, Fultz and Hmieleski also demonstrate the link between “*breaking boundaries*” and “*capturing unexpected sources of value*” by showing that improvisation can, under certain circumstances, encourage serendipity (i.e., “the *unexpected* discovery of opportunity brought about by purposeful action”, emphasis added). This link between breaking boundaries and achieving unexpected outcomes is also visible in Fisher et al. who highlight the importance of invoking surprise in the resource holder when presenting a resourcefulness narrative. They theorize that surprise is the emotional response associated with positive violations of taken-for granted expectations about normal behavior and, when invoked through resourcefulness narratives, surprise is positively associated with the perceived level of creativity of the entrepreneur’s actions and the perceived significance of the impediment overcome in the narrative. The idea that resourcefulness behaviors (embedded in narratives) should generate surprise chimes with our proffered definition of resourcefulness which involves deviation from social expectations (i.e., breaking boundaries) that produce unexpected outcomes.

Finally, we see the *productively bringing resources to bear and deploying of resources and value in the process of entrepreneurship* in those articles that examine the outcomes of resourcefulness. Going beyond the traditional focus on the economic outcomes of resourcefulness, Moss et al. (2021) highlight a range of pro-social sustainable outcomes that can result from resourcefulness behaviors. Reypens et al. reveal how different resource mobilization trajectories are associated with the achievement of technological milestones, while Fultz and Hmieleski show the pathways and contingencies through which improvisation can enhance venture performance. Fisher et al.’s suggestion that by purposefully crafting a resourcefulness narrative, entrepreneurs can maximize the productivity of the resourceful behavior that forms the basis of the narrative. By carefully crafting a resourcefulness narrative, entrepreneurs might “maintain and further generate positive outcomes from resourceful actions beyond the actions themselves.” This idea that narratives can somehow amplify the effects of resourceful behaviors connects with Hertel et al.’s (2021) “multiplier effect” associated with community resourcefulness; by engaging in low-cost efforts to engage with the wider community, the entrepreneurs they studied were able to get more out of resource-holders over time. Such a multiplier effect is also implicit in Moss et al. (2021) who demonstrate how engaging in (partnership-based) resourceful behaviors can positively influence future resourceful behaviors and associated outcomes.

In sum, the articles in this special issue showcase how resourcefulness involves productively using resources by exercising agency to creatively break boundaries and deliver new or unexpected value. We anticipate that the articles presented here will serve as an important theoretical and empirical step in advancing scholarship on resourcefulness. Furthermore, we anticipate that future research can build on the scholarship presented here, to which we now turn.

4. Research agenda

We view this special issue as an important step in organizing the resourcefulness literature to date and motivating future research on this important topic. The papers in this special issue go a long way at advancing resourcefulness research, but there is much more work to do. Furthermore, the relevance of this topic seems all the more important given recent circumstances that have transpired globally. Since we announced the call for papers for this special issue, we have encountered the unique circumstance of a global

Table 2
Theories to further deepen knowledge of entrepreneurial resourcefulness.

Theory	Definitions	Relevant resourcefulness concepts
Theory of Bisociation (Arthur Koestler, 1964)	Bisociation (in contrast to routine, habitual thinking [association]) means joining unrelated often conflicting information in a new way. It is being “double minded.” Bisociation facilitates the mixture in one human mind of concepts from two contexts or categories of objects that are normally considered separate by the literal processes of the mind. (Koestler, 1964)	Cognitive creativity; narratives, identity, and storytelling; orchestration and mobilization
Conceptual spaces (Margaret Boden, 2009)	Structured style of thought that include ways of writing prose, styles of architecture and art, theories of nature, as well as approaches to design and engineering. Any systematic way of thinking which is valued by a certain group or culture could be thought of as a conceptual space. In Boden’s framework, a conceptual space defines a space of possible combinations of its elements, where each combination represents a thought, idea, or artifact (Boden, 2009).	Cognitive creativity; Narratives, identity, and storytelling
Political skill and influence (Ferris and Judge, 1991)	Deliberate attempts to manage or control the shared meaning with others (political leaders, organizational members, etc.) to achieve one’s objectives. Ability to persuade, negotiate, or manipulate other actors to achieve one’s desired ends (Ferris et al., 2005). “The savvy to know which influence tactics to employ in particular situations, as well as the ability to exhibit a situationally appropriate behavioral style to ensure their influence effectiveness” (Kolodinsky et al., 2007: 1750).	Political coalitions, identity, leadership, resource mobilization
Psychological resilience to loss and potential trauma (Bonanno, 2004)	Positive adaptation to adversity as observed by an outcome pattern following a potentially traumatic event (PTE), characterized by a stable trajectory of healthy psychological and physical functioning (Bonanno et al., 2011). Could also include concepts of post-traumatic growth—enhanced functioning following a PTE (Tedeschi and Calhoun, 2004).	Cognitive creativity, narratives, and bricolage at the individual level

pandemic which has cost millions of lives and billions of dollars of economic destruction. During the Covid pandemic, businesses of all stripes have faced crushing resource constraints. Many have had to lay off or furlough employees. Traditional channels of selling and servicing customers evaporated, almost overnight. Firms had to repurpose their products and markets and seek answers as to what processes, practices, and routines might help them survive, and even thrive, in the face of resource constraints. These events led us to ask a number of additional questions regarding resourcefulness, such as: Is resourcefulness just as accessible to a large firm facing a challenging time as it is to a startup at its genesis? What happens after these resource constraints disappear—does the resourcefulness behavior that elevated a startup from a garage company to a successful firm evaporate too? And will resourcefulness behavior remain valuable or instead become a liability as startups grow and mature? Answering these questions requires deeper theorizing of resourcefulness, developing of empirical insights, and integrating the fragmented areas of scholarship that examine the role of resources in explaining individual/firm level entrepreneurial behavior.

In this section, we first identify additional theories that might inform future studies on entrepreneurial resourcefulness. Next, we offer a research agenda to motivate scholarship in five primary areas. We organize our overarching agenda in Fig. 1 and elaborate on the five areas below.

4.1. Introducing insights from additional theories

Despite the relatively widespread application of theories in prior scholarship on resourcefulness (see Table 1), there are additional opportunities to incorporate extant theory to expand our understanding of how entrepreneurial actors engage in resourcefulness behavior. While there are likely many opportunities to glean insights from prior approaches, we highlight four specific theories that might be especially productive as they have (1) largely been ignored in studies on resourcefulness and yet (2) could provide important insights that build on the definition we provide. We summarize these four theories in Table 2.

First, Koestler's (1964) theory of bisociation emphasizes a way of thinking that associates ideas, objects, and concepts that are seemingly unrelated to generate novel ideas. Bisociation could explain *active* efforts to be resourceful by engaging in creative information exploration (Dubitzky et al., 2012). In this way, generating "something new" could simply be a process of actively seeking to see *objects/things differently* and, potentially, create differential abilities to identify possible value in objects for entrepreneurial resourcing. Second, Boden's (2009) theory on conceptual spaces could help better explain how context influences how actors see objects and the potential productivity they perceive on those objects as resources. Boden (2009: 242) argues that by better understanding how, when, and why actors "define [creative] spaces and specify ways of navigating and even transforming them it will be possible not only to map the contents of the mind but also to understand how it is possible to generate novel, surprising, and valuable ideas." Boden similarly argues that artificial intelligence can play an important role in facilitating the mapping of creative spaces and production of unique, combinatorial perspectives that might otherwise have gone unnoticed. This idea suggests that there are rather novel opportunities for understanding resourcefulness that fall outside human cognition and action—something that is likely to become increasingly important with the rise of technology.

Third, a substantial body of scholarship has emerged on *political skill and influence* as a way for controlling shared meaning with others to achieve an objective. Controlling and shaping shared meaning relating to objects and resources is valuable across a wide range of contexts. For example, Hiatt and Sine (2014) found that entrepreneurs who effectively managed political relations with military leaders were better positioned to operate sustainable ventures. They could consistently access resources needed for their operations. Future scholarship can explore how entrepreneurs employ "the savvy to know which influence tactics to employ in particular situations" (Kolodinsky et al., 2007: 1750) to achieve their objectives, in what we might call "political resourcefulness." Finally, scholarship on resourcefulness can incorporate the literature on psychological resilience (Bonanno, 2004), which argues that resilient individuals *maintain functioning* despite facing extreme hardship or difficulty. This concept is different from adaptation and/or bouncing back from challenges, and instead argues that many individuals persist in their behaviors, positive view of the world, and emotional stability even when facing severe constraints. How does resilience relate to resourcefulness—when and how does it amplify efforts to generate unexpected outcomes, especially in the face of adversity (Ahmed et al., 2021; Williams et al., 2017)? How could resilience help explain resourceful breaking of boundaries in terms of seeing potential for resources, defying social expectations in the face of external threats, and achieving outcomes such as post-traumatic growth (Maitlis, 2020)? While some scholarship begins to incorporate the view of resilience from a clinical psychology (Bonanno, 2004) perspective (Shepherd and Williams, 2019; Williams and Shepherd, 2016a, 2016b, 2018), there is much to be explored in the relation between resilience and resourcefulness across a wide range of topics: persistence, re-entry following failure, creative resourcing in the face of extreme constraints, and so forth.

4.2. Resourcefulness and the focal resource

This special issue on entrepreneurial resourcefulness opens the discussion on the focal resource—what it is, and how one is resourceful in relation to that resource. Studies have examined absolute or relative levels of resources, such as slack in financial, human or social capital and their effects on performance in entrepreneurial firms (George, 2005; Vanacker et al., 2017). Others have focused on how entrepreneurs raise financial resources in innovative ways (Ebben and Johnson, 2006; Grichnik et al., 2014; Winborg and Landström, 2001). While these contributions are important, we believe they have not adequately considered the resource itself—specifically how an object, relationship, or thing is converted into a resource? As a result, there is still much to be gained by

understanding the resource and asking: “the actor is resourceful with what?”

4.2.1. Deriving value from things to generate productive resources

Extant research has argued for examining how actors identify and convert physical objects to resources to help explain differing degrees of performance (Penrose, 1959; Sonenshein, 2014). In extending this work, recent scholarship examines how processes, relationship, and other “things” might be molded into venture-supporting resources. In this vein, socio-political processes to enhance networks and its resultant social capital become strong prospects for research, as these resources enable entrepreneurs to act in ways that would not have otherwise been possible. For example, Vissa (2012) studied how entrepreneurs’ networking style and sources of contacts such as referrals influence the likelihood of engaging in exchange relationships. Moss et al. (2021) use partnerships as a resource to develop transformational and transactional capacity to generate sustainable outcomes in small enterprises. Hertel et al. (2021) demonstrate how entrepreneurs draw upon the local community as a valuable resource if they creatively manage local relationships. Similarly, the use of technologies, narratives, and adaptation of business models can deliver unexpected outcomes in creative ways (Bock et al., 2021; Fisher et al., 2021; George et al., 2021).

Taken together, these studies demonstrate important opportunities to expand the type/scope of resources studied and better understand the question of how these different types of objects, things, relationships, and so forth become resources in deriving value. How can entrepreneurs use existing materials, technologies, and relationships to solve problems in creative ways? What resources do they unlock, and what are the underlying processes to create unexpected value? Are there specific attributes of the resource (and/or its component parts), such as fungibility or scalability, that allow entrepreneurs latitude to secure, deploy and enhance their productivity? These questions help broaden our conversations by moving beyond slack to various tangible and intangible resources and focusing our attention on the agency associated with value creation predicated on these focal resources.

4.2.2. Resourcefulness as a resource in and of itself

The emphasis in prior research on resourcefulness as primarily a behavior done out of “necessity” and even desperation in a penurious environment has significantly influenced the scope of scholarship. However, recent research (Sonenshein, 2014, 2017) suggests that resourcefulness can provide unique advantages in that it stimulates creativity and encourages innovation—irrespective of the environmental conditions. These findings present a number of opportunities for research to understand if, how, and when resourcefulness can be cultivated in well-resourced ventures and with what consequence. Better understanding how resourcefulness practices and processes are similar or different in varied resource environments is one promising direction. For example, if resourcefulness is typically motivated by constraints, what motivates resourcefulness when it is a strategic choice? Might some firms make a strategic choice to develop resourcefulness capabilities? When do these capabilities help or hinder firm performance?

Additionally, are the mechanisms that drive resourceful behavior different with resource abundance? If resourcefulness is a strategic advantage, at least in some situations, resourcefulness may be driven more by firm-level norms than by its environment. Understanding the development of these norms could be a helpful area for future research. It would also be fruitful to understand how firms use resourcefulness to transition from relatively scarce to relatively abundance environments, such as a startup that is undergoing an initial public offering. How might leaders guide this transition and what skills are needed to continue acting resourcefully. This could also help identify when resourcefulness ceases to be imposed by an environment and more a purview of a firm’s choice. Finally, might there be a downside to behaving resourcefully despite having abundant resources, such as not appearing legitimate to stakeholders? More generally, what factors allow resourcefulness as a resource itself lend itself to aiding or inhibiting firm performance?

4.3. Contextual and cross-level triggers of resourcefulness and its effects

The boundary-breaking nature that underpins entrepreneurial resourcefulness as a behavior is influenced by its context, and it is likely that some triggers either necessitate or accentuate such behaviors. Indeed, much of the foundational work on resourcefulness places an important emphasis on the context—penurious environmental circumstances requiring creativity (Baker and Nelson, 2005), sub-standard performance driving organizational innovation (Bolton, 1993), and facing a category leader or to create new market spaces (Markides, 2013). While helpful, we have seemingly only scratched the surface in explaining the role of context on resourcefulness behaviors—including the multiple and cross-level effects. While two articles in our special issue are a valuable starting point, research should also unpack when and why do entrepreneurs exhibit resourceful behaviors, and what contextual conditions reduce or amplify its effects (Michaelis et al., 2021 and Fultz & Hmieleski [this issue], respectively).

Studies have examined the effects of triggers such as poverty, wealth loss, and debilitating events such as famine or death on entry into entrepreneurship (Baker and Nelson, 2005; George et al., 2016a; Williams and Shepherd, 2016a, 2016b, 2018; Williams and Shepherd, 2021; Zhao and Wry, 2016). These provide an initial set of triggers to explore resourcefulness as a behavior. However, we see opportunities for a much deeper dive around the physical, social, and environmental cues that are conducive for resourcefulness. For social entrepreneurs trying to change an established NGO from within or intrapreneurs already in innovative firms, the context is likely to influence the type of resourcefulness exhibited or the tools at their disposal. In the established NGO, it is likely that an entrepreneur will need to be resourceful around the processes for mobilizing organizational and economic resources or stabilizing new patterns of interaction (Busch and Barkema, 2021; Mair et al., 2016). In the innovative firm, an intrapreneur may need to be more resourceful on who and how they build their network to secure and implement new ideas (Ter Wal et al., 2020).

Similarly, corporate managers seeking to enact entrepreneurial objectives within a large firm may be more or less likely (in

different situations) resourceful about identifying and deploying resources in support of their projects. Entrepreneurial managers might also be resourceful in creating boundary objects to generate stakeholder buy-in for their nascent business models (Shepherd et al., 2021). Different nation states may also have developed unique institutional configurations (in terms of religion, profession, market etc.) that either enable or constrain entrepreneurs' ability to recruit employees, secure external funding, and gain governmental support (Cobb et al., 2016; Zhao and Lounsbury, 2016; Zhao and Wry, 2016). Thus, factors in the external context that reward or dissuade resourcefulness as a behavior will provide interesting cues on how entrepreneurs (in *de novo* or *de alio* contexts) can be systematically, rather than serendipitously, resourceful within their ventures. What are the forces at different institutional levels (e.g., organizations, fields, and nation states) that encourage or stifle resourcefulness? For example, Fisher et al. (this issue) suggests that resourceful behaviors may have less impact on attracting resources from resource holders through resourcefulness narratives if these behaviors took place in contexts where resourcefulness is the norm. How can well-sourced organizations encourage an environment of resourcefulness to stimulate creativity (Sonenshein, 2017) and avoid complacency and inertia (Rumelt, 1995)? How can nation states build and develop an institutional infrastructure to facilitate the emergence and sustainability of resourceful individuals and organizations? These are important questions to be addressed in future research.

4.4. Temporality and permanence of resourcefulness

4.4.1. The role of resourcefulness over a venture's lifespan

The potential limits and constraints associated with resourcefulness also leads us to consider the temporality and permanence of resourcefulness. With limited exceptions (e.g., Busch and Barkema, 2021; Reypens et al., this issue), very little research has attempted to understand whether resourcefulness is a temporary state driven primarily by constraints or encoded in a firm's routines and capabilities, and therefore a more permanent fixture. Prior research examining organizational resilience and other responses to crises (Williams et al., 2017) demonstrates that unique, temporary environmental conditions can alter firm behavior. Further, Reypens et al. (this issue) suggest that 'catalytic events', which need not be negative, can trigger changes in perceptions about the resource environment and resourceful behaviors. Crises in particular, while extremely disruptive, can create a unique opportunity for actors to re-interpret their environment (Roux-Dufort, 2009) and create new entrepreneurial ventures (*de alio* or *de novo*) by re-imagining and re-assembling "resource building blocks" toward new purposes (Shepherd and Williams, 2014, 2019; Williams and Shepherd, 2016a, 2016b, 2018; Williams and Shepherd, 2021). More recently, the COVID-19 pandemic has caused many established firms to act more resourcefully by speeding up product development and manufacturing. Are these likely to be lasting changes or temporary solutions to meet the immediate needs of the situation? Similarly, at a team level of analysis, would an unusually limited budget or tight deadline for a project (i.e., creating a synthetic "crisis" or sense of urgency) foster temporary resourcefulness? After the resource constraints end, are these teams likely to persist in being resourceful or revert to their previous ways of operating?

Some research (e.g., Baker and Nelson, 2005; Reypens et al., this issue) finds that resourceful behaviors may eventually impede a firm's development, suggesting a limit to resourcefulness as new ventures mature. More research is warranted to understand these temporal dynamics, with some important questions left unanswered. For instance, can resourcefulness become embedded in an organization's culture, or does it fade away as resource constraints relax? What mechanisms explain any potential changes in a firm's resourcefulness? Do institutional pressures compel organizations to "grow up" and abandon resourceful practices for more conventional ones? How does this maturation of resourcefulness impact firm performance and its ability to innovate? For firms that manage to stay resourceful, do shifting types of resource constraints (e.g., financial resource constraints early in a firm's lifecycle and human resource constraints after in a firm's life cycle) enable more permanent resourcefulness? Therefore, there is much to be learned about how entrepreneurial organizations interpret and respond to temporary crises, how they extract value from those contexts, and the role of resourcefulness as they move beyond temporary constraints.

4.4.2. Nature of resourcefulness over time

Another avenue for future research relating to temporality is to understand how the nature of resourcefulness changes over time. Sonenshein (2014) finds that resourceful behaviors (relating to creative, entrepreneurial activity within a firm) adapt as firms mature. In his case, resourcefulness moves from a state directed by employees in new ventures that have few resources to a leader-directed approach when a firm gains access to additional resources. Similarly, Williams and Shepherd (2016a) find that resourcefulness varied in degrees—from creative exploration to full on deviance and law breaking to make use of available objects and things on hand. They also find that, over time, resourcefulness decreased as some emergent organizations became more formalized. However, those organizations that retained their emergent structures and resourceful routines failed to adapt to the new environment and as a result, persisted in a permanent "survival" state. Future research can build on these early findings and continue to examine the shifting nature of resourcefulness over time. Interesting questions to explore may include: Is the locus of resourcefulness something that inevitably changes over time as new ventures implement standard operating procedures, adopt established governance mechanisms, and acquire additional resources? Or does a commitment to resourcefulness preclude organizational maturity into more efficient operating procedures and more effective governance approaches? Does an over-commitment to resourcefulness lead to a perpetual state of lack of resources? Do leaders need to take a more proactive role in promoting resourcefulness in the absence of resource constraints and simultaneously adapting resourcefulness approaches?

4.5. Social and psychological processes associated with resourcefulness

Critical to our definition of resourcefulness is the process by which actors (individuals or organizations) take agentic action to overcome obstacles while achieving unexpected outcomes. Given the agentic nature of this definition, we see several promising areas of research that integrate social and psychological processes with resourcefulness research.

4.5.1. Individual resourcefulness skills

We discussed the contextual triggers of resourcefulness above. One complementary avenue for future research is to investigate the extent to which the desire or skill to be resourceful is an individual difference. People who are frugal (Lastovicka et al., 1999) appear more likely to be resourceful (cf. Michaelis et al., 2021) but what other individual differences might influence (the nature of) resourcefulness? When might being too resourceful do more harm than good, such as by promoting underinvestment or being cheap (Rick et al., 2008)? What is the difference between simply conserving resources (at seemingly all costs) and acting in ways that are creative, generative, and expansive? We acknowledge that an over-emphasis on resourceful actions can be debilitating for necessary steps in entrepreneurial development and maturity (Williams and Shepherd, 2016a), yet there is still much more to be learned about resourcefulness as a specific entrepreneurial skill. Additionally, how do personality variables, such as openness to experience (John, 1990) which increases exploration, relate to resourcefulness? Furthermore, constructs such as cognitive complexity (Scott, 1962) may predict which types of individuals are more likely to be resourceful due to cognitive flexibility.

4.5.2. Resourcefulness and identity

It could also be fruitful to address the role of resourcefulness in a person's identity. Research has started to examine creative identities (Farmer et al., 2003), and related social psychological processes such as creative self-efficacy (Tierney and Farmer, 2002). Similarly, entrepreneurship scholars recognize the role of identity (Mathias and Williams, 2017) in shaping entrepreneurial emergence (Powell and Baker, 2014, 2017), competitive/cooperative behaviors to access shared resources (Mathias et al., 2018), and strategies for overcoming adversity—including threats to firm survival (Powell and Baker, 2014). Are there equivalent identities and social psychological processes associated with resourcefulness? Since resourcefulness implies non-conventional solutions, when will a resourceful identity convey status (such as being an unconventional problem solver) and when might it harm a person's status (such as being known for not following conventional solutions)? Furthermore, what are the tradeoffs for a resourcefulness identity at different stages of the entrepreneurial firm? Could a resourcefulness identity help explain challenges founders face when undergoing the professionalization of the firm—i.e., they no longer can enact the resourcefulness identity and need to become more conventional and professional in their role?

4.5.3. Resourcefulness and psychological resilience

With the disastrous effects of the Covid-19 pandemic, we see a lot of promise in integrating research on resourcefulness and resilience. Psychological resilience allows individuals to adapt to adversity following a potentially traumatic event (Bonanno et al., 2011; Shepherd and Williams, 2020; Williams et al., 2017). It allows individuals to maintain healthy psychological functioning, and even grow from traumatic experiences (Maitlis, 2020). When individuals face the constraints that come from major physical or social losses, resourcefulness might be a key coping mechanism. For example, Williams and Shepherd (2016b) found that individuals who took resourceful, entrepreneurial action to help others after being hit by a bushfire were more likely to have positive resilience outcomes (behavioral, emotional, and assumptive functioning) compared to those who did not take action. What motivates resourceful action in the face of a crisis? What role does resourceful behavior have in relation to resilience—does it cultivate resilience? Or is it derived from resilience?

Beyond helping individuals maintain their basic functioning and standard of living and helping them continue working in the wake of a personal crisis, there are also opportunities for understanding resourcefulness and resilience at the collective level (van der Vegt et al., 2015; Williams and Shepherd, 2021). For example, how does a major setback for an entrepreneurial firm, such as a period of poor performance, product launch failure, or even personal tragedy from a founder, trigger resourcefulness? And how might resourcefulness help an organization and its members through these difficult times? Additionally, it could be worthwhile to examine the role of resourcefulness in fostering social resilience, which helps organizations, communities, and societies live up to major societal challenges such as poverty, gender inequality, and climate change. These grand challenges (George et al., 2016a; George et al., 2016b) call for new research agendas and methods (Eisenhardt et al., 2016) that might be particularly ripe for a resourcefulness lens. With limited resources available to solve our grandest challenges, understanding resourceful individuals, organizations and societies could contribute to alleviating suffering, pain, and social inequities.

4.6. Outcomes of resourcefulness

4.6.1. Generative outcomes

In our definition, we highlight resourcefulness as creatively bringing and deploying resources to create and capture value. Following this definition, research could fruitfully examine attributes of resource productivity or its value creation or performance consequences as outcomes. The outcomes of resourcefulness could be investigated across different levels of analysis. For example, how would pursuit and engagement of resourcefulness affect individual entrepreneurs' wellbeing? Future studies can also explore if/how

resourceful entrepreneurial teams operate in a corporate and/or new venture organizing context, identifying the effects of various team compositions (i.e., resourceful individuals embedded in teams, resourceful teams coordinated with resource-seeking teams, and so forth). Do resourceful individuals amplify team outcomes? In contrast, when do resourceful individuals disrupt team goals? Such questions can help us evaluate when entrepreneurs can deliver productive (or counter-productive) outcomes, at the individual and team levels of analysis, when they exhibit resourceful behaviors. Similarly, resourcefulness exhibited at the firm or venture level might encourage employees to act congruently, thereby shaping corporate culture either positively or negatively. Overall, there are likely to be cross-level effects of resourcefulness that manifest at micro, *meso*, and macro-levels of analysis. To this end, entrepreneurship offers a unique context to consider these micro, meso, and macro-level features and outcomes of resourcefulness given the often-liminal nature of entrepreneurial firms.

4.6.2. Potential negative consequences of resourcefulness

While the majority of research to date tend to link resourcefulness to positive individual, team, or organizational outcomes as described above, the unexpected outcomes associated with resourcefulness can also be negative. For example, resourceful, entrepreneurial efforts might be “cordoned off” from other business efforts to drive specific outcomes. An overemphasis on resourcefulness might also stymie the pursuit of non-owned resources or capabilities outside of the firm. The potential dark side of resourcefulness is an underexplored area of research and begs critical questions. For example, when might resourcefulness suppress instead of enable innovation? Does resourcefulness lead to only certain types of innovation that are not suited for supporting long-term organizational survival or competitive advantage? When might resourcefulness lead to missed opportunities in acquiring or pursuing innovations owned by other firms or entities? As with many phenomena, understanding the positive and negative aspects of resourcefulness is critical. For example, is there an optimal degree of resourcefulness, and how might this degree change as a new venture evolves? How might a resourcefulness organizational focus influence basic strategic decisions (e.g., make vs. buy) for entrepreneurial firms? By considering resourcefulness as a strategic option, future research can explore tradeoffs presented to entrepreneurial decision makers as they consider when, and how to implement a resourcefulness approach to key decisions relating to innovation, growth, and competitive dynamics.

Another dark side outcome of resourcefulness to consider is individual persistence and burnout. While being resourceful can be an important individual skill and identity to develop, we also note that operating under resource constraints could foster burnout (Maslach et al., 2001), which is a prolonged response to job stressors and composed of the dimensions of exhaustion, cynicism and inefficacy. Burnout is often triggered by a lack of job resources, such as social support, information and control. While resourceful actors are often heralded for their seemingly heroic ability to overcome challenges and achieve surprising outcomes, it remains unclear whether and how resourcefulness helps or contributes to burnout. Indeed, using resourcefulness too frequently might foster burnout because individuals always have a deficit between what resources they have and what conventions suggest is necessary to complete tasks or solve problems. Furthermore, we argued previously that organizations might *purposefully* limit resources for its members to foster creative, resourceful action (Sonenshein, 2014). However, how does limiting access to additional resources (either artificially or out of necessity) impact team morale and burnout over time? Are there socio-psychological costs to restricting resources and, if so, when do these costs begin outweighing the benefits of encouraging resourcefulness (e.g., creativity, maximizing resource value, etc.)? Alternatively, resourcefulness might help avoid burnout because it allows employees to get greater productivity out of their resources. Understanding the optimal balance for individuals to reap the benefits of resourcefulness without burning out is an important question for scholars to examine.

5. Conclusion

In this editorial, we sought to provide a unifying framework to help stimulate additional scholarship on entrepreneurial resourcefulness. This included providing the theoretical grounding for extant scholarship, offering a definition of entrepreneurial resourcefulness, and detailing a research agenda. The outcome of the special issue is a group of highly impactful studies that enhance our understanding of entrepreneurial resourcefulness and also underscore opportunities for additional integrative work that is still needed. Our hope is that the work appearing in this special issue provides a foundation for rigorous, integrated research that advances scholarship on resourcefulness specifically and entrepreneurship more broadly.

CRedit authorship contribution statement

Each member of the author team contributed in important ways. All authors edited manuscripts for the special issue. The first two authors drafted the initial drafts of the editorial and the entire team worked on editing and improving the manuscript throughout the process.

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