



# Turning Lead into Gold: How Do Entrepreneurs Mobilize Resources to Exploit Opportunities?

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## TURNING LEAD INTO GOLD: HOW DO ENTREPRENEURS MOBILIZE RESOURCES TO EXPLOIT OPPORTUNITIES?

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The mobilization of resources is a central and defining feature of entrepreneurship. As the body of empirical research on entrepreneurial resource mobilization has grown, the literature has become increasingly fragmented. We review the literature on entrepreneurs' mobilization of resources, spanning human, social, financial, and other forms of capital. We identify five critical issues that hold back progress in resource mobilization research. We then propose a path ahead for future research guided by two overarching goals. First, we advocate for a process perspective, focusing attention on how an individual actor's disposition and situation shape her responses, how these responses interact with those of other actors, and how these individual and collective responses unfold over time to generate outcomes. Second, we call for stronger unification of theory *within* the entrepreneurial resource mobilization literature and *across* contiguous conversations in strategy and organization theory. Theoretical consilience will enable the accumulation of empirical research into a cohesive body of knowledge on entrepreneurial resource mobilization.

### TURNING LEAD INTO GOLD: HOW DO ENTREPRENEURS MOBILIZE RESOURCES TO EXPLOIT OPPORTUNITIES?

Entrepreneurship is often defined in terms of the identification and pursuit of opportunities (Shane, 2003; Stevenson, 1989). Entrepreneurial opportunities, in turn, are commonly defined as “situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at

greater than their cost of production” (Shane & Venkataraman, 2000: 220). To exploit opportunities, entrepreneurs mobilize and recombine a variety of resources, such as financial capital (e.g., cash or loans from a bank), human capital (e.g., skills from an employee), and social capital (e.g., information obtained from social contacts). Because the phenomenon of entrepreneurship necessarily involves the dynamic interplay of opportunities and resources, it cannot be understood without due attention to resource mobilization.

By *resources* we refer to all the tangible and intangible assets controlled by an entrepreneur, or accessible via social ties, that enable him or her to exploit an entrepreneurial opportunity. *Entrepreneurial resource mobilization* refers to the processes by which entrepreneurs assemble the resources used to execute on an opportunity. Entrepreneurial resource mobilization research aims to explain the initial stock of resources of a new organization, which has major implications for the organization's life

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chances and long-term evolution (Marquis & Tilcsik, 2013; Stinchcombe, 1965).

To date, a significant and established body of theory conceptualizes the phenomenon of entrepreneurial opportunities (Alvarez, Barney, & Anderson, 2013). By comparison, the study of entrepreneurial resource mobilization—while empirically rich—is conceptually fragmented and lacks an organizing framework. To evaluate the state of the entrepreneurial resource mobilization literature, we systematically review extant research, synthesizing 150 empirical articles on resource mobilization during the nascent phase of a venture. During this phase, the venture transitions from an abstract idea to a concrete social entity (Seidel & Greve, 2017); it is distinct from the scale-up phase, when internal organization design becomes a more prominent consideration (DeSantola & Gulati, 2017).

Five critical issues emerge from our review of the field. First, the field disproportionately focuses on financial resources as an outcome variable, particularly the mobilization of venture capital financing, with comparatively limited coverage for the alternative resources mobilized by entrepreneurs. Second, the literature largely overlooks how the entrepreneur *searches* for resources in the first place, instead focusing heavily on whether an entrepreneur is granted *access* to resources. Third, there is a disproportionate focus on resource mobilization attempts where actors in the mobilization process are guided by self-interest; too little scholarly attention is paid to nonmarket logics of resource access. Fourth, there is limited research on mobilization attempts where resource usage is governed through informal means. Fifth, ambiguous use of mechanism labels across articles clouds the nuanced explanations underlying distinct theoretical mechanisms. Together, these five issues hinder the cumulation and convergence of findings across the field, limiting the pursuit of deeper explanations of the phenomenon.

Our review prompts us to make two broad recommendations that will help address these five critical issues and build a coherent body of theory on entrepreneurial resource mobilization. First, we call for a process perspective on entrepreneurial resource mobilization. Much existing work takes a variable-centric approach, examining correlations between initial attributes of entrepreneurial actors or situations and the final outcomes of resource mobilization episodes, leaving the intervening processes as something of a black box. By contrast, a process perspective focuses attention on how an individual actor's disposition and situation shape her responses, how these

responses interact with those of other actors, and how these individual and collective responses unfold over time to generate outcomes. Thus, a process perspective requires scholars to open up the black box and illuminate the intermediate steps of the resource mobilization process. For example, an overlooked intermediate step is the initiation of the search for resources, and further study could shed light on how an entrepreneur shifts between cognitions (i.e., constructing and evaluating a mental model of their resource environment) and actions that shape the resource search process. A process perspective also allows for the examination of mobilization attempts across multiple types of resources simultaneously, including the reciprocal interactions between the entrepreneur's human, social, financial, and other forms of capital. Furthermore, a process perspective on resource mobilization will permit closer integration with the literature on opportunity identification, by uncovering how these two entrepreneurial processes dynamically interact.

Second, we call for stronger unification of theory *within* the entrepreneurial resource mobilization literature and *across* contiguous conversations in strategy and organization theory. We advocate for consilience—that is, the unity and consistency of knowledge across different subdomains (Wilson, 1998). Whereas Wilson (1998) was concerned about the unity of knowledge across the natural and social sciences, our aim is more modest. We use the term consilience to refer to modes of theorizing that promote cumulation of research findings within the community of entrepreneurial resource mobilization scholars and across the contiguous communities of strategy and organization theory scholars. Our goal is to enable deeper scholarly understanding of how entrepreneurs mobilize resources to pursue opportunities, in ways that are consistent with broader theoretical conversations in strategy and organization theory. The cumulation of empirical research into a cohesive body of knowledge will allow resource mobilization research to better guide scholars and practitioners alike.

We proceed as follows. In the next section, we review extant research on entrepreneurial resource mobilization. We take a process approach to organize extant research and highlight theoretical and empirical developments. Our literature review and assessment help identify critical gaps in the field's understanding of entrepreneurial resource mobilization. In the subsequent section on the path ahead, we build on our review and assessment to specify key elements of a research agenda going forward that would address the gaps.

## EXTANT RESEARCH ON ENTREPRENEURIAL RESOURCE MOBILIZATION

In this section, we review in detail the literature on entrepreneurial resource mobilization. After briefly outlining our methodology, we describe two frameworks that emerged from the review: the typology of entrepreneurial resources and the process model of entrepreneurial resource mobilization, which consists of steps of search, access, and transfer. The main body of the backward-looking review is organized around these three steps. For each step, we take a bird's eye perspective on the literature, identifying key topics and theoretical mechanisms that explain entrepreneurs' and resource holders' behaviors at that step.

### Methodology of Literature Review

Our review focuses on empirical research on entrepreneurial resource mobilization at the nascent stage of organizing a business. The entrepreneurship literature considers both the *ex post* consequences of resources for firm performance and the *ex ante* process by which these resources are obtained. Recent meta-analyses and review articles synthesize the first category (see Appendix). The second category examines how pre-founding conditions, founder characteristics, and behavioral processes at founding contribute to the entrepreneur's resource assembly activities in the first place. This category has received increasing empirical attention in recent years, but existing work does not synthesize its many strands. We undertake this synthesis in our review.

Our review is based on a set of 150 articles that we arrived at by undertaking a systematic search of the literature on entrepreneurial resource mobilization. We used Web of Science to identify relevant articles that contain at least one entrepreneurship search term [*entrepreneur\**, *new firm(s)*, *new venture(s)*, *new business(es)*, or *founder(s)*] and at least one resource search term [*resource\**, *capital\**, *network\**, or *bricolage*] in their title, abstract, or keywords. We review articles published between 2000 and 2016: our starting point of 2000 coincides with Shane and Venkataraman's (2000) formative statement on the field of entrepreneurship and marks the beginning of a substantial increase in methodological sophistication among empirical studies of entrepreneurship (Chandler & Lyon, 2001; Davidsson & Gordon, 2012).

We focused our initial search on nine leading management and entrepreneurship journals: *Academy of Management Journal (AMJ)*, *Administrative Science Quarterly (ASQ)*, *Entrepreneurship Theory*

and *Practice (ET&P)*, *Journal of Business Venturing (JBV)*, *Journal of Management (JOM)*, *Management Science (MS)*, *Organization Science (OS)*, *Strategic Entrepreneurship Journal (SEJ)*, and *Strategic Management Journal (SMJ)*. We supplemented our review with articles from additional journals if they are heavily cited by the in-scope articles.

This search generated an original list of 850 articles. These were screened by the authors according to the following scope criteria. First, we focus the review on articles that are empirical, including both qualitative and quantitative research. Second, we include articles in which obtaining resources is an outcome (or at least a distinct intermediate step) and exclude articles where resources are only an input variable. Third, we focus on the phase of organizational emergence from the earliest moments of pre-operational activity up to the first round of external fundraising. We exclude articles relating to later stage venture capital fundraising and initial public offerings (IPOs) because they likely deal with issues of scaling-up rather than organizational emergence. Fourth, we focus on articles whose focal level of analysis is individual entrepreneurs or nascent organizations and exclude studies where only larger aggregates (e.g., regional clusters or countries) are being analyzed. After this screening process, we arrived at the main set of 150 articles. Each article was read and systematically coded for the type(s) of resources it analyzes as outcome and input (if applicable). We also coded the theoretical mechanisms each article investigates and the labels it uses for these.

### Resource Typology and Process Framework

We find that underlying most work is an implicit typology of entrepreneurial resources. The most frequently invoked types of resources can be grouped together under the concepts of human capital, social capital, and financial capital (Florin, Lubatkin, & Schulze, 2003). The importance of these three forms of capital has been acknowledged across the social science disciplines, from economics (Becker, 1993; Glaeser, Laibson, & Sacerdote, 2002) to sociology (Bourdieu, 1986; Burt, 1992; Lin, 2002).

In the context of entrepreneurship, the focal actor is an individual endowed with a set of skills, knowledge, and prior experience (human capital), pre-existing social connections (social capital), and personal cash or credit to invest in the business (financial capital) (Davidsson & Honig, 2003; Evans & Leighton, 1989). The focal actor then engages in a resource accumulation process to augment these resources:

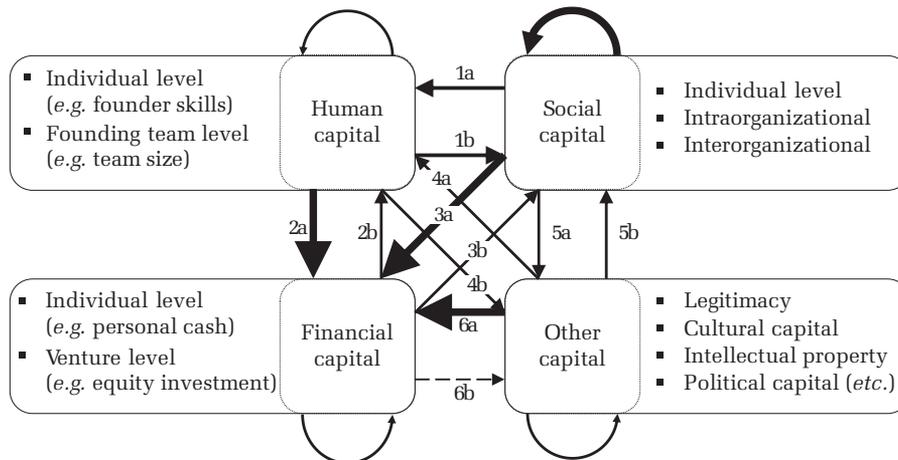
human capital through the assembly of a founding team, early employees and informal advisors; social capital through new interorganizational ties, and financial capital through outside investment (Aldrich & Kim, 2007; Hallen, 2008; Vissa, 2012). In addition to these three, scholars have identified other important forms of entrepreneurial resources, such as legitimacy (Delmar & Shane, 2004), narratives (Martens, Jennings, & Jennings, 2007), and intellectual property (Hsu & Ziedonis, 2013). Figure 1 displays a typology of the literature, across human capital, social capital, financial capital, and other forms of capital.

We find that most studies address pairwise links between two of these forms of capital. For example, multiple authors study the link leading from human capital to social capital (Link 1b in Figure 1): individuals with higher levels of education or with prior experience as entrepreneurs tend to establish a better initial network position (Hallen, 2008; Mosey & Wright, 2007). Social capital, in turn, is highly consequential for raising financial capital (Link 3a in Figure 1): social ties allow credible information to flow to potential investors, reducing the uncertainty around a new venture (Hallen, 2008; Hsu, 2007; Shane & Cable, 2002). The arrows in Figure 1 are weighted according to the count of articles from our review that address that particular link. Feedback loops in Figure 1 represent research where the same form of capital is both the explanatory variable and outcome variable (e.g., actors with more social capital find it easier to expand their social network).

The first critical issue we identify in the entrepreneurial resource mobilization literature emerges from Figure 1: disproportionate attention is paid to financial capital as an outcome variable compared with other forms of capital. Of our 150 in-scope articles, 99 use financial capital as an outcome variable, often being explained by human, social, or some other form of capital. We see no *a priori* reason that financial capital deserves precedence as the most important form of capital to be explained (a topic we return to in the forward-looking section). Indeed, links in Figure 1 in the reverse direction, in which financial capital explains the mobilization of other forms of capital, constitute an underexplored area for future research.

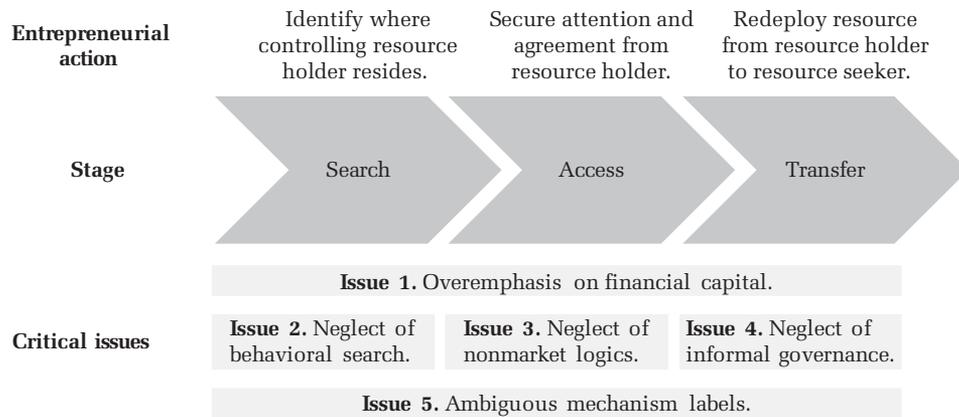
The forms-of-capital typology organizes the literature into phenomenological categories. We also coded the theoretical mechanisms proposed and tested in each article, and the labels authors use for the mechanisms. We find that different mechanisms explain different steps in the resource mobilization process, with mechanisms sometimes offering competing explanations for how actors behave at a given point in the process. The competing explanations form three broad clusters corresponding to the key process steps of *search*, *access*, and *transfer* of resources. We adopt this process and mechanism-oriented framework—depicted in Figure 2—to organize our review of existing literature. We find in our review that common theoretical mechanisms are invoked across different forms of capital. However, this overarching theoretical

**FIGURE 1**  
**Entrepreneurial Resource Typology across Forms of Capital**



Notes: Thickness of arrows is proportional to the volume of the literature studying the association of one form of capital (independent variable) with another (dependent variable). Feedback loops represent the literature where the same form of capital is both an independent and a dependent variable.

**FIGURE 2**  
**Stages of the Entrepreneurial Resource Mobilization Process**



structure has been obscured by the historical tendency for research to be organized around phenomena.

*Search* refers to the processes by which an entrepreneur identifies potentially relevant resource holders. Entrepreneurs often face uncertainty over where in their environment the resources they seek to mobilize reside and who controls them (Grossman, Yli-Renko, & Janakiraman, 2012). This may take the form of searching for individuals with valuable skills or identifying the set of angel investors who operate in the entrepreneur's region and take an interest in their focal sector. Extant research often ignores or assumes away this search, focusing instead on whether attempts to access resources are successful or not.

*Access* refers to processes that culminate in the entrepreneur and resource holder agreeing to deploy the resource in the focal venture attempt. Having identified desired resources controlled by an external actor, the entrepreneur next needs to get that actor's attention and get them to agree to transfer or transact with the entrepreneur. In the case of human capital, the access step could be the process of convincing an individual to join the nascent venture. In the case of social capital, it includes the process of persuading an established company to form an alliance with the new venture. In the case of financial capital, it includes the process of getting the attention of equity and debt providers and persuading them of the new venture's merits.

*Transfer* refers to processes by which the entrepreneur and resource holder agree (explicitly or implicitly) on the governance of the resource, including allocation of property rights over the resource deployment and the resultant created value. Frictions stemming from transaction costs (Williamson, 1985) can stall the transfer of resources, even when a pair of

actors have in principle agreed to a particular exchange. Transaction costs in the form of measurement costs and governance costs are particularly salient in the entrepreneurial setting (Michael, 2007) and present basic barriers to writing complete contracts to transfer resources (Langlois & Robertson, 1995).

The next three subsections organize the body of our review around the steps of search, access, and transfer of resources. Each subsection highlights one critical issue we identify in the literature. Figure 2 maps the critical issues to the resource mobilization process steps.

### Search for Entrepreneurial Resources

The broader organizational literature identifies search (e.g., for choices, solutions, or information) as a common response to uncertainty and an antecedent to decision-making (March & Simon, 1958). However, research explicitly addressing entrepreneurial resource search is scarce. The lack of work on entrepreneurial resource search emerges as the second critical issue we identify in our review and is a theme we return to in the forward-looking section of the article. We identify aspiration-driven search from the behavioral strategy literature (Posen, Keil, Kim, & Meissner, 2018) as a relevant perspective to integrate with entrepreneurship theory.

In this section, we highlight two search-related themes that emerge from the entrepreneurship literature. First, entrepreneurs are often assumed to search for resources locally within their immediate social networks, especially close ties made up of family, friends, and former coworkers. Second, a few studies examine the proactive networking behavior through which entrepreneurs expand their

networks in search of new sources of resources. We then proceed to draw conceptual links with the behavioral strategy literature on search. Of our 150 in-scope articles, 20 percent address the search for resources in some way, making this the most sparsely studied of the three steps in the process framework. Table 1 summarizes the key topics and mechanisms of entrepreneurial resource search.

**Preexisting social networks as the locus of resource search.** Since the 1980s, researchers have recognized that entrepreneurs are embedded in networks of relationships (Aldrich & Zimmer, 1986). Entrepreneurs are conceptualized as actors situated in a social structure comprising a mixture of strong ties (e.g., close friends), weak ties (e.g., casual acquaintances) (Granovetter, 1973), and strangers. Building on sociological work that examines variation in the types and strengths of social ties, entrepreneurship scholars examine which types of social ties provide which forms of resources and support to nascent entrepreneurs (Hoang & Yi, 2015). Studies have found that entrepreneurs' networks are used to mobilize all the major forms of resources (Ruef, Aldrich, & Carter, 2003; Shane & Cable, 2002). The search for resources is rarely conceptualized explicitly: instead, it is implicitly assumed that search is usually restricted to the close social ties of the entrepreneur.

As a result, research has paid attention to the antecedents of entrepreneurs' social networks (Grossman et al., 2012; Hallen, 2008). Entrepreneurs' preexisting networks—those ties that predate their nascent organizing activities—include ties to family members, college classmates, and former coworkers (Hanlon & Saunders, 2007). Many entrepreneurs do not appear to search beyond these preexisting ties, meaning their resource mobilization is constrained by their personal background and the neighborhood in which they grow up (Ruef et al., 2003). Individuals who start in privileged positions—wealthy families, prosperous neighborhoods, high-status education—have initial networks rich in resources (Hallen, 2008). Conversely, individuals born into a resource-scarce social environment are likely to have a weak initial network position as nascent entrepreneurs.

Existing literature broadly supports the importance of preexisting social ties for resource search. However, significant gaps remain in our understanding of this step in the resource mobilization process. Some entrepreneurs form new social ties instrumentally (Kilduff & Tsai, 2003), and such proactive networking constitutes a key mechanism of entrepreneurial resource search. Furthermore, a comprehensive theory of entrepreneurial resource search would shed light on *which* social contacts are approached and *when*

**TABLE 1**  
**Search for Entrepreneurial Resources: Key Topics, Mechanisms, and Selected Example Studies**

Key Topics	Main Arguments/Mechanisms	Forms of Capital	Selected Example Studies
Preexisting social networks as the locus of resource search	<ul style="list-style-type: none"> <li>• Entrepreneurs turn first to embedded social relations when looking for resources</li> </ul>	Human capital	Ruef et al. (2003) Leung, Zhang, Wong, & Foo (2006) Aldrich & Kim (2007)
		Social capital	Beckman et al. (2014) Li (2013) Milanov & Fernhaber (2009)
		Financial capital Other capital	Hallen (2008) Yli-Renko, Autio, & Sapienza (2001)
Proactive networking behavior	<ul style="list-style-type: none"> <li>• A subset of entrepreneurs exhibit agentic behavior, forming new ties through referrals or by reaching out to strangers</li> </ul>	Human capital	Hsu (2007)
		Social capital	Vissa (2012) Ozcan & Eisenhardt (2009) Hallen & Eisenhardt (2012)
Behavioral strategy perspective on search	<ul style="list-style-type: none"> <li>• Search mixes “offline” cognitive processes and “online” tests of alternatives</li> <li>• Search for choices is pursued more energetically by actors with higher initial aspirations</li> </ul>	n/a	Zott & Huy (2007) Zhang, Souitaris, Soh, & Wong (2008)
			Financial capital

*Notes:* 30 of the 150 in-scope articles in our review (20 percent) relate in some way to the search for entrepreneurial resources. Key Topics are classified by the authors based on the central explanatory construct described in the literature. Under Selected Example Studies, \* indicates a nonentrepreneurship study.

an entrepreneur initiates search for new social ties. The following subsections address these issues.

**Proactive networking.** A theoretical tension exists in the entrepreneurship literature between theories in sociology—which tend to depict social structures as constraining and self-reproducing (Giddens, 1979)—and the popular portrayal of entrepreneurs as proactive, outgoing, “wheeler-dealers.” Research tries to understand the extent to which entrepreneurs can break out of the constraints of social structure through agentic action or sheer force of will, and to what extent network evolution is deterministic, following a “rich get richer” preferential attachment dynamic. The evidence on this question is mixed but, viewed synthetically, it paints a picture in which there is individual-level heterogeneity in the propensity for agentic networking behaviors (Vissa, 2012).

For entrepreneurs with a low propensity for proactively forming new ties, their network grows based on whatever ties they form serendipitously in their immediate social surroundings. On the other hand, entrepreneurs with a high propensity for proactive networking have the potential to overcome initially poor social structural positions. Vissa (2012) documents the impact of network-broadening and network-deepening behaviors on entrepreneurs' networks over time, finding that some particularly agentic entrepreneurs are especially adept at adding new social contacts to their networks. Zott and Huy (2007) identify *symbolic management* behaviors that convey an entrepreneur's credibility and professionalism by emphasizing their credentials, affiliations, and personal reliability. In a similar vein, Hallen and Eisenhardt (2012) document strategies which entrepreneurs use to successfully cultivate new ties to potential investors, such as negotiating in parallel with multiple potential partners.

This relatively small literature on proactive networking provides rich insights into the behavior of entrepreneurs but leaves open several important questions. The literature links intentions with the outcomes of networking behavior (Vissa, 2011). However, further work is needed to understand the cognitive and behavioral processes that mediate between intention and outcome. We suggest that the behavioral strategy perspective on search may help address this.

**The behavioral strategy perspective on search.** Search receives considerable attention in the literature on behavioral strategy (Gavetti, Greve, Levinthal, & Ocasio, 2012). Work in this field has potential to shed light on the search step of entrepreneurial resource mobilization. Crucially, entrepreneurship and behavioral strategy researchers share similar

human nature assumptions: people are boundedly rational, goal-oriented, social actors. Behavioral strategy pays attention to managerial cognition and draws a useful distinction between two modes of search: in *offline search*, actors evaluate alternatives based on their mental models, and in *online search*, actors evaluate alternatives based on attempts to implement a given option (Gavetti & Levinthal, 2000). Existing entrepreneurship research does not yet tease out the relative importance of these two search modes. A promising line of enquiry is pursued by Grossman et al. (2012), who measure an entrepreneur's perception of the value of each contact in their network. They find the perceived value of a contact is positively related to the number of resource categories anticipated from, or provided by, the contact. This lays a foundation for future studies of how entrepreneurs evaluate and cognitively activate social network contacts (Shea, Menon, Smith, & Emich, 2015) while searching for resources.

Within the behavioral strategy literature, a particularly promising concept to bring into entrepreneurship is the idea of aspiration-driven or problemistic search (Posen et al., 2018). In Simon's original formulation of boundedly rational decision-making, an individual chooses among a sequence of possible options (Simon, 1955). The individual compares each option against their aspiration level and selects the first option that meets the aspiration level. If none of the options in the initial set of possibilities meet their aspiration level, the individual tries to expand the set of options—or lowers their aspiration level. This model is one of the foundations of the theory of problemistic search, which itself has proved to be a powerful paradigm through which to analyze established organizations (Greve, 2003; Posen et al., 2018). Problemistic search has been extended to examine search within interorganizational networks (Baum, Rowley, Shipilov, & Chuang, 2005). Extending problemistic search to the domain of entrepreneurial networks could therefore help us understand when entrepreneurs approach more socially proximate or distant contacts when searching for resources (Clough & Vissa, 2018). Entrepreneurs with higher initial aspiration levels are less likely to be satisfied with their initial set of options—the resources of their closest social contacts—and therefore are more likely to expand their choice set by proactively forming new ties with indirect contacts and strangers.

### Accessing Entrepreneurial Resources

The resources entrepreneurs seek to mobilize are generally controlled by someone else (i.e., the

resource holder) (Villanueva, Van de Ven, & Sapienza, 2012).<sup>2</sup> The entrepreneurship literature highlights that resource access requires getting the resource holder's attention and convincing them to allow the entrepreneur to deploy the resources to build their venture. In this section, we describe key topics of resource access. We highlight the third critical issue identified by our review: *market logics* of resource access are often the default presumption in the entrepreneurship literature. We question whether this is warranted and highlight the sparseness of work adopting nonmarket logics as a gap in the literature.

The entrepreneurship literature identifies a wide variety of motives guiding the decisions of resource holders. The literature on institutional logics provides a useful language for describing the heterogeneous motives underlying economic action (Pahnke, Katila, & Eisenhardt, 2015; Thornton, Ocasio, & Lounsbury, 2012). We broadly categorize the motives underlying entrepreneurial resource access as market logics and nonmarket logics. Market logics refer to the assumption that action is guided by economic rationality; it is a cognitive model of human behavior driven by self-interest. Nonmarket logics refer to the assumption that action is motivated by and oriented toward a goal higher than individual self-interest, such as the family, community, or religion (Friedland & Alford, 1991). Research that invokes nonmarket logics as the basis for action stresses that actors' ongoing social relations (Granovetter, 1985), as well as their cultural context (Thornton et al., 2012), shape their preferences and motivations. Nonmarket logics place emphasis on the *appropriateness* of a course of action rather than on its consequences (March, 1994).

Of the three steps in the emerging process framework, resource access has received the most attention: 55 percent of the in-scope articles address this step. These articles propose various explanations linking dispositional or situational attributes of entrepreneurs or resource holders with resource access outcomes. In this section, we group the explanations outlined in extant research into the following five topic areas based on their central explanatory construct: (i) signaling underlying quality, (ii) information flows in social

networks, (iii) narratives and storytelling, (iv) family embeddedness, and (v) homophily and demographic biases. The first two, signaling and information flows in social networks, involve economic actors processing information to make forward-looking calculative decisions; hence, these topics are premised on market logics. Narratives and family embeddedness involve social action guided by nonmarket logics.

Research on homophily and demographic biases varies in the underlying behavioral assumption about resource holders' behavior: some studies implicitly invoke a market logic and others attribute behavior to nonmarket logics. This is, in part, a result of conceptual ambiguity over the underlying causal mechanisms at work. Precisely identifying the causal mechanisms underlying empirical patterns of homophily and gender differences in resource mobilization outcomes is very difficult using observational data, creating opportunities for novel research approaches to study this topic.

Table 2 summarizes our bird's-eye view of extant research. Table 2 cites selected example studies to illustrate the key arguments made within each topic area as authors apply these central explanatory constructs in nuanced ways to describe how entrepreneurs access different types of resources.

**Signaling underlying quality.** There is a substantial literature on how entrepreneurs gain access to various forms of resources by signaling their underlying quality. Signaling helps entrepreneurs overcome information asymmetry, which is identified in economics as one of the basic ways in which markets fail (Akerlof, 1970). We find in our review that distinct streams of literature use differing labels for the same (or highly similar) underlying causal process(es): literatures on *status* and *certification* are often at their heart about signaling underlying quality. However, these labels are also used to refer to mechanisms of power and legitimacy, generating possible ambiguity around mechanism labels. This is an issue we return to when we look at pathways to develop more cumulative resource mobilization research.

In the entrepreneurial context, resource providers lack information about the underlying quality of the resource seekers, that is, about the abilities and motivations of the entrepreneur and the value of a given entrepreneurial opportunity (Amit, Glosten, & Muller, 1990; Wu, 2016). Given that resource seekers generally know more about their own quality than resource holders do, this information asymmetry problem can result in a market failure in the

<sup>2</sup> The alternative is that an entrepreneur repurposes something as a resource which other people overlook. This process—known as bricolage—is discussed later in the section on *transfer*.

**TABLE 2**  
**Accessing Entrepreneurial Resources: Key Topics, Mechanisms, and Selected Example Studies**

Key Topics	Main Arguments/Mechanisms	Forms of Capital	Selected Example Studies
Signaling underlying quality	<ul style="list-style-type: none"> <li>• Formal qualifications and certifications signal an entrepreneur's quality</li> <li>• Affiliations to high-status actors are interpreted as endorsements; networks act as "prisms"</li> </ul>	Human capital	Backes-Gellner & Werner (2007) Davila et al. (2003)
		Social capital Financial capital	Ozmel, Reuer et al. (2013) Hallen (2008) Ozmel, Robinson et al. (2013) Chen, Yao, & Kotha, (2009)
		Other capital	Sine, David, & Mitsuhashi (2007) Sieger, Zellweger, Nason, & Clinton (2011)
Information flows in social networks	<ul style="list-style-type: none"> <li>• Social network ties are "pipes" through which credible information about quality flows</li> </ul>	Human capital Social capital Financial capital	Hsu (2007) Newbert, Tornikoski, & Quigley (2013) Shane & Cable (2002) Wuebker et al. (2015)
Narratives and storytelling	<ul style="list-style-type: none"> <li>• Entrepreneurial narratives emphasizing community and social benefits can attract resources from supporters</li> </ul>	Other capital	Bhagavatula, Elfring, van Tilburg, & van de Bunt (2010)
		Human capital Social capital Financial capital	Dunkelberg, Moore, Scott, & Stull (2013) Di Domenico, Haugh, & Tracey (2010) Allison et al. (2015) Moss et al. (2015)
		Other capital	Santos & Eisenhardt (2009)
Family embeddedness	<ul style="list-style-type: none"> <li>• Family members offer one another access to resources based on solidarity rather than on economic returns</li> </ul>	Human capital Social capital	Discua Cruz, Howorth, & Hamilton (2013) Chua, Chrisman, Kellermanns, & Wu (2011)
Homophily and demographic biases	<ul style="list-style-type: none"> <li>• Resource holders are more likely to support resource seekers with whom they share demographic traits</li> <li>• Systematic differences in the resources men and women entrepreneurs mobilize indicate patterns of sexism in some domains</li> </ul>	Financial capital Other capital Human capital	Romano, Tanewski, & Smyrniotis (2001) Hanlon & Saunders (2007) Ruef et al. (2003) Jung et al. (2017)
		Social capital Financial capital	Vissa (2011) Bengtsson & Hsu (2015) Hegde & Tumlinson (2014) Saparito et al. (2013)

*Notes:* 82 of the 150 in-scope articles in our review (55 percent) relate in some way to entrepreneurs accessing resources. Key Topics are classified by the authors based on the central explanatory construct described in the literature.

market for entrepreneurial resources (Venkataraman, 1997).<sup>3</sup> To mitigate this type of information asymmetry, the resource-seeking entrepreneur can *signal* their quality to a potential resource provider. Economists propose that a signal is credible and has information value precisely because it is less costly for a high-quality actor to obtain and convey than for a low-quality actor, and the signal is thus positively correlated with the quality of the actor (Spence,

1973). For example, a signal can take the form of a credential, certificate, affiliation, or award—often granted by a credible third party. As compared with the economics literature, entrepreneurship scholars apply the theory of signals less formally and thus more broadly: in entrepreneurship research, the term "signal" describes any informational characteristic that credibly indicates an entrepreneur's underlying quality.

The entrepreneurship literature finds that various signals enhance an entrepreneur's access to resources—especially, but not exclusively, their access to financial capital. Formal intellectual property, such as a trademark, can signal a start-up's orientation toward growth to financial investors (Block, De Vries, Schumann, & Sandner, 2014). Educational credentials signal the quality of the

<sup>3</sup> The information asymmetry problem is particularly pronounced when high-quality entrepreneurs are capable of building a business without outside resources (e.g., by bootstrapping rather than by raising formal financial capital). In this case, the only entrepreneurs soliciting external resources will be the lower quality ones (Eckhardt et al., 2006).

founding team, attracting investors (Hallen, 2008; Townsend & Busenitz, 2015) and early employees (Backes-Gellner & Werner, 2007) to their firm. In the context of equity crowdfunding, founders can retain equity ownership to signal their commitment to the venture, which in turn attracts financial backers (Ahlers, Cumming, Günther, & Schweizer, 2015).

An entrepreneur's network connections can serve as a signal of quality to resource holders. The sociology literature finds that an actor's affiliations are interpreted by others as a signal of the actor's underlying attributes (Podolny, 2005). Social networks act as a "prism" through which resource holders observe one another and make inferences about the quality of the entrepreneur, based on the assumption that a social tie represents an endorsement (Podolny, 2001; Stuart, Hoang, & Hybels, 1999). An existing investment from a venture capitalist (VC), especially a VC of high status, constitutes an important signal to attract other third parties. This helps the venture to attract further human capital, in the form of employees (Davila, Foster, & Gupta, 2003); social capital, in the form of alliance partners (Ozmel, Reuer, & Gulati, 2013); and financial capital, in the form of further investment rounds (Ozmel, Robinson, & Stuart, 2013).

**Information flows in social networks.** In addition to acting as prisms through which actors make sense of an uncertain situation, social networks also act as pipes through which information flows (Podolny, 2001). In his classic study, "Getting a Job," Granovetter (1995) found that a high proportion of informants he surveyed had found their current employment through social ties via indirect "friend of a friend" referrals (Granovetter, 1973). When networks act as conduits of information, they allow entrepreneurs to find resources (as we discuss earlier in the section on *search*) and they also allow resource holders to evaluate entrepreneurs and decide whether to provide access to their resources. In this way, information that flows through the network helps to offset the information asymmetry around the quality of the entrepreneur.

Informal word of mouth through social networks has been found to impact the mobilization of financial capital (Hsu, 2007; Wuebker, Hampl, & Wüstenhagen, 2015). Shane and Cable (2002) find that investors are more likely to back an entrepreneur whom they have direct and indirect ties social ties with because the ties facilitate access to private information. Shane and Stuart (2002) find that university technology commercialization start-ups whose founder has preexisting direct or indirect ties

to business angels or venture capital investors raise financing faster. Information flows in social networks also impact the mobilization of human capital. While a lot of entrepreneurial team formation occurs serendipitously (Aldrich & Kim, 2007), there is evidence that high-ambition ventures sometimes find cofounders through the personal networks of the venture capital backers (Hsu, 2007). Information flows in interpersonal networks also underlie the formation of interorganizational ties to customers and alliance partners. In a study of the semiconductor industry, Beckman et al. find that new organizations' boards of directors play an important role in a venture's alliance formation: ventures with more diverse boards form more diverse alliance portfolios, consistent with directors providing referrals to potential partners within their domain of expertise (Beckman, Schoonhoven, Rottner, & Kim, 2014).

**Narratives and storytelling.** Entrepreneurial narratives—resting on nonmarket logics of economic action—are an important but understudied area of resource mobilization research. Entrepreneurs use narratives to persuade resource holders to provide access to resources (Garud, Schildt, & Lant, 2014; Lounsbury & Glynn, 2001). Skilled storytellers use cultural symbols that are meaningful to their audiences (Swidler, 1986). Persuasive narratives often appeal to some goal higher than merely making money, and so nonmarket logics play an important role in mobilizing support. For example, different financial backers in the surgical device industry are associated with different institutional logics (Pahnke et al., 2015), and so appeals for grants from a government agency will present a different narrative around a venture compared with appeals to VCs.

Storytelling is particularly relevant to hybrid organizations such as social ventures, which have both social and financial objectives (Battilana & Lee, 2014). How social entrepreneurs balance the competing logics associated with social and financial goals is a topic of substantial interest to entrepreneurship scholars because of the theoretical importance of how organizations manage conflicting logics (Battilana & Lee, 2014) and because hybrid organizations compete with focused organizations for the same pool of resources (Mendoza-Abarca, Anokhin, & Zamudio, 2015). The relatively meager research that examines these issues is inconsistent. For example, two recent articles studying the tension between social and financial goals in constructing narratives to raise financial capital arrive at contrasting findings. In a study of the crowd-based

microlending platform Kiva, Moss, Neubaum, and Meyskens (2015) find that microenterprises with loan descriptions highlighting their entrepreneurial orientation (i.e., market logics) are more likely to be funded, whereas those emphasizing a virtuous orientation (i.e., community logics) are less likely to be funded. However, in a study of the same platform but using different text analysis dictionaries to analyze the loan descriptions, Allison, Davis, Short, and Webb (2015) find that lenders respond positively to narratives highlighting the venture as an opportunity to help others (community logics) and less positively when the narrative is framed as a business opportunity (market logics). In addition to reconciling these findings, we argue that future work on entrepreneurial narratives ought to move beyond the “horse race” research design (i.e., which logic is better) to study more deeply the interactions between entrepreneurs and different resource provider audiences. For example, a market-logic narrative that appeals to VC investors might have an off-putting effect on other resource holders.<sup>4</sup>

**Family embeddedness.** Family embeddedness rests squarely on nonmarket logics of economic action. In this subsection, we outline how family embeddedness leads to mobilization of various forms of capital. In aggregate, we find this is an understudied topic in the resource mobilization literature: the volume of research fails to reflect the entrepreneur’s heavy reliance on family members in the earliest stages of nascent organizing activities.

Family members are among the most frequent providers of resources to nascent entrepreneurs (Aldrich & Cliff, 2003; Hanlon & Saunders, 2007). The strength of the social tie raises the likelihood that the family member decides to support the entrepreneur. In many cultures, it is normatively expected that family members provide unconditional support to one another (Friedland & Alford, 1991). The institutional logic of family often takes priority over market logics when individuals are making economic decisions relating to family members (Thornton et al., 2012). For example, in a study of family entrepreneurial teams, Discua Cruz, Howorth,

and Hamilton (2013) find that team composition “appears to be driven by relationships much more than economically rational requirements for resources or heterogeneity” (p. 37). Because the decision by a resource holder to support a family member’s nascent enterprise is driven by social obligation and the potential to build socio-emotional wealth for the family unit, entrepreneurs may find it easier to access resources from family members than from other social contacts (Rooks, Klyver, & Sserwanga, 2016).

The literature also indicates, however, that relying on family members during the resource mobilization process is a double-edged sword. First, it sets up a reciprocal obligation toward family members to allow them to benefit from the new business. For example, the entrepreneur may feel obliged to hire family members for roles they are ill-suited for (Discua Cruz et al., 2013) or to distribute equal equity stakes to family members who provide help (Kotha & George, 2012). Second, reliance on family members for resources can foreclose access to more diverse pools of resources (Uzzi, 1997). For example, the knowledge bases of family members typically overlap because they also know each other, and the entrepreneur is precluded from accessing more diverse sources of advice (Gras & Nason, 2015). Although it provides valuable insights, the family embeddedness literature is still far from providing a complete picture of the contingencies under which family logics assist the entrepreneur’s resource mobilization process.

**Homophily and demographic biases.** A large social science literature addresses individual decision-making biases (Kahneman, 2011). Entrepreneurial resource mobilization research often finds outcomes that are correlated with demographic attributes such as ethnicity and gender, suggesting biases might be affecting resource holders’ decisions. However, as we explain in this section, it is very difficult to precisely specify which underlying causal mechanism gives rise to the correlations. In the case of homophily, for example, it is unclear how much individual-level choice plays a part in generating homophilous patterns of association, and still less clear whether choice is subject to implicit bias or not. As a result, the term “homophily” is subject to considerable theoretical ambiguity. Regardless of the underlying mechanism, the overall picture emerging from the literature is one in which some demographic groups face structural disadvantages in accessing resources, making this a topic of tremendous practical importance. In this section, we first briefly outline homophily; we then discuss research on resource

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<sup>4</sup> A related literature examines the entrepreneurial narratives surrounding IPO firms (Martens et al., 2007; Payne, Moore, Bell, & Zachary, 2013; Pollock & Rindova, 2003). The audience for narratives at this venture stage differs from the audience of a nascent entrepreneur mobilizing an initial pool of resources. Future research should look explicitly at how audience reactions to entrepreneurial narratives vary over a nascent venture’s life cycle.

access and ethnicity, and third, we discuss resource access and gender.

Homophily refers to the tendency for individuals to associate with others who share similar characteristics to themselves (Lazarsfeld & Merton, 1954). Homophily is one of the best documented empirical regularities in the study of social relationships (McPherson, Smith-Lovin, & Cook, 2001). Two underlying forces generate homophilous social networks: *induced homophily* refers to the fact that similar people often have a higher base rate of encountering one another (e.g., due to geographic location) and *choice homophily* refers to an individual's preference toward associating with similar others (Kossinets & Watts, 2009). It is rarely clear which of these two mechanisms is operating. Furthermore, there are differing accounts as to whether choice homophily constitutes implicit, irrational bias or whether it is, instead, a rational behavior premised on lower communication costs between similar people.

Studies have found evidence of homophily on the basis of ethnicity in the mobilization of financial, human, and social capital. Several studies of venture capital investments find that similarity of ethnicity between VC partners and a venture's executives raises the likelihood of an investment tie forming (Bengtsson & Hsu, 2015; Claes & Vissa, 2017; Hegde & Tumlinson, 2014). In the domain of human capital, evidence from the Panel Study of Entrepreneurial Dynamics (PSED) suggests that ethnically homogeneous entrepreneurial teams are 46 times more likely to appear in the data than would be expected based on chance, or 27 times more likely once familial ties are controlled for (Ruef et al., 2003). In the domain of social capital, Vissa (2011) finds that both caste similarity and language similarity predict an entrepreneur's *intention* to form an exchange tie with an external party, and language similarity predicts the *realization* of new exchange ties.

Ethnic homophily thus emerges as an important topic in the entrepreneurial resource mobilization literature. However, this body of research also illustrates the theoretical ambiguity over the causal mechanisms that give rise to homophilous ties. The studies by Bengtsson and Hsu (2015) and Hegde and Tumlinson (2014) both use data on the U.S. venture capital industry, and both use the method of inferring ethnicity from individuals' surnames. However, where Bengtsson and Hsu interpret their findings as evidence of implicit bias toward one's own ethnic group, Hegde and Tumlinson argue that the homophilous tie formation is a rational behavior

premiered on lower communication costs between similar people.

The other demographic dimension that receives substantial attention in resource mobilization research is gender. There are well-documented differences between the levels and types of financial resources mobilized by female and male entrepreneurs (Jennings & Brush, 2013). On average, businesses founded by female entrepreneurs tend to have lower initial levels of financial capital and are less likely to use formal, external sources of capital (Alsos, Isaksen, & Ljunggren, 2006; Orser, Riding, & Manley, 2006). Homophily between predominantly male resource holders and male entrepreneurs is one possible explanation for this, whereas gender discrimination against women poses another possible explanation. The recent literature on gender and financial resources has been attempting to untangle these mechanisms.

Two methodological issues complicate this attempt. First, when resource holders are male, homophily and implicit bias against women both manifest in the same way: a stronger preference to back male than female entrepreneurs. To get around this difficulty, it is necessary to study the behavior of female resource holders toward male and female resource seekers. A study by Saporito, Elam, and Brush (2013) takes this approach by studying dyadic relationships between male and female bank managers and male and female business owners. The authors find—contrary to the homophily hypothesis—that female–female pairs display low levels of trust and satisfaction with credit access. However, in a different context, Greenberg and Mollick (2017) find that, in crowdfunding campaigns, female backers tend to provide stronger support to female founders. In the context of angel investing, Becker-Blease and Sohl (2007) find some evidence of gender-based homophily between female angel investors and female resource seekers. It could be that, as Greenberg and Mollick (2017) suggest, members of structurally disadvantaged groups display homophily in contexts where social activism is salient (i.e., *activist choice homophily*) but that otherwise they may inadvertently internalize a bias against members of their own group.

Second, to the extent that female founders anticipate facing higher barriers to receiving finance, they may be less likely to seek it in the first place. Female and male entrepreneurs base their decision over whether to seek external finance on different criteria (Becker-Blease & Sohl, 2007; Orser et al., 2006). Hence, when we study which entrepreneurs gain access to resources, the subsets of female and male

founders who fall into observable samples systematically differ. This self-selection hinders our ability to make inferences about resource holders' biases from observational data. To measure biases on the part of resource holders, we therefore need to use experimental research designs, which are gaining increasing traction in the literature as a component of multimethod studies (Greenberg & Mollick, 2017; Lee & Huang, 2018).

Gender-related mechanisms have been found to influence mobilization not only of financial capital but also—still the subject of far fewer studies—of human capital. After controlling for spousal pairs, gender-based homophily has been found to impact the formation of founding teams (Ruef et al., 2003). Furthermore, female entrepreneurs are more likely than male entrepreneurs to become solo entrepreneurs, which could be due to the relative difficulty women have in finding same-gender cofounders (Ruef et al., 2003). When mixed-gender teams do form, stereotypes about role fit are likely to influence the allocation of initial roles. Jung, Vissa, and Pich (2017) find that men are seen as a closer fit than women for the role of CEO, whereas women are viewed as a closer fit for the role of chief marketing officer.

Viewed collectively, the literature on entrepreneurial resource access identifies a variety of factors that drive resource holders' decisions. Some resource holders behave according to a market logic, basing their decisions on their (boundedly rational) self-interest. This is often used as the default behavioral assumption in the literature; this assumption is so widespread that it is rarely stated explicitly. It is by juxtaposing this literature with work drawing on nonmarket logics that the distinction between resource holders' motives becomes clear. Some resource holders behave according to community, professional, or family logics, which may lead them to support entrepreneurs who offer little of obvious economic benefit in return. We posit that the nonmarket domain of resource mobilization may be crucially important to long-run entrepreneurial dynamics—for example, the emergence of new industries—because many novel ideas do not at first appear economically attractive (Agarwal, Moeen, & Shah, 2017). We therefore highlight the tendency to prioritize market logics as a critical issue that the resource mobilization literature needs to address going forward.

### Transfer of Entrepreneurial Resources

Even when a resource holder is motivated to provide access to their resource, frictions stemming from

the threat of opportunistic behavior (i.e., transaction costs) may impede the transfer or use of the resource by the entrepreneur (Williamson, 1985). In this section, we examine mechanisms that facilitate resource transfer, drawing a distinction between formal and informal resource transfer governance. The fourth critical issue we identify in our review is the literature's predominant focus on formal governance mechanisms, to the neglect of research on informal resource transfer governance.

Transfer frictions arise from the high uncertainty surrounding an entrepreneurial venture (Alvarez & Barney, 2004; Larson, 1992). Intangible entrepreneurial resources are hard to measure (Alchian & Demsetz, 1972; Casson, 1982), and resources with high specificity to particular entrepreneurial opportunities create a hold-up problem (Kaul, 2013; Michael, 2007; Zenger, Felin, & Bigelow, 2011). A variety of formal and informal governance mechanisms are available to mitigate the risk of opportunistic behavior, where *formal* refers to both formal contracts and formal authority (March & Simon, 1958; Williamson, 1985); *informal* refers to relational arrangements built on trust, identity, and reciprocity (Bradach & Eccles, 1989; Polanyi, 1957). At the earliest stages of organizing a venture—and the earliest phases in the emergence of an industry—a great deal of the activity that takes place is informal in nature (Aldrich & Ruef, 2006). We therefore find it surprising that relatively little research explicitly studies the informal governance mechanisms.

Of the in-scope articles in this review, 31 percent address the resource transfer step. We group the varied explanations outlined in extant research on resource governance into the following four topic areas based on their central explanatory construct: (i) formal contracts, (ii) resource dependence and power dynamics, (iii) trust and relational contracting, and (iv) bricolage. The first of these is, by definition, a formal governance mechanism. The other three topics refer to informal mechanisms.<sup>5</sup> Table 3 summarizes our bird's-eye view of extant research. It cites selected example studies to illustrate the key arguments made within each topic area as authors apply these central explanatory constructs in subtle ways to describe resource transfer and the governance of such resources.

**Formal contracts.** Formal contracting structures try to mitigate the risk of opportunistic behavior in

<sup>5</sup> The informal mechanisms sometimes operate alongside a formal contract, and other times the informal mechanisms substitute for a formal contract entirely.

**TABLE 3**  
**Transfer of Entrepreneurial Resources: Key Topics, Mechanisms, and Selected Example Studies**

Key Topics	Main Arguments/Mechanisms	Forms of Capital	Selected Example Studies
Formal contracts	<ul style="list-style-type: none"> <li>Formal contracts set up incentives to mitigate moral hazard by the resource seeker and resource holder</li> </ul>	Human capital Social capital Financial capital Other capital	Wasserman (2003) Boeker & Wiltbank (2005) Marino et al. (2008) Dushnitsky & Shaver (2009) Li (2013)
Resource dependence and power dynamics	<ul style="list-style-type: none"> <li>Threat of social sanctions acts as a deterrent against opportunistic behavior by the resource seeker or resource holder</li> </ul>	Human capital Social capital Financial capital Other capital	<i>None identified</i> Fischer & Reuber (2004) Hallen et al. (2014) Drover et al. (2014) Villanueva et al. (2012)
Trust and relational contracting	<ul style="list-style-type: none"> <li>Calculative trust: opportunism is attenuated because long-run incentives favor cooperative behavior</li> <li>Relational trust: shared history and identity promote positive expectations over the behavior of the other party</li> </ul>	Human capital Social capital Financial capital Other capital	Mosey & Wright (2007) Hite (2005) Scarbrough et al. (2013) Wu, Wang, Chen, & Pan (2008) Zheng (2012)
Bricolage	<ul style="list-style-type: none"> <li>Sources that others overlooked are creatively repurposed as entrepreneurial resources</li> </ul>	Human capital Social capital Financial capital Other capital	Stinchfield et al. (2013) Baker et al. (2003) <i>None identified, but bricolage around financial capital is theoretically analogous to bootstrapping</i> Baker & Nelson (2005)

*Notes:* 47 of the 150 in-scope articles in our review (31 percent) relate in some way to governance of resource transfers. Key Topics are classified by the authors based on the central explanatory construct described in the literature.

the transfer of entrepreneurial resources by mutually aligning the incentives of entrepreneurs and resource holders (Bolton & Dewatripont, 2005). In aggregate, we find formal contracting is well studied in the context of technology ventures (e.g., in mobilizing venture capital and forming technology alliances) (Aggarwal & Hsu, 2009); however, limited research addresses other entrepreneurial contexts. In addition, most extant research takes either the entrepreneur's or the resource holder's perspective. As a result, the extant resource mobilization research does not fully reflect the two-sided nature of the opportunistic behavior (c.f., Lafontaine, 1992).

Optimal contracting has been widely studied from the perspective of the financial investor in the context of entrepreneurial finance (Cable & Shane, 1997; Denis, 2004). From the perspective of the resource holder, such as a venture capital investor, the entrepreneur may underprovide effort or overpay herself, acting against the interests of the resource holder. To address this problem, the resource holder could specify reporting requirements for the entrepreneur's salary, design a compensation structure rewarding effort, or even provide for control rights to terminate an entrepreneurial executive. Several

studies document the circumstances in which venture investors may leverage their contractual rights to replace founding executives. In a large-scale study of the succession of founder-CEOs, Wasserman (2003) finds that founders are more likely to experience succession events, that is, be replaced, when they sell large portions of their equity to investors. Boeker and Wiltbank (2005) find that venture capital ownership and board representation are positively associated with turnover in the top management team (i.e., changes in human capital), whereas managerial ownership is accordingly associated with less turnover among managers.

Similarly, the entrepreneur may leverage formal contracts for their benefit. The literature on entrepreneurial alliances addresses the entrepreneur's perspective and identifies the various conditions under which formal contracts benefit the entrepreneur. For example, the entrepreneur's internal resources determine whether optimal contracts are possible. Slack resources empower ventures to select interfirm governance modes that encourage joint oversight, such as equity alliances (Marino, Lohrke, Hill, Weaver, & Tambunan, 2008). The usefulness of contracts for the transfer of entrepreneurial resources

depends on whether breaches of contract will be detected and whether the property rights specified by the contract will be enforced. Strong property rights thus tend to facilitate the formation of cooperative ties between the entrepreneur and outside parties (Dushnitsky & Shaver, 2009; Huang, Ceccagnoli, Forman, & Wu, 2013).

Formal governance through contracts is an important mode of entrepreneurial resource transfer and the aforementioned examples demonstrate its relevance for mobilizing human, social, and financial capital. However, formal contracts are notably absent from much nascent entrepreneurial activity because entrepreneurial firms face voids in the legal or business regime which prevent the writing of formal contracts: an unincorporated firm may have unclear ownership rights, external partnerships may rest on unwritten agreements, and expert mentors may provide advice on an *ad hoc* informal basis. Thus, informal governance mechanisms, such as power and trust, are important in the entrepreneurial resource transfer process.

**Resource dependence and power dynamics.** Nascent entrepreneurs are often far more dependent on the resource holders they work with than *vice versa*. This dependence asymmetry implies that the resource holder is the powerful actor in this relationship (Emerson, 1962). Resource dependence theory is a useful paradigm through which to analyze how actors manage relationships when power imbalances arise (Pfeffer & Salancik, 1978; Wry, Cobb, & Aldrich, 2013). Entrepreneurial resource mobilization may—counterintuitively—be enabled by the power imbalance between resource seeker and resource holder. The idea here is that power can act as a check on opportunism. A powerful resource holder is unlikely to be concerned about opportunism by a low-power resource seeker because any opportunistic behavior by the resource seeker could be met with strong social sanctions.

The power imbalance in the entrepreneur–resource holder dyad might leave the entrepreneur in a vulnerable position. A system of generalized reputation can serve as a mechanism to keep opportunism by resource holders in check. Research on the mobilization of financial capital finds that entrepreneurs consider a VC's reputation for ethical behavior when deciding whether to accept investments from them (Drover, Wood, & Fassin, 2014). Entrepreneurs are willing to accept lower valuations from higher status VCs (Hsu, 2004), consistent with the theory that high-status investors are less likely to behave opportunistically. In the domain

of social capital, researchers have found that entrepreneurs are cognizant of the influence held by dominant customers (Fischer & Reuber, 2004).

A strand of resource mobilization research examines the exchange hazards that technology ventures face when accepting equity investments from corporate VCs (CVCs). Dushnitsky and Lenox show that CVC is sometimes used by firms to provide market intelligence on technological trends, which could allow the corporation to preempt and out-compete the start-up venture in a nascent market (Dushnitsky & Lenox, 2005). Anticipating this behavior, technology ventures are often wary of accepting investments from CVCs that occupy a similar product space, unless the industry has strong intellectual property rights or the venture can protect its innovation through secrecy (Dushnitsky & Shaver, 2009; Katila, Rosenberger, & Eisenhardt, 2008). This perspective is further enriched by research that looks at the *social defense mechanisms* that technology ventures can use to guard against opportunistic behavior by CVCs (Hallen, Katila, & Rosenberger, 2014). Consistent with a mechanism of interorganizational power dynamics, technology ventures with a high-status VC investor are more likely to accept CVC investment from technologically proximate corporations: whereas the venture itself has little power, its VC backer can socially sanction any opportunistic behavior by the CVC firm. Thus, multiparty power dynamics help smooth the resource transfer process.

**Trust and implicit/relational contracting.** Alongside power, trust is another informal mechanism of resource transfer governance. It is a theoretically pluralistic construct with varying definitions and interpretations in different research traditions (Rousseau, Sitkin, Burt, & Camerer, 1998). In a cross-disciplinary review, Rousseau et al. define trust as “a psychological state comprising the intention to accept vulnerability based on positive expectations of the intentions or behavior of another” (1998: 395). Trust therefore refers to the belief one party holds over another party's likely future behavior. When parties trust each other, they can engage in resource transfers without using formal contracts specifying the terms of the exchange because they do not expect any opportunistic behavior on behalf of the other party.

The large social science literature on trust identifies several distinct mechanisms for why one party expects the other not to act opportunistically. A distinction is often made between calculative trust, which is based on the expectation that actors will

forgo opportunism because it is in their own long-run self-interest, and relational trust, which is based on the idea that goodwill or shared identity will inhibit opportunistic behavior, even when it is not costly *per se* (Poppo, Zhou, & Li, 2016; Rousseau et al., 1998). Calculative trust may derive from the future benefits that actors anticipate from the continuance of a given dyadic relationship or it may derive from the social sanctions the actor anticipates being applied by third parties who learn about opportunistic behavior (Burt & Knez, 1995). As a result, calculative trust is strongly associated with dense structures in social networks (Coleman, 1990).

Trust is frequently invoked as an underlying mechanism that smooths resource transfers when entrepreneurial resource mobilization is based on social network ties (Mosey & Wright, 2007; Zheng, 2012). Several entrepreneurship studies find that for new social ties, trust is initially calculative in nature and it later takes on a relational dimension (Hite, 2005; Scarbrough, Swan, Amaeshi, & Briggs, 2013). However, resource mobilization research explicitly measuring trust is relatively scarce. More often, the presence of trust is inferred based on the existence or duration of a past relationship or the density of ties in an entrepreneur's social network (Aldrich & Kim, 2007; Rooks et al., 2016).

An adjacent literature in organizational economics examines relational contracts. The concept of a relational or implicit contract refers to an agreement between two parties that is *not* legally formalized, but which is self-reinforcing (Gibbons & Henderson, 2012). A relational contract is thus a strong version of calculative trust, usually studied by writing game-theoretic models of actors' choices and showing that a given combination of choices is stable. Surprisingly, very little attention has been paid to relational contracting in the existing literature on entrepreneurial resource mobilization.<sup>6</sup> We tentatively posit that a relational contract may exist between a firm's founders and its early employees, through the (noncontractual) promise that early employees will benefit from venture growth through future promotion opportunities. A relational contract may also exist between a venture and its investors in the implicit expectation that future rounds

of finance will be provided if the venture is successful. Future work to understand the nature and durability of relational contracts will enhance our understanding of the entrepreneurial resource mobilization process.

**Bricolage.** Drawn from the anthropological work of Lévi-Strauss (1966), bricolage refers to the practice of coping with resource scarcity by repurposing, as resources, things in the environment that are overlooked by others (Baker & Nelson, 2005). It has been defined, most simply, as "making do with the means or resources at hand" (Baker, Miner, & Eesley, 2003: 273). Bricolage theory rests on a social constructionist perspective (Berger & Luckmann, 1967) on the nature of entrepreneurial resources: what is and is not a resource is not absolute but instead depends on the cognitions and actions of the individuals employing it as a resource.<sup>7</sup> It is therefore an inherently informal process that does not entail rational, market-like exchange (Stinchfield, Nelson, & Wood, 2013). Instead, it requires unilateral action to recognize and realize the latent potential of some possible resource. Bricolage may involve—or even elide together—a mix of actions to search for, access, and transfer resources (Baker et al., 2003); we discuss bricolage under the rubric of transfer because it lies at the informal extreme of the spectrum of transfer mechanism formality.

Bricolage tends to involve substituting some conventional resource mobilization with a cost-free, informal alternative that achieves the same ends. For example, instead of hiring employees to fill skills gaps, bricoleurs would either learn those skills themselves (Baker & Nelson, 2005) or find volunteers to work for free (Desa & Basu, 2013; Fisher, 2012). Bricoleur entrepreneurs may employ others but tend to use highly informal arrangements, selecting employees based on who is available and turning a blind eye toward nonstandard work practices (Stinchfield et al., 2013). Rather than purchasing physical capital, bricoleurs repurpose artifacts ignored or discarded by others (Baker & Nelson, 2005). In its purest form, this can involve searching junkyards or stockpiling broken equipment to recover spare parts from the waste material (Baker & Nelson, 2005; Stinchfield et al., 2013).

Bricolage theory occupies a relatively coherent niche within the entrepreneurial resource mobilization

<sup>6</sup> Although the modern resource mobilization literature has not picked up this strand of theory, Godley (2013) adopts an implicit contract theory perspective on entrepreneurial opportunities, suggesting that entrepreneurs can "make markets" through implicit contracts with customers.

<sup>7</sup> This sets bricolage theory apart from the other mechanisms studied under entrepreneurial resource mobilization, which rest on social realist philosophical foundations.

literature. In addition to documenting the processes of bricolage, this literature explores contingencies under which bricolage is more prevalent. Bricolage tends to be a response to resource scarcity (Baker & Nelson, 2005) and, as such, has been studied in contexts such as the family businesses of low-income households (Gras & Nason, 2015) and social venturing (Desa, 2012). In a cross-country study, a higher prevalence of bricolage practices was found in countries with weaker legal institutions (Desa, 2012). However, bricolage practices have also been documented in the early stages of high-growth technology ventures (Fisher, 2012). This hints at the potential for broader application of this concept in future research.

### Overall Model Emerging from Extant Work

While reviewing extant work on entrepreneurial resource mobilization, we systematically coded both the underlying mechanism used to explain the measured outcome and the label used by the author (s) for the explanation. This coding revealed a varying degree of coherence in the use of mechanism labels, with some terms used in ambiguous or inconsistent ways. We highlight this as the fifth critical issue identified in our review. The term *homophily*, for instance, while well defined as an attribute of social networks in general, is used ambiguously in the resource mobilization literature to refer to multiple underlying causal processes. The concept of status is invoked both as a signal of underlying quality (enhancing resource access) and as a proxy for an actor's power within a social structure (smoothing resource transfers). The broader literature on trust illustrates its multiple distinct forms, but resource mobilization literature often invokes trust without specifying which form is being referred to. We suggest that ambiguity in the use of mechanism labels hinders the accumulation of research and risks situations where scholars "reinvent the wheel" because earlier work lacked the necessary coherence to build on.

Figure 3 summarizes and distills the overall process model of entrepreneurial resource mobilization that emerges from our synthetic analysis of the existing literature. An individual entrepreneur with some initial personal endowment of resources interacts with a resource environment—in steps of search, access, and transfer—and accumulates an initial organizational endowment of resources. The overall process of resource mobilization is recursive, so that resources controlled at one moment can be used to

help search for, access, and transfer the next resource an entrepreneur seeks (see also Figure 1).<sup>8</sup> Figure 3 is intended as a guiding framework for future research on entrepreneurial resource mobilization.

### A POTENTIAL PATH FORWARD FOR RESEARCH ON ENTREPRENEURIAL RESOURCE MOBILIZATION

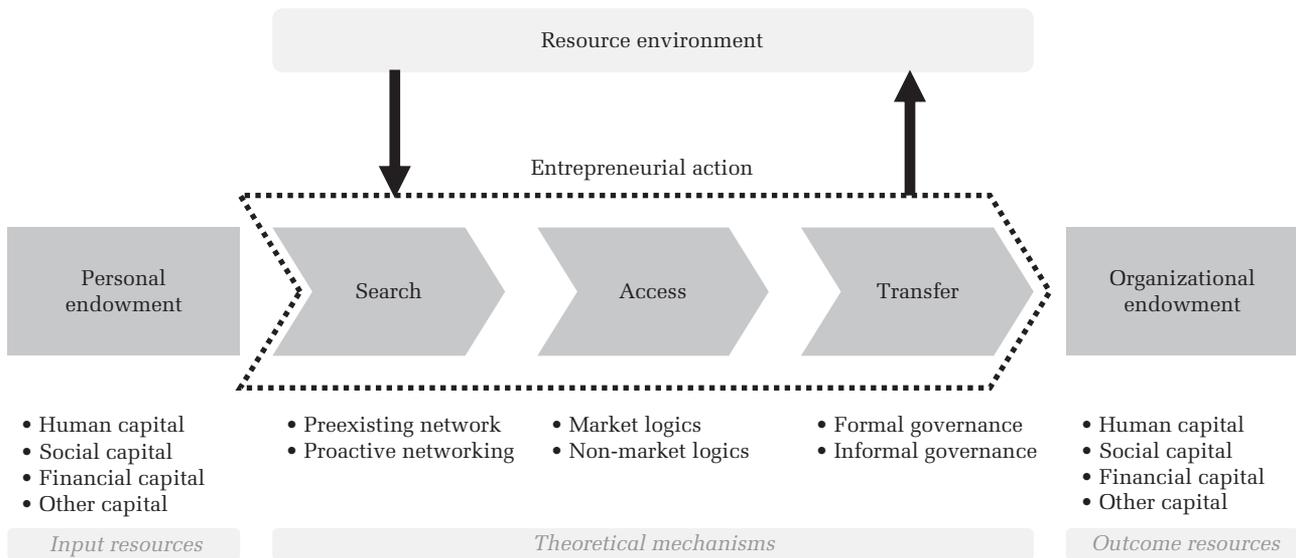
After examining extant scholarship on entrepreneurial resource mobilization, we now aim to provide a potential path forward for research on entrepreneurial resource mobilization through two objectives. First, we return to the five critical issues that hinder theoretical and empirical progress in entrepreneurial resource mobilization research. We named these in the essay's introduction and then showed, in our comprehensive review, how they emerge from gaps in the literature. Second, we present suggestions on how to remedy these five issues and thereby build a cohesive body of theory around entrepreneurial resource mobilization.

We propose that developing such a cohesive body of theory requires using a process perspective melded to a conceptual tool kit that brings consilience to entrepreneurial resource mobilization research. As we outlined earlier, a process perspective encourages researchers to pay more attention to "the cogs and wheels of the causal process through which the outcome to be explained was brought about" (Hedström & Ylikoski, 2010: 50). Much entrepreneurial resource mobilization research takes a black box approach, examining correlations between initial attributes of entrepreneurial actors or situations and the final outcome of resource mobilization episodes. A process perspective requires scholars to open up the black box and illuminate the intermediate steps of the resource mobilization process.

We draw on Wilson's (1998) notion of consilience to refer to the unity of knowledge. By consilience we refer to modes of theorizing that promote cumulation of research findings within the community of entrepreneurial resource mobilization scholars and across the contiguous communities of strategy and organization theory scholars. Cumulation is more likely to occur when scholars apply clearly defined constructs and explanations across mobilization processes of different resource types, while specifying

<sup>8</sup> The dynamic interdependence between multiple resource mobilization episodes is therefore an important topic for future work, although its full consideration lies beyond the scope of this review.

**FIGURE 3**  
**The Entrepreneurial Resource Mobilization Process**



*Notes:* The arrows linking entrepreneurial action with the resource environment capture both the entrepreneur interacting with the environment and the feedback loops whereby resources mobilized at one point in time can be used in future resource mobilization episodes (see also Figure 1).

the human nature and ontological assumptions underlying their theory. Cumulation also allows entrepreneurial resource mobilization scholars to contribute to broader theoretical conversations in strategy and organization theory.

**Issues in the Extant Literature**

Our review of extant entrepreneurial resource mobilization research made visible several critical issues that we believe hinder the field’s theoretical and empirical progress. We discuss the five critical issues in the following paragraphs.

The first critical issue we identify is the disproportionate attention devoted to mobilizing financial capital. Our review of extant research reveals a pattern where prior work disproportionately focuses on how founders’ human, social, and other capital is converted into financial capital—usually accessed *via* professional investors such as venture capital funds or business angels—for the new venture. This attention is both unsurprising and warranted if availability of financial capital is the binding constraint on a new organization’s growth or survival. However, evidence from nascent entrepreneurship suggests that new organizations that raise financial capital through venture capital funding are a small fraction of the universe of new organizations (Aldrich & Ruef, 2006). We speculate that the disproportionate

scholarly focus on venture capital mobilization possibly arises because of relatively easier availability of secondary data on VC funding that enables quantitative analyses or because VC funding occupies the limelight in terms of media discourse, thereby biasing scholarship (Aldrich & Ruef, 2006).

The second critical issue is the short shrift given to search processes, with extant entrepreneurial resource mobilization research focusing mainly on the resource access or resource transfer steps of the mobilization process. There are at least three plausible reasons—two conceptual and one research design-related—why extant research neglects search-related processes. The first reason is that resource search by the focal entrepreneur is implicitly assumed to be unimportant because, as the archetypical low-power actor, entrepreneurs are assumed to not have the luxury of assembling a choice set of potential resource holders and choosing the best-fit resource holder. Rather, entrepreneurs, as low-power actors, are assumed to engage with the first available resource holder who displays any interest in providing resources to a fledgling new venture effort. In other words, search is conceptually unimportant because it is in practice infeasible for all but the very few entrepreneurs who are immediately perceived as highly talented. The second reason is that the field lacks the conceptual apparatus to theorize search processes from the perspective of the low-powered entrepreneurial actor.

Although entrepreneurship scholars using a network perspective have initiated some theorizing on this issue (Aldrich & Kim, 2007), and some empirical work has addressed search (Hallen & Eisenhardt, 2012; Vissa, 2011), our empirical understanding of entrepreneurial search for resources is still limited, possibly because of the third reason. The third reason is a more pragmatic research design-related tradeoff. The empirical literature could be constrained in such a way that entrepreneurs' active management of the search process is not easily observable, thus making it difficult to study. Irrespective of the relative importance of these reasons, to date, examining the processes and challenges associated with the entrepreneur's search process has been broadly overlooked in the entrepreneurial resource mobilization literature.

The third issue we noted is that much of the extant entrepreneurial resource mobilization research examines resource mobilization episodes where actors (entrepreneurs and resource holders) interact using a market logic to access resources. Market logics emphasize forward-looking, calculative decision processes by actors, while nonmarket logics emphasize decision processes based on appropriateness, solidarity, and identity (March, 1994). Nonmarket logics remain a source of neglect in the literature despite their explanatory power. The fourth issue we identified is that research neglects informal modes of resource transfer governance. We contrasted formal governance (through formal contracts across a market interface or authority relationships within formal organizations) with informal governance mechanisms (based on trust, tradition, or social relationships).

Our reading of the literature suggests at least four plausible and interrelated reasons for the relative neglect of nonmarket logics of resource access and informal modes of resource governance. One reason could be that market logics and formal governance are in fact the predominant way for organizing resource mobilization efforts in practice, and scholarship merely reflects that objective reality. The second reason is that the empirical context of much published research involves national, cultural, and institutional contexts where market exchange and formal governance are the norm; in other words, our empirical evidence is drawn disproportionately from certain country populations where market logics and formal governance are more likely the norm. The third reason could be that theories that emphasize calculative, self-interested action have become self-fulfilling in ways that deny a voice to alternative perspectives (Ferraro, Pfeffer, & Sutton, 2005). Finally, to the extent that it is easier to collect

quantitative data about market-like processes and formal resource transfers, the neglect of nonmarket logics and informal governance might reflect a bias in the field toward quantitative over qualitative research methods. There is no way to examine whether the first and third reasons are likely operating in our in-scope articles. However, our analysis of in-scope articles suggests that disproportionate emphasis on North America or Western Europe as empirical contexts (73 percent of in-scope articles), as well as the relative dearth of qualitative studies (25 percent of in-scope articles), could be hindering our understanding of how entrepreneurs mobilize resources using nonmarket logics or use informal modes of governance over accessed resources.

Finally, our review revealed that explanatory mechanisms in entrepreneurial resource mobilization research have varied levels of coherence. By coherence, we mean whether scholars using a particular mechanism label in fact agree on the underlying explanation implied by that mechanism label. Some mechanism labels (e.g., bricolage) seem quite coherent, with high consensus on the theoretical explanation represented by the mechanism label. Other mechanism labels (e.g., homophily) have low coherence, with low consensus on the explanation represented by the mechanism label. Thus, for example, Bengtsson and Hsu (2015) argue and provide evidence that, for nonrational reasons, VCs are more likely to invest in entrepreneurs drawn from the same ethnicity. Hegde and Tumlinson (2014), on the other hand, propose and show that VCs preferentially investing in co-ethnic entrepreneurs is a rational response, given the uncertainty and information asymmetry inherent in the entrepreneurial context. A third explanation is offered by, Zhang, Wong, and Ho (2016), who find that ethnic-Asian VCs set higher valuations when investing in ventures led by ethnic-Western entrepreneurs in order to overcome structural, status-based barriers to investing in such ventures. In summary, it is unclear whether and how ethnic homophily between VCs and entrepreneurs matters for important outcomes such as selection and pricing in venture capital markets because these three studies all use empirical data from the United States (albeit at varying levels of granularity) and reach quite different conclusions on how and why homophily (in terms of ethnicity, which is an important demographic attribute) matters in mobilizing venture capital financing. These inconsistencies in the literature could be arising because of relatively poor paradigm development in the management field (Davis, 2015b; Pfeffer, 1993).

### Future Research: Process Theorizing and Consilience as Key Objectives

To address these five critical issues and move toward a cumulative body of theory on entrepreneurial resource mobilization, we outline a path ahead for research predicated on two key concepts. Theorizing must embrace a *process perspective* that reflects the evolutionary nature of the resource mobilization process. In addition, theorizing needs to focus more on *consilience*—both within entrepreneurial resource mobilization scholarship and with contiguous conversations in strategy and organization theory. We flesh out the rationale and specifics of these objectives as follows.

Most extant entrepreneurial resource mobilization work is quantitative and focuses on variance research (Mohr, 1982), wherein variation in the independent variables is correlated to variation in a dependent variable that is usually a (distal) outcome of the mobilization process. Although this black box approach which is prevalent in extant work facilitates empirical research, it could stymie theoretical progress because it does not study in sufficient detail the intervening processes through which the independent variable is hypothesized to influence the dependent variable.

A necessary condition for progress in our field, where we define progress in terms of cumulating research findings that help *correctly* answer a question (Davis, 2015a), is the need to open up the black box and examine the intermediate steps of the (sub) processes that connect the independent variables with ultimate mobilization outcomes. It is useful to note that process research can be quantitative or qualitative—but the key is that such research needs to shed light on the intermediate steps of the process—the nuts and bolts—which can lead to a deeper understanding of entrepreneurial resource mobilization. Future research would thus need to investigate activities at different stages of the process, including interconnections and feedback loops over time, thereby complementing the mainly static perspectives we have in the present research that uses a variance approach.

Scholarly work on entrepreneurial resource mobilization has developed independently on different types of resources. Thus, research on financial capital mobilization, for example, developed independent of, say, acquiring expertise and know-how from mentors, hiring of employees, or finding alliance partners. Hence, explanatory concepts and mechanisms developed in a siloed manner within scholarly

communities that were usually bounded based on resource type. Another necessary condition for progress in our field is consilience in modes of theorizing. With regard to entrepreneurial resource mobilization research, consilience consists of three elements. First, theorizing uses definitions of concepts and descriptions of causal mechanisms that cut across mobilization of different resource types. Second, the concepts and mechanisms used are compatible with conceptual definitions in contiguous fields of strategy and organization theory so that research on entrepreneurial resource mobilization dovetails with and contributes to the broader conversation in these contiguous fields (Zahra & Newey, 2009). Third, scholars clearly specify the ontological and human nature assumptions underpinning their theorizing so that it becomes easier to examine which mechanisms and concepts are compatible to being integrated (Shaw, Tangirala, Vissa, & Rodell, 2018).

As we move toward a richer process view of entrepreneurial resource mobilization and use consilience in our mode of theorizing, we see opportunities to broaden and deepen our understanding of entrepreneurial resource mobilization. In the sections that follow, we make four specific recommendations for how future research on entrepreneurial resource mobilization can build out a holistic, process perspective while also moving toward consilience rather than fragmentation. Table 4 summarizes the five critical issues we identified and maps how the four recommendations help to resolve the critical issues and move the field toward process theorizing and consilience.

### Use Novel Phenomena to Study Earlier Stages of the Founding Process

More attention on the earlier stages in the founding process will improve the literature by addressing the first four critical issues.

Studying the earlier stages of nascent organizing will draw more attention to understudied forms of capital mobilized relatively early in a new firm's life cycle, addressing issue one. Much prior research addresses entrepreneurs' access to financial capital, especially venture capital: VCs tend to back firms that already have a founding team in place and already have some initial external ties to suppliers, customers, and strategic partners (Gompers & Lerner, 2004). In the emergence of a nascent venture, financial capital is likely to be one of the later resources that entrepreneurs mobilize. The study of

**TABLE 4**  
**Critical Issues in Extant Research and Paths Forward for the Field**

Path Forward	Earlier Stages of Founding Process	Multiple Stages of Firm Emergence	Agency for Resource Seekers	Simultaneous Capital Outcomes
	Leverage Novel Phenomena	Explore Variation in Mechanisms	Go Beyond Resource Holders	Break down Phenomena Silos
Critical Issue				
1 Overemphasis on financial capital	X	X		X
2 Neglect of search	X	X	X	
3 Neglect of nonmarket logics	X	X	X	X
4 Neglect of informal governance	X	X	X	X
5 Ambiguous mechanism labels				X
<i>Process theme</i>	X	X	X	X
<i>Consilience theme</i>		X	X	X

earlier stages can address open questions related to human capital, for example, how founders coalesce into founding teams, and social capital, for example, how entrepreneurs find initial users or customers.

It will also help shed light on the *search* step of the resource mobilization process, addressing the second critical issue. Search is a cognitive and behavioral process that precedes the entrepreneur's attempt to access and transfer resources: tracking entrepreneurs from an earlier point in time will allow search to be studied in real time rather than inferred *ex post*.

In addition, it can help to address the third and fourth critical issues: the tendency in extant research to prioritize market logics and formal governance mechanisms. Research suggests that earlier stages of organizing are more reliant on nonmarket logics of access and informal mechanisms of transfer governance (Maurer & Ebers, 2006). At the earliest stages of organizing, uncertainty is highest (Huang & Pearce, 2015): market-like returns appear least likely to be realized, so support is premised on nonmarket logics. Early organizing is characterized by informal handshake agreements rather than by formal contracts. As a result, greater attention to earlier stages of organizing will help address the bias we identified in the literature toward market logics and formal governance.

In making this recommendation, we are cognizant that studying the earliest life stages of new firms has been a longstanding goal of entrepreneurship researchers, and that a central challenge in this research is to identify a sampling frame within which nascent entrepreneurs can be observed (Katz & Gartner, 1988). Put simply, by the time new firms are "on the radar" of researchers, they have often already passed the earliest phase of resource mobilization.

Retrospective study of these firms' early phases is still possible, but traditional research methods such as surveys and interviews may be subject to recall biases and *post hoc* rationalization. Entrepreneurship research is best performed by collecting primary data in real time or collecting secondary data that are contemporaneous with the activity being studied.

The sampling methodology of the PSED represented a tremendous step forward for resource mobilization research. From a telephone survey of 64,622 randomly chosen phone numbers, researchers identified and tracked a panel of 830 individuals engaged in nascent organizing activities (Gartner, Reynolds, Carter, & Shaver, 2004). We advocate for further studies adopting the PSED sampling approach.

In addition, new phenomena, such as seed accelerators, shed new light on the earliest stages of organizing. Since the founding of Y Combinator in 2005, seed accelerators have become a prominent feature of the technology entrepreneurship landscape. Seed accelerators are fixed-length, focused programs for start-ups that provide some combination of mentorship, financial investment, office space, public attention, and certification (Stross, 2012). Existing research on seed accelerators has focused on measuring the treatment effect of going through an accelerator program (Gonzalez-Urbe & Leatherbee, 2017) and documenting how entrepreneurs interact and learn within an accelerator (Cohen, Bingham, & Hallen, 2018). Seed accelerators, and early-stage entrepreneurship programs more generally, can act as windows on the whole process of entrepreneurial resource mobilization, starting at its earliest phases, while also making multiple forms of capital visible simultaneously. These programs act as natural sampling frames of early-stage entrepreneurs, with a well-defined starting

point for the study of entrepreneurs' event histories. As we study these recent phenomena, the goal of consilience for entrepreneurial resource mobilization research should guide us to view these phenomena as an opportunity to test and augment existing theory, and build out theory in areas where we have explicitly identified gaps, such as in the *search* for entrepreneurial resources. New phenomena do not necessarily call for new theory.

### **Study Resource Mobilization across Multiple Stages of Firm Emergence**

As a corollary benefit, studying *earlier* stages of the founding process enables research on resource mobilization across *multiple* stages of a new, emerging venture's life cycle. The study of multiple stages allows the building of a more comprehensive process theory of resource mobilization by shedding light on how search, access, and transfer mechanisms vary over the stages of firm emergence.

Theoretical work on entrepreneurial resource mobilization points toward life cycle contingencies in relationships between resource seekers and resource holders (Huang & Knight, 2017). For example, the logics of resource access and the governance of resource transfer may shift dynamically as a venture emerges. When quantitative data are only collected at two points in time, these life cycle contingencies cannot be measured empirically. To shed light on these contingencies, we call for more qualitative longitudinal studies and quantitative studies that collect data at more than two time points. The increasing prevalence of digital platforms tracking entrepreneurial activity (e.g., AngelList and Crunchbase) and the use of social media to publicize new businesses make it easier to collect data on more stages of a venture's emergence (George, Haas, & Feldman, 2014; Jin, Wu, & Hitt, 2015; Ter Wal, Alexy, Block, & Sander, 2016).

An exemplar article looking at multiple stages of firm emergence is Maurer and Ebers's (2006) qualitative study of biotechnology ventures. They find that the initially important resources of technical know-how and expertise are most effectively mobilized when founders use nonmarket (science-based) logics of action for accessing them. Subsequently, effective entrepreneurs switch to a market logic when raising financial capital. In addition, effective governance of resources (both technical expertise and financial capital) requires the founder to build network ties to diverse resource holders.

An additional benefit of studying multiple stages of new venture emergence is that it can help better

untangle the interplay of different resources, in particular how financial capital impacts a venture's ability to attract other forms of capital. As we noted in the discussion of Figure 1, financial capital is used widely as a dependent variable but rarely as an explanatory variable. We suggest there is no *a priori* reason this should be the case. Financial capital may enable entrepreneurs to shift how they search for cofounders, employees, customers, and alliance partners (among others), yet existing work has little to say on this. Tracking multiple stages makes it possible to measure reciprocal relationships and feedback loops between forms of resources that build out our understanding of the whole resource mobilization process.

### **Ascribe Agency to Resource Seekers, Not Just Resource Holders**

The literature can take a major step forward by ascribing more agency to the resource seeker (i.e., the entrepreneur). The lack of attention on resource seeker agency is related to the excess attention paid to financial resources. The preeminence of research on whether resource holders grant entrepreneurs access to financial resources places the agency in the mobilization process in the hands of the resource holder. Much of the literature implicitly assumes that entrepreneurs have an insatiable desire for financial capital, and that equity and debt investors are the key decision-makers who determine which businesses receive financial investment.

Consideration of resource seeker agency would open up research on two categories of open questions. First, entrepreneurs must decide whether or not to seek resources in the first place. Some entrepreneurs consciously decide to forgo outside equity investment and instead "bootstrap" by using personal funds and retained profits (Ebben & Johnson, 2006; Winborg & Landström, 2001). Others determine the opportunity they will pursue based on the resources they have at hand, in a process that has been labeled effectuation (Sarasvathy, 2001). A full understanding of entrepreneurial resource mobilization treats the entrepreneur's decision to seek resources as part of the process (see Eckhardt, Shane, & Delmar, 2006, as an exemplar of this approach).

Second, ascribing greater agency to resource seekers draws attention to the search processes through which entrepreneurs identify valuable pools of resources. Behavioral strategy research provides a set of constructs that could be integrated with entrepreneurship research, such as the distinction between offline and online search (Gavetti & Levinthal, 2000) and the

concept of aspiration-driven problemistic search (Posen et al., 2018). These concepts help us understand both the search for resources and the search for entrepreneurial opportunity (Levinthal & Contigiani, 2018). The prescriptive methodology of the lean start-up (Blank, 2005; Ries, 2011) advocates for a systematic search for a business model based on rapidly bringing to market a minimal product (i.e., “online” search) and iterating repeatedly until some acceptable threshold of growth rate is reached (Levinthal & Contigiani, 2018).

The human nature assumptions of behavioral strategy research (i.e., humans as boundedly rational, goal-driven actors) are consistent with those used in entrepreneurship research. Hence, integrating behavioral strategy into entrepreneurial resource mobilization research contributes to the broader objective of consilience between these contiguous literatures. Moreover, an important implication of consilience is that the same human nature assumptions should be used for the behavior of both resource seekers and resource holders. The exchanges that occur during entrepreneurial resource mobilization require both parties to opt in; however, existing research rarely captures the two-sided character of the decision process.

### **Examine Multiple Resource Mobilization Outcomes Simultaneously**

Our backward-looking review reveals that much extant research has been conceptually organized around a specific phenomenon, hindering cumulative research on theoretical mechanisms. Distinct labels are sometimes used for the same underlying mechanism across phenomena, making it unclear whether the same mechanism applies across multiple forms of capital. For example, does signaling a market orientation to attract financial capital help or hinder a social entrepreneur’s attempts to attract early employees?

One route toward the high-level goal of consilience will be to conduct studies that examine multiple resource mobilization *outcomes* simultaneously. The focus of such a study becomes the theoretical mechanism, which gets investigated in the context of multiple forms of capital. This approach requires scholars to break down the siloes that surround particular phenomena. It requires discourse between resource mobilization scholars who tend to specialize based on the type of resource being mobilized. Our analysis of the in-scope articles suggests strong scholarly division of labor: 64

percent of scholars tend to specialize in examining one particular resource type as the outcome variable. Discourse between scholars of different phenomena would, in turn, surface underlying inconsistencies in how theoretical mechanisms are conceptualized and what human nature assumptions are used. Resolving these inconsistencies is a key step toward building a cumulative body of theory on this topic. Studying multiple resource mobilization outcomes simultaneously also helps achieve the goal of building a holistic process theory. It helps us understand the ways in which resource mobilization processes interact. In particular, it reveals potential trade-offs, such as circumstances when a given mechanism helps mobilize one resource while hindering the mobilization of another resource. For example, using nonmarket logics to access resources from one set of resource holders could preclude the use of market logics with another set of resource holders. In addition, the use of informal governance mechanisms to transfer resources at one point in a new firm’s emergence could affect the availability of formal governance mechanisms in future resource transfers. Studying multiple resource outcomes together helps us to understand the distinct, diverging pathways along which a new firm can emerge.

Few studies presently examine multiple mobilization outcomes simultaneously. One informative example is Ozmel et al.’s (2013) study of biotechnology start-ups. The authors study both alliance formation and venture capital investment, in addition to studying exit outcomes (IPO, acquisition). The article finds that venture capital investment raises the likelihood of both future alliances and future VC funding, whereas alliance formation raises the likelihood of future alliance formation but lowers the likelihood of future VC funding. This highlights an asymmetric trade-off between the two types of external ties and thus helps us untangle the complex evolutionary pathways of these firms’ resource mobilization processes.

### **CONCLUSION**

The dual objectives of process theorizing and consilience place a demanding burden on future researchers, who need to be familiar with the breadth of resource mobilization phenomena and conversant with theoretical mechanisms that draw on varying disciplinary approaches. We hope that this article provides both a rallying cry for cumulative research on entrepreneurial resource mobilization and a coarse-grained map of the territory—viewed from a bird’s-eye

perspective—that guides future research and identifies important areas for exploration. An exciting journey lies ahead as we build on extant research to establish a coherent and practical understanding of the complexities of entrepreneurial resource mobilization.

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## APPENDIX

**TABLE A1**  
**Recent Reviews, Retrospectives, and Meta-analyses in Entrepreneurship**

<b>Panel A1.a: Entrepreneurial Opportunity Discovery and Creation</b>		
<b>Authors (Year)</b>	<b>Journal</b>	<b>Title</b>
Alvarez & Barney (2010)	<i>Acad. Manag. Ann.</i>	Entrepreneurship and epistemology: The philosophical underpinnings of the study of entrepreneurial opportunities
Short, Ketchen, Shook, & Ireland (2010)	<i>J. Manage.</i>	The concept of “opportunity” in entrepreneurship research: Past accomplishments and future challenges
Alvarez, Barney, & Anderson (2013)	<i>Organ. Sci.</i>	Forming and exploiting opportunities: The implications of discovery and creation processes for entrepreneurial and organizational research
Davidsson (2015)	<i>J. Bus. Venturing</i>	Entrepreneurial opportunities and the entrepreneurship nexus: A re-conceptualization
<b>Panel A1.b: Consequences of Resources for Entrepreneurial Outcomes</b>		
<b>Authors (Year)</b>	<b>Journal</b>	<b>Title</b>
Unger, Rauch, Frese, & Rosenbusch (2011)	<i>J. Bus. Venturing</i>	Human capital and entrepreneurial success: A meta-analytical review
Rosenbusch, Brinckmann, & Mueller (2013)	<i>J. Bus. Venturing</i>	Does acquiring venture capital pay off for the funded firms? A meta-analysis on the relationship between venture capital investment and funded firm financial performance
Stam, Arzlanian, & Elfring (2014)	<i>J. Bus. Venturing</i>	Social capital of entrepreneurs and small firm performance: A meta-analysis of contextual and methodological moderators
<b>Panel A1.c: Other Recent Entrepreneurship-themed Reviews</b>		
<b>Authors (Year)</b>	<b>Journal</b>	<b>Title</b>
Jennings & Brush (2013)	<i>Acad. Manag. Ann.</i>	Research on women entrepreneurs: Challenges to (and from) the broader entrepreneurship literature?
Battilana & Lee (2014)	<i>Acad. Manag. Ann.</i>	Advancing research on hybrid organizing—Insights from the study of social enterprises
Garud, Gehman, & Giuliani (2014)	<i>Res. Policy</i>	Contextualizing entrepreneurial innovation: A narrative perspective
Klotz, Hmieleski, Bradley, & Busenitz (2014)	<i>J. Manage.</i>	New venture teams: A review of the literature and roadmap for future research
Shepherd, Williams, & Patzelt (2015)	<i>J. Manage.</i>	Thinking about entrepreneurial decision making: Review and research agenda
Terjesen, Hessels, & Li (2016)	<i>J. Manage.</i>	Comparative international entrepreneurship: A review and research agenda
DeSantola & Gulati (2017)	<i>Acad. Manag. Ann.</i>	Scaling: Organizing and growth in entrepreneurial ventures

*Notes:* Journals abbreviated as follows: *Acad. Manag. Ann.* for *Academy of Management Annals*; *J. Manage.* for *Journal of Management*; *Organ. Sci.* for *Organization Science*; *J. Bus. Venturing* for *Journal of Business Venturing*; and *Res. Policy* for *Research Policy*.