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Holger Patzelt

Entrepreneurial Theorizing
An Approach
to Research

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Preface

Coming from the Australian University system, I (Dean) believed that graduating with my Ph.D. punched my ticket to a prosperous life as a professor. I moved to the USA and tried to secure a job. I had very little success. I was invited to one university for a job talk and campus visit. They let me know that they had offered the job to someone else two weeks later. I was preparing to return to Australia (with my tail between my legs) when I received a call from the university's department head, that initially rejected me. They now wanted to make me an offer because their preferred candidate declined their offer. I said yes to their offer.

While I was appreciative of the offer, I did not want to be in such a powerless position again. I realized that universities highly valued publications in top journals. But publishing in the top journals was (and still is) very difficult. I was going to have to lift my game. As journal rejections came in, a common refrain was that my papers lacked sufficient theory. Theory was my nemesis. I was determined to make it my friend. I started to find better ways to theorize in my research, and I began to research theorizing and the publication process. I am not claiming that I have all the answers. I do not. But I tried to apply my emerging knowledge of entrepreneurship to understand entrepreneurial phenomena and adapt it for application in how I approached research. The information in this book captures some of my struggles and some of the lessons that I have learned over my career. A great joy of research is working with others. I publish this book with Holger Patzelt.

When I (Holger) was an entrepreneurship doctoral student in Germany (I already had a Ph.D. in biochemistry), I did not receive any formal doctoral training on organization or entrepreneurship because the German university system at that time did not offer any courses for Ph.D. students. I realized that to be able to publish in the top journals, I needed help from someone with knowledge and experience in theory development. Thus, I contacted Dean, asking him whether he would be interested in developing a paper together and if I could visit him in the U.S. By this time, Dean had started the publication ball rolling but was still very much an emerging scholar. When I arrived, I asked Dean for feedback on a draft paper. I soon learned that the draft paper was anything but good, and in the version Dean gave me back, there was more red than black due to the many track changes and comments he had made. When I met with Dean, he rattled off several comments about the positioning and theorizing of the paper (some of which I barely understood). After that meeting, I left (with my tail between my legs) and did not return to Dean's office for over two weeks. But eventually, I appeared with a new draft with which I had tried to incorporate all of Dean's comments (to the word and the spirit). Dean seemed pretty happy with my work and felt that I had improved the paper in many ways. Our coauthoring partnership began then, and since then, we have learned a lot from each other and had a lot of fun developing papers together.

However, there are other contributors. Each chapter is based on a source article. The coauthors of these source articles join us as coauthors of the corresponding chapter. Therefore, we acknowledge the essential contributions of Dimo Dimov, Kathie Sutcliffe, Roy Suddaby, Johan Wiklund, and Trent Williams. Thank you!

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Theorizing and Entrepreneurship

Entrepreneurship scholars have paid significant attention to the role of theory in their research. Indeed, publishing in most top entrepreneurship and management journals requires a paper to contribute to theory (Hambrick, 2007; Shepherd, 2010). Although some scholars question this dominant role of theory (Hambrick, 2007; Pfeffer, 2014), few disagree about the salience of theory building for furthering knowledge (Suddaby, 2014a). For instance, business scholars have called for new theories of entrepreneurship (Shepherd, 2015), management (Barkema et al., 2015), compassion (Rynes et al., 2012), and so on. Despite this deep recognition of the salience of theory building, actually developing theory is a decidedly difficult task. Accordingly, scholars have become increasingly interested in the process of theorizing—namely, *how* to build theories. This emerging literature stream provides many tools and approaches to theorizing, including engaged scholarship (Van de Ven & Johnson, 2006), metaphor (Cornelissen, 2005), and finding the balance between novelty and continuity (Locke & Golden-Biddle, 1997). This work has made significant contributions by offering varying insights into specific parts of the theorizing process—namely, different methods to

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initiate the creation of a new theory, different approaches to forming new explanations of entrepreneurial phenomena, and different ideas of what a theoretical contribution entails, respectively.

However, where does this current literature leave nascent entrepreneurship theorists? It appears to leave them with a wide range of potential "theorizing tools" without providing a coherent picture of how these many tools fit together. Namely, there is scant direction regarding when to use a specific theorizing tool vis-à-vis another (i.e., substitutes) and which combinations of tools (i.e., complements) can be harnessed in the theorizing process to further the entrepreneurship field. Therefore, although the different approaches in the literature address distinct and often isolated questions about *how* to build specific parts of theory, they fall short of explaining how and when to utilize the various tools to facilitate entrepreneurial theorizing. As such, in this chapter, we integrate the numerous threads of theory building in entrepreneurship and then extend this integration to a particular theorizing approach—pragmatic empirical theorizing.

Through our literature review on theory building in entrepreneurship, we integrate the many individual components of theory building to gain a more holistic picture.[1] This budding literature stream shows the increasing importance of narratives and storytelling in theorizing (Pollock & Bono, 2013), demonstrating that compelling theories are, in essence, compelling stories. A compelling story centers on the main *character* (or characters) who grapples with a formidable entity (*narrative conflict*) within a *narrative setting*. The story is woven together by a specific *sequence of events* and is made comprehendible by its *plot*. By the end of the story's *narrative arc,* there is a resolution to the story's problem and/or the problem faced by the main character(s). As such, we center our review of theory building on the five key elements characterizing every compelling story: conflict, character, setting, sequence, and plot/arc.

We hope to make three main contributions to the entrepreneurship scholar community by reviewing and organizing the literature on theory building. First, by organizing the theory-building literature, we integrate "like tools" to better understand how they enable specific parts of the theorizing process. Second, this organizing allows us to connect

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[1] For a description of the method for the review, see Shepherd and Suddaby (2017).

different parts of the theorizing process. In turn, the resulting deeper understanding within and across theorizing parts provides a clearer "big picture" of the process of building interesting theories to further the field of entrepreneurship. Finally, we offer pragmatic empirical theorizing—a theorizing tool we believe has significant promise to advance entrepreneurship theories. At its core, pragmatic empirical theorizing harnesses quantitative empirical findings to motivate theorizing as part of an abductive inquiry process.

Theorizing Trigger—The Narrative Conflict

Arguably the most difficult part of theorizing is identifying an anomaly or tension to initiate and guide the theorizing process. This task involves a creative process requiring both extensive imagination (Mills, 1959) and keen observational powers—skills that March (1970) claims can best be obtained by learning about the observational habits of exceptional storytellers.

In storytelling, narrative conflict reflects the struggle between two powerful entities, for example, human versus human, human versus nature, or human versus god. In theory building, narrative conflict represents the struggle between two realms of knowing: namely, the *empirical world* of phenomena and the *scholarly world* of theoretical literature that aims to explain the empirical world. Conflict arises not only from within these worlds but also—perhaps more typically—from gaps between them. We examine both types of conflict to establish the different techniques entrepreneurship scholars use to "trigger" the theorization process.

Conflict in the Literature

Becoming immersed in the literature can unveil numerous paradoxes, problems, challenges, and puzzles. A paradox entails "contradictory yet interrelated elements that exist simultaneously and persist over time" (Smith & Lewis, 2011: 382). For example, a paradox can arise in the form of an underlying tension between two sets of relationships that seem to make sense when considered individually but appear contradictory when considered simultaneously. This scenario can trigger theorizing as an attempt to reconcile the paradox. Paradoxes stem from changes in systems, differences in individual and collective identities, competing organizing modes/designs, and different stakeholder goals (Smith &

Lewis, 2011). They also arise across categories of learning, belonging, organizing, and performing and reflect (or generate) a tension that can motivate more extensive theorizing as an attempt to resolve the focal paradox (Poole & Van de Ven, 1989). For instance, in their paper on the effect of negative feedback on new ventures' organizational identity (OI), Domurath et al. (2020: 2) explain,

> On the one hand, negative feedback indicates that the achievement of future venture goals is threatened, which can raise doubt among organizational members about who they are as an organization (Corley and Gioia, 2004), thus weakening OI (Gioia et al., 2000). On the other hand, organizational members can use negative feedback as a legitimization of their distinctiveness, thus maintaining or even enhancing OI strength (Clark et al., 2010; Gioia et al., 2000). To date, we do not have a theoretical explanation of when a venture's OI is more or less weakened upon negative feedback events.

Another approach to engaging the literature to trigger theorizing is problematization. Problematization refers to "challeng[ing] the value of a theory and explor[ing] its weaknesses and problems about the phenomena it is supposed to explicate" (Alvesson & Karreman, 2007: 1265–1266). This approach highlights the need to rethink existing theory and perhaps the need to change direction. Problematizing requires researchers to both gain an understanding of the literature and keep an open mind regarding that literature. By approaching the literature with an open mind, entrepreneurship scholars can allow the literature (as data, in line with a grounded theory approach) to "speak to them" to uncover (in a bottom-up way) problems within or across literature streams (see Chapter 6). Moreover, problematizing entails significant rhetorical ability in creating the "gap" between the literature and the real world or in explaining a logical flaw in previous theory (Locke & Golden-Biddle, 1997) because this task likely (hopefully) involves more than simply incremental gap-spotting. Instead it involves the construction of a considerable gap that contests critical assumptions (Sandberg & Alevesson, 2011). For example, problematization was used in a recent study (Patzelt et al., 2021: 2) on employees' emotions resulting from entrepreneurial project failure to identify a major gap in previous research:

> However, although existing work provides insights into the individual and organizational factors that can help employees manage their negative

emotions after the failure of entrepreneurial projects, neither the corporate entrepreneurship nor the leadership literature acknowledges the potential role of supervising managers in the aftermath of entrepreneurial project failure. Ignoring supervisor-employee dyads in this context is a critical omission not only because supervisors "are formally responsible for monitoring and regulating the performance of others" (Sheridan and Ambrose, 2020: 2) but also because it is well known that supervisors shape their subordinate employees' attitudes toward their organizations (Bear et al., 2010; Wayne et al., 2002) and their behaviors at work (Judge et al., 2006; Settoon et al., 1996). Indeed, the success of entrepreneurial projects depends, in part, on managers leading employees such that they yield high individual performance. (Reid et al., 2018; Simsek et al., 2015)

Scholars can ask contrastive questions to help problematize a situation or explanation by referring to various elements of an event (i.e., an allomorph) or by emphasizing a focal fact and contrasting it with one or more alternative(s) (i.e., fact and foil) (Tsang & Ellsaesser, 2011). Contrastive questions are so useful because by asking better questions, entrepreneurship scholars can begin to provide better explanations of different phenomena. Accordingly, Abbot (2004) suggests that problematization can be spurred by reversing a well-known proposition, switching figure and ground, using emotional language, and—as we discuss below—putting things in motion (Abbot, 2004).

Conflict Revealed Through Entrepreneurial Phenomena and Entrepreneurs' Practices

As discussed above, the data that triggers theorizing can come from the literature; however, it can also come from the phenomenon of interest— namely, through knowledge discovery beginning with "observation by the senses" (Locke, 2007: 888). Like with conflict in the literature, in the case of this observation, entrepreneurship scholars need to approach the focal phenomenon and data with an open mind, or else they run the risk of forcing the data and/or its interpretation to fit previous theories. Keeping an open mind (i.e., withholding prior expectations as much as possible) facilitates the discovery of interesting research problems during data collection and analysis; that is, it enables "the high potential for an empirical response and a novel insight that adds significantly to—or against—previous understandings" (Alvesson & Karreman, 2007: 1268). Further, in the case of grounded theory, keeping an open mind can "elicit

fresh understandings about patterned relationships" and social interactions (Shah & Corley, 2006; see also Glaser & Strauss, 1967; Turner, 1983). For instance, by observing social entrepreneurs, McMullen and Bergman (2017: 244) found that these entrepreneurs sometimes continue their venturing efforts even after solving their original target problems. This observation challenged the dominant view that social ventures are temporary organizations that are terminated once they solve their social problems:

> SE [social entrepreneurship] is often conceived of as an institutional patch that arguably succeeds by rendering itself no longer necessary, implying that it is temporary (e.g., Mair & Martí, 2009; McMullen, 2011; Santos, 2012). But if this is true, then how do we reconcile it with Negroponte's reaction to Intel's and Microsoft's foray into the LDC market for inexpensive laptops? If the focus of social entrepreneurship is truly on value creation, not value capture, and SE is indeed an institutional patch, then would it not be reasonable to expect Negroponte to jump for joy and declare his mission accomplished upon any announcement that multinational corporations (MNCs) like Intel or Microsoft have taken up his cross to bear?

A significant data source for motivating theorizing on entrepreneurial phenomena can come from a practice orientation—namely, how entrepreneurs establish and enact entrepreneurial activities. Entrepreneurial theorizing that is triggered in such a way helps uncover paradoxes and problems of practical value to entrepreneurs. To undertake such theorizing, scholars may need to either zoom in on specific activities in context or zoom out to observe relationships and patterns across practices to more deeply understand the connections between and potential of activities, tools, and interactions (Sandberg & Tsoukas, 2011). Indeed, when undertaking an entrepreneurial activity, founders and/or employees often become one with the task (Dreyfus, 1995). However, if the effectiveness of an activity temporarily breaks down—namely, if an individual experiences a momentary disconnection from others and/or things—that individual separates from the task and engages in deliberate reflection (Sandberg & Tsoukas, 2011). In the entrepreneurial context, such temporary breakdowns unveil problems for entrepreneurs and thus opportunities to theorize to gain a more comprehensive and practically useful understanding of such situations and/or tasks. This type of theorizing helps "explore new terrain and develop novel ideas,

thus potentially overcoming the inherent conservatism in well-established frameworks" (Alvesson & Karreman, 2007: 1267).

Indeed, according to Weick (1974), theorists should focus on everyday events, ordinary places, common questions, micro-organizations, and absurd organizations. When scholars seek, observe, and/or question everyday events in ordinary places, theorizing can itself become more commonplace instead of being bound solely to Fortune 500 companies or the "armchair." Such theorizing begins with observing a pattern and then formulating robust explanations for the pattern underlying the focal task (and organizing tasks more generally). Likewise, focusing on micro-organizations helps deemphasize the centrality of the thing (i.e., the organization) and instead highlights the process (i.e., the organizing). Finally, studying absurd organizations—almost by definition (of absurd)—challenges theorists' core assumptions, which is a fundamental step toward theorizing to expose new research terrain (Weick, 1974) and contribute to knowledge.

Engaged scholarship can also trigger new theorizing. Engaged scholarship refers to "a collaborative form of inquiry in which academics and practitioners leverage their different perspectives and competencies to co-produce knowledge about a complex problem or phenomenon under conditions found in the world" (Van de Ven & Johnson, 2006: 803). This form of scholarship is likely most beneficial when projects are designed to explore complex real-world problems, be collaborative learning endeavors, endure for a prolonged period, and harness multiple frames of reference (Van de Ven & Johnson, 2006). Such problem-driven research requires scholars to at least minimally engage with entrepreneurs (or related stakeholders, such as venture capitalists) as they perform their activities, to be open to new experiences (compared to existing theories), and to self-reflect on their engaged scholarship role (see Van de Ven & Johnson, 2006). With this approach, scholars are taking a step toward addressing what is generally referred to as the large gap between theory and practice (Rynes et al., 2001). Indeed, collaborating with entrepreneurs throughout the research process enables theorists to formulate problems that are grounded in the experiences of those actually engaged in the various entrepreneurial tasks under exploration—namely, they can investigate real-world problems faced by entrepreneurs whose solutions contribute to the knowledge of both academics and practicing entrepreneurs.

Conflict Between the Entrepreneurship Literature and Entrepreneurial Phenomena

Scholars have devoted considerable effort to debating the relative importance of phenomenal gaps versus gaps in the literature. Those who advocate for the former tend to emphasize empirical facts (Hambrick, 2007; Pfeffer, 2014) and are backed by intellectual giants in social theory, including Durkheim (1895/1964: 15), who claims that researchers should move from "things to ideas," not from ideas to things. However, according to the pragmatic consensus—as backed by a long succession of scholars beginning with Peirce (1934), extending to Merton (1967), and advancing today with Weick (2014)—effective theorizing is a process whereby a researcher moves *iteratively* between gaps observed in the phenomenal world and those observed in the existing literature. Indeed, such gaps create a tension that often triggers the need for a new theory.

After triggering the theorizing process by revealing or creating a conflict in entrepreneurship—a paradox, problem, or challenge—the focal entrepreneurship scholar then needs to *conceive* of a research idea. This idea may start as a simple construct or guess that the scholar then *constructs* into a theory to explain an entrepreneurial phenomenon.

Conceiving and Constructing Entrepreneurship Theories—Building Stories

We organize the research on conceiving and building entrepreneurship theories using a narrative framework because this framework reinforces the idea that effective theorizing entails adeptly interweaving prior knowledge (i.e., existing literature) and emerging knowledge (i.e., new empirical observations) of entrepreneurship.

Identifying the Core Constructs of an Entrepreneurship Theory: The Main Characters

Compelling stories center on main characters (Pentland, 1999)—namely, actors whose behavior best portrays the focal narrative. In storytelling, an actor is a person, animal, or entity whose experience is the story's central point. Similar to stories being built around main actors, theories are built around core constructs (Pentland, 1999). Accordingly, a critically important step early in the theorizing process is formally naming core

constructs even if the theoretical narrative remains unclear. At this point, constructs also tend to be somewhat fuzzy, but the act of formally naming a phenomenon of interest is a critical step in conceptually separating a specific phenomenon from the collective "noise" of routine empirical experience and/or separating specific core constructs from the collective "noise" of previous entrepreneurship research.

Theorists have implemented numerous strategies to name constructs. Arguably, the most common strategy is to simply use a commonplace term that captures the phenomenon of interest most closely. For example, the rather general word *performance* has been used to refer to the array of activities by which entrepreneurial organizations are evaluated. Prominent sociologist Max Weber (2001: 63) recommended this approach, encouraging scholars to use "the nearest and most descriptive words" from everyday language to name constructs. However, there are clear downsides to using commonplace terms to name constructs. In particular, scholars run the risk that adopting words from everyday language will weigh down constructs with too much "surplus meaning" (Cronbach & Meehl, 1955). Indeed, using the term *performance* invites scholars to infer—consciously or not—a range of meanings for performance based on individuals, machines, sports teams, and a variety of other entities and activities, thus markedly reducing the analytic precision of the construct. For example, strategic management performance can refer to an organization's sustainable competitive advantage whereas entrepreneurial performance can refer to an organization's growth.

Another similar strategy for naming constructs is to borrow an established construct from a related field. In organizational theory, for example, population ecologists have borrowed words like *niche* and *species* from the neighboring field of evolutionary biology (Freeman & Hannan, 1989; Hannan & Freeman, 1977). Borrowing a term from a related field partly resolves the lack of definitional precision stemming from using everyday language, but this approach does not fully solve the surplus-meaning issue. Returning to the previous example, population ecology has been criticized for using terms like species, a word that has a much more precise meaning when referring to living organisms (i.e., capable of interbreeding and producing viable offspring) than organizations. Indeed, according to Whetten et al. (2009), borrowing terms from other fields frequently creates more confusion (e.g., in levels of analysis, boundary conditions, etc.) than clarity in understanding phenomena.

A final strategy for naming constructs is to coin a new term to describe a phenomenon of interest. In management theory, Weick's use of the term *sensemaking* is an apt example. This new word is a portmanteau of common preexisting terms that have acquired a unique and specific meaning due to Weick's theorizing.

No matter what strategy is used, identifying and naming constructs are critical for theorizing because constructs are a source of agency or causality. In other words, when constructs and their relationships to phenomena of interest are described in greater clarity, the motivations and causal relationships in the associated theoretical arguments also become clearer (Suddaby, 2010; for other rigor-related aspects of theory building, see Donaldson et al., 2013). In theory, such clearly defined constructs necessitate precise definitions and specific boundary conditions/contexts in which they do and do not apply and thus help readers understand the focal theoretical arguments more fully. Indeed, when constructs are captured accurately, readers can quickly grasp their history, the motivation for their use, and the implications of their roles in the causal relationships being presented. It is worth mentioning, however, that construct clarity has limits. As Kaplan (1964) notes, enhancing definitional clarity ultimately leads to increasingly finer-grained distinctions that eventually fall outside understanding: the "more discriminations we make, the more opportunities we create for classification errors between borderlines" (Kaplan, 1964: 65).

Choosing a Perspective for Theorizing: Determining the Narrative Setting

In addition to having main characters, all stories occur in a narrative setting—that is, a specific time and place in which the main events occur. In a way, a story's setting is as critical in explaining causality as the overarching conflict that defines the story and the main character's motivations. Adept storytellers appreciate that context goes beyond a story's backdrop and can play a decisive role in an argument—it is critical both to a theoretical argument's credibility and to readers' understanding of a theory's causal logic—and by altering the context, a theorist can expose new conceptual terrain. In this section, we discuss a variety of strategies entrepreneurship scholars use to introduce new perspectives by modifying the philosophical settings within which theory is presented: namely, shifting ontology, moving up or down the ladder of theory complexity,

moving back and forth between data and theory, and shifting the level of analysis.

First, scholars can introduce a new perspective by *shifting the ontology* of their research. Scholars typically use a specific theoretical lens to explore a phenomenon such that one philosophical perspective tends to dominate a particular research topic. Alternatively, research topics can be bifurcated by research streams that advance in parallel based on different philosophical underpinnings (e.g., research anchored in either a structural realist or a social constructivist perspective; Hassard, 1993). However, instead of sticking with just one philosophical approach, theorists can harness an ontological shift to produce creative insights that can be used to develop mid-range theories. An ontological shift comprises "changes in the ontological emphasis that maintain epistemic-ontological alignment" (Thompson, 2011: 755). Here, *ontology* refers to the nature of phenomena, and *epistemology* refers to the nature of knowledge about the phenomena (Gioia & Pitre, 1990). When shifting ontology, scholars must be sure to change the epistemology, or else they can compromise their constructs, which leads to ontological drift (Thompson, 2011).

One way to shift ontology for theorizing is to move from an entity-based ontology to a process-based ontology (or vice versa). Indeed, entrepreneurship theories tend to focus more on entities (e.g., organizations, entrepreneurs, and institutions) than processes (e.g., organizing, emergence, co-constructing). However, as an example, the notions of *entrepreneur* and *institution* (i.e., entities) can be considered as processes, such as *venturing* and *institutionalizing*. This theorizing approach does not eliminate or replace the entity construct but complexifies it, which can lead to different research logics of action that reflect different assumptions and orientations and can be used to address different research questions (see Morgan, 1980).

Second, scholars can also *move up and/or down the ladder of theory complexity* to conceive and build theory. According to Ofori-Dankwa and Julian (2001), two dimensions are vital in establishing the level of theory complexity: (1) *relative endurance*, which refers to the degree to which the core concepts of a (proposed) theory are represented as relatively stable (high endurance) or unstable (low endurance), and (2) *relative exclusivity*, which refers to the degree to which a single core concept (high exclusivity) or several core concepts (low exclusivity) form a model. Thus, as a 2×2 setup, there are four levels of theoretical complexity: *Level 1* (simple complexity) involves high endurance and high exclusivity

to offer theories of contingency, *Level 2* (medium complexity) involves low endurance and high exclusivity to offer theories of cycles, *Level 3* (high complexity) involves high endurance and low exclusivity to offer theories of competing value, and *Level 4* (very high complexity) involves low endurance and low exclusivity to offer theories of chaos (Shepherd & Suddaby, 2017).

Abstracting one's theorizing—that is, moving up the ladder of theory complexity—can provide the foundation for a meta-paradigm perspective, allowing scholars to consider diverse approaches to theory building together as a way to bridge paradigm boundaries (Gioia & Pitre, 1990; for an epistemological approach [evolutionary naturalist] to combine disparate perspectives, see Azevedo, 2002). Indeed, according to Kaplan (1964), many theorists move from observable indicators of a phenomenon (i.e., the "individual") to higher levels of abstraction that entail unobservable categories or concepts (i.e., "social classes" or "society"). Similarly, Stinchcombe (1968) notes that the theorizing process requires skillful abstraction, or carefully moving up or down the ladder of abstraction, to develop propositions (generated at higher levels of abstraction) or operationalize hypotheses (generated at observable levels of abstraction). For instance, Dencker et al. (2021) attempt to clarify the concept and manifestation of necessity entrepreneurship, acknowledging that different basic needs may spur necessity entrepreneurship and that necessity entrepreneurs may vary in their level of human capital. Based on these premises, the authors formulate propositions regarding the different entrepreneurial processes entrepreneurs engage in under distinct contextual conditions.

Abstraction is required for theorists to broaden their view (from one based on assumptions from one paradigm) to juxtapose, and perhaps connect, formerly distinct views to provide a broader perspective of the focal phenomena (Lewis & Grimes, 1999). While theorizing across paradigms might seem challenging due to each paradigm's different assumptions, the boundaries between paradigms tend to be blurry and can be usefully thought of as "transition zones" that can be bridged (Gioia & Pitre, 1990). Specifically, through abstraction, scholars can generate second-order concepts, which describe scientific understanding, instead of first-order concepts, which describe how people experience phenomena. As abstractions of first-order concepts, second-order concepts enable scholars to recognize related or comparable concepts as the foundation for a bridge across the transition zones of two or more paradigms

(Gioia & Pitre, 1990; Lewis & Grimes, 1999). This type of meta-paradigm perspective goes beyond the "agree to disagree" approach to disparate paradigms to provide a deeper understanding of why disagreement exists and to theorize on the similarities and interrelationships underlying entrepreneurship phenomena, in turn broadening the "conception of theory and the theory-building process itself" (Gioia & Pitre, 1990: 600). For instance, Pfeffer and Fong (2005) promote theorizing that reveals and connects foundational core constructs to build a broad understanding that explains a range of behaviors. In the entrepreneurship context, a firm's entrepreneurial orientation can be considered such a core construct as it encompasses the degree to which a firm generates innovative ideas, shows aggressiveness compared to competitors, fosters autonomous thinking in employees, takes risks, and behaves proactively in the marketplace (Lumpkin & Dess, 1996). While these firm characteristics may vary independently, by considering them as part of the broader entrepreneurial orientation construct, scholars can theorize on how characteristics of a firm's environment and structure moderate the relationship between entrepreneurial orientation and firm performance (Lumpkin & Dess, 1996). Thus, both abstraction and complexification can lead to new theories of entrepreneurship.

Third, *moving back and forth between data and theory* helps provide new perspectives to construct a theoretical story. Eisenhardt (1989) proposes that the best way to build a theoretical narrative is by comparing multiple case studies. In this approach, a theorist enters the field with a clear-cut research question (perhaps one taken from the literature or one centering on clarifying specific constructs), thoughtfully chooses cases that create tension or contrast around the research question ("theoretical sampling"), and identifies illustrative patterns that match data with theory to build "bridges from rich qualitative evidence to mainstream deductive research" (Eisenhardt & Graebner, 2007: 25). For example, in their work, Williams and Shepherd (2016) explore the emergence of six ventures created to alleviate suffering after the 2010 Haiti earthquake. Based on their analysis, the authors identify two divergent groups of ventures that differed in how they recognized opportunities to help, accessed important resources, and acted to alleviate victims' suffering. Similarly, Preller et al. (2020) investigate eight founding teams to shed light on how individual team members' entrepreneurial dreams impact future venture performance. Another approach to moving between data and theory, proposed by Dyer and Wilkins (1991), emphasizes the narrative elements of a

single case study. With this approach, a theorist builds theory by shifting between the thick description of data and the existing literature. For instance, Waldron et al. (2015) offer a comprehensive exploration of the Rainforest Action Network to examine how institutional entrepreneurs harness institutional change to enhance their influence within organizational fields. In the case of both approaches, however, a theoretical narrative surfaces from abductive iteration between theory and the literature to fulfill an "unmet expectation." According to Van Maanen et al. (2007: 1149), an unmet expectation is "like the dog that did not bark in the fictional world of Sherlock Holmes"—namely, a mystery or a clue that triggers theorizing by pushing a theorist to build a hearty explanatory narrative that gives "primacy to the empirical world, but in the service of theorizing."

Finally, changing assumptions by shifting the *level of analysis* can facilitate theory building. Klein et al. (1994) outline three critical assumptions underlying multilevel theorizing that scholars should make clear—(1) *homogeneity*, which refers to "group members are sufficiently similar with respect to the construct in question that they may be characterized as a whole" (Klein et al., 1994: 199); (2) *independence*, which refers to group members being independent of the group's influence and others in the group concerning the construct of interest (between individual variance); and (3) *heterogeneity*, which refers to individuals being nested within the group such that the "group context is not only informative but necessary to interpret an individual's placement or standing in the group" (Klein et al., 1994: 202). For instance, Laspita et al. (2012) explore the extent to which entrepreneurial intentions are transmitted from parents to children across different cultures (individualist vs. collectivist). Indeed, theorizing across levels of analysis provides a more in-depth understanding of mechanisms that shift the level of analysis, thereby distinguishing mechanisms used in initial theories or topics to explain the "why" of existing relationships (and theories) (see also Shepherd & Sutcliffe, 2015).

In particular, Morgeson and Hofmann (1999: 251) emphasize the multilevel nature of constructs in collective contexts, with collective referring to "any interdependent and goal directed combination of individuals, groups, departments, organizations, or institutions." In such collective contexts, constructs can exist at both the individual and group levels and can be investigated in terms of their function (i.e., the causal output of the focal system [or part of the system]) and/or their structure

(i.e., the system of interaction among members of the collective). For example, Shepherd et al. (2010) establish a theory for how organizational members' entrepreneurial mindset can trigger the formation of an entrepreneurial culture in organizations and vice versa, resulting in a spiraling relationship between constructs at the individual and organizational levels. By exploring the function and structure of collective constructs, scholars can build theory on the emergence of, stability of, and changes in collective entrepreneurial constructs. Notably, these features—emergence, stability, and change—all entail notions of time, to which we now turn.

Set Time to Establish the Boundary Conditions of an Entrepreneurship Theory: The Story's Sequence of Events

A story's sequence of events is the order in which events occur, which brings together the different parts of the story. While time is directly or indirectly a boundary condition for most theories, theorizing sometimes entails shifting the time perspective to alter the ontological nature of constructs and the relationships between them (George & Jones, 2000; Zaheer et al., 1999). Indeed, in Whetten's (1989; see also Dubin, 1978) explanation of the criteria of theory—namely, "what," "how," "why," "who," "where," and "when"—the "when" directly reflects the salience of time for theory. Further, George and Jones (2000) outline how time can be applied in theorizing by considering the following: (1) how the past and future influence the present and how time can be experienced differently (i.e., subjective time) within and across individuals; (2) how time is grouped into chunks, such as with defined episodes (for different time scales, see Zaheer et al., 1999); (3) how the duration of different periods can be classified as periods of stability and change; (4) how the nature of change can be considered in terms of its rate (over time), its magnitude (e.g., incremental or discontinuous), and its pattern (e.g., frequency, rhythm, and cycles); and (5) how the interplay between constructs over time can be reflected in mutual causation (e.g., positive or negative spirals) and change intensity (Dansereau et al., 1999; Mitchell & James, 2001). For example, Breugst et al. (2020) theorize how a new venture team member's perception of their teammates' efforts at a specific point in time (one week) impacts this member's efforts at a later point in time (the following week), thus explaining the dynamic process of effort contagion in new venture teams. Moreover, Corley and

Gioia (2011) propose that scholars should direct their attention to the future to foresee problems and thus inform future thought and action, generate vibrancy, and ensure value in quickly changing external environments. This type of theorizing—known as prescient theorizing—is informed by either projective futurism or prospection. Projective futurism refers to a sound theoretical foundation for arguing and predicting, whereas prospection is the use of informed projections into the future to predict issues, act as if those issues have arisen, and then infer domains that need attention or innovation (Corley & Gioia, 2011: 25).

For scholars who explicitly consider time to build process theories (as opposed to theories of variance; Mohr, 1982), Langley (1999) provides several different strategies to construct theories: (1) developing a comprehensive story through time (*narrative strategy*); (2) coding qualitative events into predetermined categories for statistical analysis (*quantification strategy*); (3) proposing and evaluating alternative theoretical templates of the same events with different theoretical premises (*alternate templates strategy*); (4) repeatedly comparing datasets to progressively develop a system of categories that can be connected to explicate a process (*grounded theory strategy*); (5) graphically or visually presenting multiple depictions of "precedence, parallel processes, and the passage of time" (Langley, 1999: 700) (*visual mapping strategy*); (6) bracketing and labeling periods of a single event and highlighting the continuities within that period as well as the discontinuities at or outside the period's borders (*temporal bracketing strategy*); and (7) constructing global measures of a process as a whole to compare and contrast with other processes (*synthetic strategy*). Indeed, McMullen and Dimov (2013) contend that while entrepreneurship is frequently described as a process, scholars have failed to fully consider its processual nature in entrepreneurial theorizing. Likewise, Rauch and Hulsink (2021) propose that studying the temporal sequences of events comprising the entrepreneurial process would benefit entrepreneurial theorizing. Lévesque and Stephan (2020) also suggest that applying a time-based lens could significantly advance the entrepreneurship field.

Entrepreneurship Scholars' Disciplined Imagination: Plot and Theme

The plot is what binds a story together (Jameson, 2001), makes it intelligible (Garud & Giuliani, 2013), and—with the main character(s)—provides coherence (Ibarra & Barbulescu, 2010). In other words, the plot

provides the discipline for the imaginative parts of a story. Similarly, theo-rizing to generate something new—a new explanation, new insights, or a new story—necessitates discipline and imagination. Theorizing in the form of disciplined imagination can entail thought experiments—abstract hypothetical scenarios (Folger & Turilo, 1999) or simulations that are part of an artificial selection process (Weick, 1989)—"a method for using computer software to model the operation of real-world processes, systems, or events" (Davis et al., 2007: 481). Indeed, Weick (1989) suggests that when theorists construct theory through such thought experiments, their endeavors resemble an evolutionary model of variation, (artificial) selection, and retention.

The disciplined imagination process starts with devising a research question in the form of a problem statement. A problem statement is formulated and posed by a theorist to indicate a specific need that requires a solution. Specifically, the theorist identifies a problem that needs to be solved (explained), outlines assumptions that can be disconfirmed, provides a set of concepts that can be linked in different ways, suggests a plot that may be improbable, and asks a question that has not been asked yet (Weick, 1989). After constructing a problem statement, the theorist can then undertake thought trials, testing (competing) conjectures of a solution to the problem statement (see also Kaplan, 1964; Stinchcombe, 1968). Conducting a higher number of and more diverse thought trials enhances theorizing by helping the theorist refine conjectures about the potential solutions as heterogeneous thought trials provide more infor-mation to inform the theorizing process. Finally, the theorist must choose and apply selection criteria for the thought trials to determine the plausi-bility of the emerging story. Namely, theorizing becomes more promising when the selection process consistently applies a set of criteria (Weick, 1989), when it provides access to tacit knowledge through embodied or vicarious participation (Folger & Turilo, 1999), and when it invokes the related properties of a system's interrelated links (Folger & Turilo, 1999; Shepherd & Suddaby, 2017). While scholars can conduct thought trials in their minds (or through simulation software), the production of knowl-edge usually involves a social component such that theorists typically need to test conjectures by communicating them to others (i.e., via stories) and receiving feedback (Jacques, 1992; Weick et al., 2005).

The discipline of theorizing can come from numerous sources, including metaphors (e.g., the specific case of anthropomorphizing [see

Chapter 3]), other forms of blending, at-hand knowledge resources (i.e., bricolage), and patterns in the form of typologies, to which we now turn.

To theorize using an interaction *metaphor* (Cornelissen, 2005, 2006), a theorist must begin by creating a generic structure that links a source and a target domain. The theorist can then start to map the similarities between the two domains and transfer "instance-specific" information about concepts between them. This approach allows the theorist to expand upon the emerging story by combining the source and target concepts, thereby gaining new insights into both the target and source domains (Cornelissen, 2005, 2006) (more on blending in the following sections). Specifically, metaphors aid the theorizing process in several ways: they (1) provide a vocabulary to "express, map, and understand" the complexity of different phenomena, thus enabling a stronger foundation for understanding (and communicating about) underlying constructs (Cornelissen, 2005: 753; Lakoff & Johnson, 1980; Tsoukas, 1991); (2) foster an open-minded approach with "multiple ways of seeing, conceptualizing, and understanding" phenomena of interest (Cornelissen, 2005: 753); and (3) enable new insights that may have been implausible beforehand (Morgan, 1980, 1983, 1996; Oswick et al., 2002). For instance, Lundmark et al. (2019) analyze highly cited entrepreneurship articles to propose eight root metaphors (e.g., entrepreneurship as parenthood, mutagen, conduit of knowledge, method, mindset, networking, exploration, and politics) capturing core assumptions and thought patterns in the mainstream entrepreneurship literature. The authors suggest that future research to extend these metaphors could advance the field by questioning and defying these assumptions and investigating entrepreneurial topics from different angles.

Anthropomorphizing is another way to theorize through metaphor. *Anthropomorphizing* refers to "imbuing the imagined or real behavior of nonhuman agents with humanlike characteristics, motivations, intentions and/or emotions" (Epley et al., 2007: 864). Chapter 3 highlights how anthropomorphizing has been critical to creating and developing many important management theories, including organizational knowledge and entrepreneurial orientation (see also Shepherd & Sutcliffe, 2011). This theorizing tool can be especially beneficial when theorists use their rich understanding of themselves and others to (1) take a chance to guess the explanation of an anomaly, (2) shed light on the mechanisms underlying the "how" and "why" of important relationships and provide insights into

organizing, and (3) aid sensemaking as well as tap into audiences' knowledge of themselves and people in general as a sensegiving communication strategy to tell compelling stories. Indeed, anthropomorphizing enables theorists to conceptualize, construct, and communicate creative theories of organizations, organizing other non—human entities, and other processes (and perhaps even theories of themselves). Moreover, this tool instills confidence in junior scholars so they are able to theorize more easily.

In the interaction model of metaphor, metaphor entails *blending*; however, not all blending for theorizing entails metaphor. For example, Oswick and colleagues (2011) highlight four types of blending that do not involve metaphor: (1) orthodox domestic theory (i.e., narrow focus in terms of theoretical contributions and primarily involves the domain of production) enables incremental extensions to a specific sub-area of management; (2) innovative domestic theory (i.e., broad focus in terms of theoretical contributions and mainly involves the domains of production) "challenges existing knowledge and ways of thinking but does so from an insider's perspective" (p. 323); (3) novel traveling theory (i.e., narrow focus in terms of theoretical contributions and involves numerous domains) provides "quirky insights into non-management disciplines yet largely reinforces, builds upon, or resonates with prior knowledge" (p. 324); and (4) radical traveling theory (i.e., broad focus in terms of theoretical contributions and involves numerous domains) reflects a "significant challenge to and departure from the contemporary and conventional pre-existing insights in a particular discipline" (p. 322) but calls for significant "repackaging, refining, and repositioning" (p. 323) for it to be adopted by management scholars. When using blending, it is essential for scholars to theorize about how the insights generated influence the source domain (over and above the influence on the target domain), possibly including how prior source theories need to be adjusted and boundary conditions need to be reassessed (see also Zahra & Newey, 2009).[2] In their study on how affect impacts entrepreneurial effort, for

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[2] These story-building approaches (i.e., using metaphor, anthropomorphizing, blending, and bricolage) are different from the concept of borrowing, which is not particularly useful for effective theorizing. *Borrowing* refers to adopting largely complete theories from other scholarly fields and applying them to management phenomena. This approach might be useful but is unlikely to lead to meaningful theoretical contributions. Some have even argued that scholars rely too much on borrowing theory (Oswick et al., 2011; Whetten et al., 2009). There are two common forms of borrowing: horizontal borrowing, or

example, Foo and colleagues (2009) not only advance theory on affect's role in entrepreneurship but also extend affect-as-information theory (a major psychological theory) by revealing how positive affect can increase (rather than decrease) effort through a future temporal focus. Similarly, Haynie and Shepherd (2011) explore how an entrepreneurial career can enable traumatized veterans to build a future for themselves; in doing so, they offer major insights into theories of career transitions in addition to contributing to entrepreneurship theory.

Whereas blending offers a foundation to transform constructs and relationships in both the target and source literatures (i.e., bidirectional information flow), *bricolage* combines sub-elements from a source domain that can be applied in entrepreneurship to generate a unique combination (i.e., unidirectional information flow). Knowledge production can be conceptualized as evolution, differentiation, and bricolage. While evolution (i.e., the accumulation of knowledge via "trial and error toward an increasingly robust view of the world") and differentiation (i.e., efforts to "generate knowledge that is discontinuous with existing knowledge") prevail in scholarship (Boxenbaum & Rouleau, 2011: 279–280), bricolage holds significant promise as a source of novel theories and is thus an important theorizing tool. For theorizing, bricolage signifies "the assembly of different knowledge elements that are readily available to the researcher" to form fluid knowledge constructs (Boxenbaum & Rouleau, 2011: 281). This strategy necessitates theorists to be "flexible and responsive… to deploy whatever research strategies, methods, or empirical materials, at hand, to get the job done" (Denzin & Lincoln, 1994: 2). Accordingly, bricolage's role in theorizing may actually be stronger than it appears because although scholars may apply bricolage in their theorizing, they often communicate the outcomes of the process in terms of an evolution or differentiation approach.

According to Boxenbaum and Rouleau (2011), theorists undertake bricolage by (1) concentrating on combining different elements (e.g.,

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using concepts from studies in other social contexts, and vertical borrowing, or using concepts developed at a different level of analysis (Whetten et al., 2009). The problem with these forms of borrowing (beyond the challenge of generating a theoretical contribution) is that they could (likely do) overlook differences across contexts and/or levels that are important in knowledge production. This issue is particularly problematic in the field of entrepreneurship as context is often extreme (but that extremeness also provides opportunities).

ideas, concepts, experiences) they have at hand instead of endlessly examining the literature or generating a theory from "scratch"; (2) selecting elements that are nearby (to the theorist) and adequately diverse such that combining them can lead to novel (and hopefully useful) insights; (3) using common sense when choosing and combining elements so additional theorizing can produce logical, broad, and valuable explanations of phenomena; (4) staying flexible and alert to new combinations by considering the elements (to be combined) as fluid concepts and their combination as potentially transformative (in terms of new insights); and (5) reflecting on their use of bricolage to theorize. For instance, Cardon et al. (2009) apply bricolage to theorize about various types of entrepreneurial passion and how they influence entrepreneurial action. In particular, the authors evoke Gartner et al.'s (1999) taxonomy of entrepreneurial activities to propose that entrepreneurs may be passionate about inventing new products, founding new ventures, or developing their ventures.

Finally, using *typologies* is another useful way to combine constructs. Typologies aid in theorizing by representing complicated explanations of causal relationships entailing contextual, structural, and strategic factors to explain an outcome (Doty & Glick, 1994; Fiss, 2011). Importantly, these explanations are not classification schemes—"systems that categorize phenomena into mutually exclusive and exhaustive sets with a series of discrete decision rules" (Doty & Glick, 1994: 232) for describing phenomena—but are instead complex theories in themselves (Doty & Glick, 1994). To use typologies to theorize, theorists need to make their grand theoretical claims explicit (Doty & Glick, 1994: 235), specify each ideal type, describe each ideal type with the same set of dimensions and elucidate the assumptions underlying how the dimensions (e.g., core and peripheral elements; Fiss, 2011) that describe the ideal types (Doty & Glick, 1994) are weighted. Typologies can reveal vital insights to further knowledge because they help theorists go beyond the linear to investigate numerous patterns (Miles et al., 1978), highlight the significance of how multiple aspects fit together to provide a more complete story (Fry & Smith, 1987; McKelvey, 1982), allow for equifinality (i.e., organizations can achieve the same outcome [e.g., high performance] via different routes; Katz & Kahn, 1978; Payne, 2006; Van de Ven & Drazin, 1985), and provide a "form of social scientific shorthand" (Ragin, 1987: 149) to explain multiple causal relationships (Fiss, 2011). As an example, Zahra and colleagues (2009) develop a typology of social entrepreneurs

based on their motives and search processes. Douglas et al. (2020) also suggest that using qualitative comparative analysis can help theorists generate novel theories by classifying entrepreneurial behavior based on the antecedent attributes of individuals within groups.

Evaluating a Theory: The Narrative Arc

Narrative arcs generally end by providing a resolution to the focal story's problem and/or the problem faced by the story's main actor. Although constructing theories and making theoretical contributions are important, the resolution in stories (i.e., what constitutes a theory) varies widely, as do interpretations of what constitutes a good story (i.e., a theoretical contribution). As Suddaby (2014b) argues, the range of beliefs of what represents theory reflects the extensive variety of beliefs about what theory should be used for. Some (perhaps most) view theory as a way to *accumulate* knowledge. Others view theory as a means to *legitimate* some forms of knowledge over others. Still, others see a powerful normative value in theory—namely, they believe that summarizing existing knowledge is less important than guiding the attention of a research community to investigate salient issues for the future. However, for each group, some theories appear to be favored over others due to their narrative attributes (Van Maanen, 1995). Accordingly, in this section, our goal is to review the rhetorical attributes of successful theories and, in particular, identify the narrative elements constituting a contribution to theory.

A theory can be thought of as a statement of concepts and their relationships that indicate how and/or why a phenomenon occurs within boundary conditions as well as who is involved (Bacharach, 1989; Gioia & Pitre, 1990). The overall purpose of a theory is to organize (parsimoniously) and communicate (clearly) (Bacharach, 1989), which it does by providing a logical explanation of a phenomenon, making assumptions, and building on those assumptions to coherently generate predictions and offering conjectures that can be tested, confirmed, refuted, and/or falsified (Shapira, 2011).

While these attributes of the conceptualization of theory are helpful, it is not always entirely clear whether the outcome of a specific scholarly work is a theory. Indeed, Sutton and Staw (1995) note the challenge in establishing an outcome as a theory, instead they approach the matter by describing what theory is not. According to these authors, theory is *not* references to previous work, data reflecting a phenomenon, a list of

variables or constructs, a diagram with boxes and arrows, or a set of hypotheses. Similarly, Bacharach (1989) explains what theory is not by describing how theory is *not* an explanation, or the *what*, of a relationship without the *how, why*, and *when*.

Weick (1995) mainly concurs with Sutton and Staw (1995), and thus Bacharach (1989), about what theory is not. However, he also acknowledges that offering a fully developed theory is rare and that scholars should instead hope to contribute to knowledge by presenting their work as an interim struggle (Runkel & Runkel, 1984), the outcome of which can be assessed in terms of a continuum rather than a dichotomy (i.e., a theory or not). This notion of theory as a continuum is comforting because it establishes more realistic expectations about what is (or should be thought of) a theoretical contribution. Thus, while Sutton and Staw's (1995) list of what theory is not is apt when theory is considered a dichotomy, theorizing outcomes can be an important part of an emerging story and/or an input to further theorizing. When theorizing as an *interim struggle* contributes to subsequent work, it can be valuable and is perhaps a contribution worth publishing (despite not yet achieving the status of a fully developed theory).

Thus, the next question is what characterizes a theoretical contribution. A theorizing outcome can be deemed a contribution when it bridges a gap between two theories as a foundation to explain something between two domains (Bacharach, 1989) and when it produces useful new insights (Whetten, 1989) that lead to a reassessment of existing theories (Bacharach, 1989). Accordingly, a theorizing outcome must be original and useful to constitute a contribution. To be original, a theorizing outcome needs to uncover something previously unknown (Corley & Gioia, 2011), surprise scholars by pushing them to reexamine something they thought they knew (Rynes, 2002), and be adequately novel and/or counterintuitive (Davis, 1971). To be useful, a theorizing outcome needs to provide scientific utility or practical utility. Scientific utility facilitates improvements in conceptual rigor and specificity and/or aids in operationalization and testing, while practical utility applies directly to the problems entrepreneurs face (i.e., problems that matter; Pfeffer, 1993). Thus, although a theory must be distinct enough from established wisdom to justify a reexamination, it also needs to be similar enough to this wisdom to be intelligible (McKinley et al., 1999). By connecting a theory with established knowledge, a theorist infuses

novelty with meaning, thereby setting up a dynamic tension and inter-play between novelty and continuity (McKinley et al., 1999: 638). For example, Patzelt and Shepherd (2011) draw on the well-established idea that knowledge and motivation are major drivers of opportunity recognition (McMullen & Shepherd, 2006) to theorize on the antecedents of recognizing opportunities for sustainable development. However, they also acknowledge that sustainable development outcomes differ from purely economic outcomes and are thus able to theorize on the roles non-economic knowledge and motivation play in opportunity recognition in the sustainable development context.

The value of a theory (or another type of theorizing outcome) may also arise from its ability to spur further theorizing. For instance, theorists can be reflexive—namely, they can reflect on the research process by acknowledging the situated nature of the knowledge and knowledge creation behind their theorizing outcomes. Alvesson et al. (2008) propose several different practices to stimulate reflexivity: (1) taking different perspectives to develop a different frame of reference from that applied in the original theorizing to see the focal phenomenon differently and thus recognize that these different perspectives represent new knowledge sources, (2) using a different voice than the one used in the original theorizing to appreciate how voice impacts perspective (see also Pentland, 1999), (3) employing different positionings to understand how time and context affect the choice of perspective (see also Pentland, 1999), and (4) destabilizing a perspective by examining the conditions and consequences of theory building and thus problematizing the process and outcome of the original theorizing. When used to stimulate new theorizing, reflexivity may also depend on how researchers exit their fieldwork. For instance, Michailova and colleagues (2014) suggest that researchers can achieve paradoxical thinking and revelatory theoretical outcomes from a fieldwork exit in which the relationship between the researcher and their subjects (or informants) is terminated and not easily restarted. Specifically, they contend that such a relationship disruption enables researchers to disengage (physically, mentally, and emotionally) from the field, thereby facilitating the abstraction required for theorizing; provides the aggravation needed for abductive research; and takes researchers out of their comfort zone as the foundation for an "aha" moment. Indeed, when engaging in inductive research, the challenge for entrepreneurship scholars is stepping back from the data (i.e., the trees) to obtain a more abstract perspective (i.e., see the forest) for theory building.

Pragmatic Empirical Theorizing

In the discussion above, we reviewed existing methods for successfully identifying an anomaly and then generating, building, and assessing an entrepreneurship theory as expressed by leading theorists. A recurrent issue in this literature, however, is the ongoing tension between how much emphasis should be given to prior versus emerging knowledge, or how much emphasis should be given to the existing theoretical literature versus empirical observation. There is a growing concern—detailed most adeptly by Hambrick (2007)—that the management field's obsession with theory often hinders the publication of research exploring new but undertheorized phenomena, which many also believe is true for the entrepreneurship field. Hambrick (2007: 1346) contends that,

> A theory fetish prevents the reporting of rich detail about an interesting phenomenon for which no theory yet exists. And it bans the reporting of facts—no matter how important or how competently generated—that lack explanation, but that once reported, might stimulate the search for explanation.

Similarly, Harris et al. (2013: 451) propose that "many of the interesting gaps to be filled by empirical research may be in phenomenological understanding rather than in questions about theoretical axioms."

Many renowned scholars join Hambrick in arguing that theory is progressively becoming a limiting instead of a generative tool for building new knowledge in management. For instance, Miller et al. (2009) characterize top-tier management journals' approach as narrowing the idea of what a contribution to theory is (i.e., applying a straightjacket) to topics that fit neatly within popular contemporary theories and that enable the development and modification of those theories. Sutton and Staw (1995: 381) support Miller's notion of theory as a straightjacket, noting that "the problem with theory building may also be structural" in that scholars can only interpret data through the lens of existing theory. Consequently, "the craft of manuscript writing becomes the art of fitting concepts and arguments around what has been reassured and discovered."

As Suddaby (2014a, 2014b) observes, Hambrick's concerns reflect the deep-rooted frustration and tension between rationalism and empiricism. Rationalists contend that knowledge is most valuable when it is abstracted into general principles and relationships—namely, theory. Rationalists

deride the notion that a new phenomenon can be understood without theory, instead arguing that what makes a phenomenon new can only be determined by explaining the existing literature. Rationalists build new knowledge mainly via deduction from past knowledge. However, many scholars view this conforming effect of prior theory as a constraining straightjacket that necessitates a contribution to theory.

Empiricism is the alternative to rationalism. It centers on direct empirical observation without the constraining influence of theory. In empiricism, knowledge is accumulated via induction (i.e., building observation on observation, fact on fact), with purist empiricists arguing that prior theory obscures observation and hinders the development of knowledge through brute facts. This perspective—as evidenced in Hambrick's (2007) and others' (e.g., Pfeffer, 2014) fervent appeals for less theory—is perhaps best captured in Kerr's (1998, in Bern, 1987: 173) reflection:

> There are two possible articles you can write: (1) the articles you planned to write when you designed your study, or (2) the article that makes the most sense now that you have seen the results. They are rarely the same and the correct answer is (2). . . . The best journal articles are informed by the actual empirical finding from the opening sentence.

How can scholars make sense of these two contradictory views of theory? We provide a middle ground between these two extremes that we term *pragmatic empirical theorizing*. This view primarily draws on the well-known founder of American Pragmatism, Charles Saunders Peirce (1958). Pragmatic theorizing focuses on abductive reasoning as a practical compromise between induction and deduction that more accurately captures the authentic process driving theorizing.

With pragmatic empirical theorizing, entrepreneurship scholars can uncover and engage interesting findings as a *transparent step* in the hypothetico-deductive process (not as the conclusion of all steps in the process). Interesting and novel facts, such as anomalies that current theories do not readily explain, are critical *because* they trigger an investigation. Indeed, such anomalies spur abduction, which is fundamental to the logic of discovery (at least in the pragmatic tradition; Hanson, 1958). Accordingly, theorizing can be triggered by interesting facts about entrepreneurial phenomena. Instead of merely outlining the interesting facts upon which other scholars can theorize, the entrepreneurship scholars who uncover these interesting facts can make more significant

contributions by making initial attempts at providing explanations for them. In other words, they have the opportunity to offer a story to explain the "why" of the relationships they discover.

Unlike presenting post hoc hypotheses as a priori (PPHA; also known as hypothesizing after results are known [HARKing]), the pragmatic theorizing approach to exploring entrepreneurial phenomena presents post hoc propositions as post hoc—namely, it entails transparently theorizing from results. This approach overcomes many concerns related to PPHA because many of these concerns are attributable to a lack of transparency (or deception) about the process. That is, many of the problems related to PPHA stem from misleading audiences that the theorizing preceded the findings. With pragmatic empirical theorizing, however, scholars can fulfill both the possibility of discovering anomalies and the need for building theory by unmasking the process. We do not naïvely believe that this approach will not require a shift in the research mindset of authors, reviewers, and editors. Nevertheless, the need for new discoveries, the emphasis on theory, and the potentially prevalent practice of PPHA indicate that the scholarly entrepreneurship community may be open to pragmatic empirical theorizing—an approach that harnesses empirical insights from interesting findings on entrepreneurial phenomena to spur and inform a preliminary conjecture and adjustments to that conjecture while also documenting and reporting crucial steps in this process.

In this approach, facts can play a critical role in triggering (i.e., spurring and informing) theorizing to provide a tentative (and potentially highly speculative) explanation for the focal data. This theorizing can then be combined with the facts to form a theoretical contribution to the entrepreneurship literature. In other words, theorizing does not need to be omitted from a paper and reserved for future research. Instead, we suggest that the entrepreneurship scholar—as the discoverer or creator of the anomaly at hand—has the opportunity to present the first explanation. Indeed, identifying a problem and taking the initial step toward its resolution provide a sturdier foundation for contributing to understanding than solely recognizing a problem. Of course, offering a potential explanation does make one susceptible to being challenged and having one's efforts replaced by a superior explanation. However, if this occurs, we should consider ourselves lucky. As a theorizing story evolves across ensuing papers, so does its original contribution—or at least it should.

Although scarce, some recent examples of empirical theorizing on entrepreneurial phenomena have emerged. Specifically, entrepreneurship scholars have used qualitative comparative analysis (QCA) and similar techniques to investigate how configurations of antecedents are connected to entrepreneurial outcomes and then offered theoretical explanations for the resulting findings. Muñoz and Dimov (2015), for instance, apply fuzzy-set QCA (fsQCA) to explore how entrepreneurs' previous sustainability-related knowledge, sustainability orientation, entrepreneurial intentions, desired value creation, and perceived social and business support influence how they articulate sustainability-related venture ideas, actions, and relationships. Using the fsQCA technique, the authors reveal two distinct paths (conformist/insurgent) that sustainable entrepreneurs take to establish their ventures. They then draw on these findings to theorize the role distinct antecedent configurations play in entrepreneurs' choices. In a similar vein, Douglas and colleagues (2021) use fsQCA to investigate the influence of different individual-level factors on the formation of entrepreneurial intentions, finding complementary, substitutive, and suppressive conditions. Based on these empirical findings, the authors advance propositions on the formation of entrepreneurial intentions. Finally, Debrulle et al.'s (2021) recent work explore how different configurations of founders' resources, venture strategies, and environmental conditions impact venture performance. Due to the complexity involved in theorizing configurational relationships, the authors begin with an empirical investigation to uncover distinct configurations associated with high venture performance and then go on to develop theoretical explanations for their findings and divergence from prior theory.

Ultimately, we concur with Hambrick's (2007) notion that facts can trigger theorizing. We hope entrepreneurship scholars (as well as reviewers and editors) begin to realize that interesting findings can lead to theorizing within a single paper instead of having to be investigated across multiple papers. Stated differently, data does not have to follow theory. Indeed, when data highlights an unfulfilled expectation (i.e., an explanation for an empirical phenomenon), it can trigger an abductive process that "works backward to invent a... theory that would make the surprise meaningful.... [Abduction] assigns primacy to the empirical world, but in the service of theorizing" (Van Maanen et al., 2007: 1149; see also Swedberg, 2014). Although informative descriptions can spark interesting questions, theorizing is necessary to provide novel insights.

Thus far, the notion of what constitutes a contribution has largely been based on the insight provided by a paper (an insight that is original and useful; Corley & Gioia, 2011). However, future contributions are likely to emerge from entrepreneurship scholars transparently presenting interesting findings and subsequently theorizing on potential explanations (instead of offering these findings as theory testing or providing only interesting findings).

Conclusion

In this chapter, our goal was to review and integrate the rapidly expanding literature on theorizing. By focusing on what prominent theorists have to say about the theorizing process, we aimed to accrue knowledge on the tools used to generate exceptional theory that explains entrepreneurial phenomena. Further, we hoped to reinforce the idea that creative theory building is not exclusively reserved for elite or experienced scholars; rather, it is a technical skill that all scholars can learn and apply. In particular, we identified and expounded upon several activities that can generate influential theories. The first activity we presented—the *theorizing trigger*—requires aspirant theorists to identify a tension that will drive the remainder of the theorizing process. Indeed, theories are often triggered by tensions between what scholars know and what they observe. Accordingly, we outlined a variety of tensions that have previously led to solid theory. Next, we discussed the activities of developing the main character(s) (or construct[s]) for a theory, constructing the context or setting, and actively engaging the audience's imagination by introducing plots and themes. Finally, we detailed how entrepreneurship scholars need to choose story elements to construct the narrative arc of a theory—namely, to justify and evaluate the theory.

Furthermore, after reviewing the literature on theorizing, we proposed a theorizing approach that we believe has significant promise to produce new entrepreneurship theories—pragmatic empirical theorizing. This approach builds on the idea that interesting findings can be an important source of new theories, and it overcomes the lack of transparency resulting from PPHA (i.e., presenting post hoc hypotheses as a priori). We are interested in what others think about pragmatic empirical theorizing and hope to see this approach adopted and eventually accepted as a legitimate tool for entrepreneurial theorizing.

Each of the tools we described necessitates a high level of skill and insight and likely involves a degree of detail going far beyond the scope and space of this chapter. Here, we hope to start the conversation required to make theorizing a point of continual reflection in the scholarly entrepreneurship community. We offer merely an initial step in the form of a common language and a causal process that necessitate further clarification and elaboration by a group of like-minded scholars. Like all research endeavors, advancing entrepreneurial theorizing is a collective effort. We hope this concise account provides the basis for an ongoing and engaging conversation.

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Me-Search for Generating Ideas
for Entrepreneurial Theorizing

This chapter focuses on future entrepreneurial theorizing that will contribute to the knowledge of entrepreneurial phenomena based on our prior work (Shepherd et al., 2021). In particular, we put forth me-search as an approach scholars can take to produce streams of entrepreneurial theorizing that they are both able and driven to pursue and that have the highest chances of offering something new and valuable to the field. This approach directs scholarly attention toward the future based on one's personal experiences (see Wiklund, 2016). More specifically, me-search is useful for generating research opportunities that one has idiosyncratic knowledge about and is motivated to persist with until publication. While we have not always taken this approach, me-search has led to research outcomes for which we are most proud.

For instance, Dean Shepherd harnessed his father's experience of business failure to generate a research stream on the role of grief in learning from failure. Similarly, he used his Auntie Shirley's experience of losing her house to a bushfire to generate a research stream on compassion organizing and resilience. He also used his coauthors' experiences to

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investigate their me-search on veterans disabled in combat, Palestinian refugees in Lebanon, people living in the slums of India, expedition cruise ships in Norway, the refugee crisis and terrorist attacks in Germany, inclusive growth in rural India, and so on.

As another example, Johan Wiklund's experience with mental health issues motivated him to explore entrepreneurship's connection to psychiatric diagnoses, mental well-being, and diversity. Johan began this work nearly a decade ago and has maintained it as his main research focus since. This me-search has resulted not only in numerous fruitful working relationships in which scholars, entrepreneurs, and students have shared their experiences and built new knowledge but in a new research stream at the intersection of entrepreneurship and clinical psychology.

For Dimo Dimov, the shifts, serendipity, and unpredictability of his life experiences have continually highlighted entrepreneurship as a route to a different future. Reflecting on his past selves with the clarity of hindsight—a schoolboy studying diligently to become a diplomat, a young professional establishing a career in the hospitality industry, a hotel finance director attending a Ph.D. program induction with scant knowledge of what academia entailed—Dimov has centered his research on the forward-looking, hopeful stances from which entrepreneurs construct futures that did not formerly exist.

Finally, Holger Patzelt has been interested in nature and the sciences since childhood, which drove him to study chemistry and earn a Ph.D. in molecular biology before beginning his academic career in entrepreneurship. When he began his research on entrepreneurial ventures, he focused on alliance building in the biotechnology industry, a topic that benefited from his understanding of these ventures' strategies and the ways the features of their underlying technologies affected those strategies. Holger's me-search has also involved exploring other topics with coauthors, such as the refugee crisis in his hometown of Munich.

As our experiences reveal, including me-search (and coauthors' me-search) in one's research portfolio can produce novel and useful contributions to the field of entrepreneurship. However, we also acknowledge some difficulties with conducting me-search. First, one principle of me-search is that scholars can mobilize their idiosyncratic knowledge to offer unique insights into a phenomenon and then conduct and publish research to explain that phenomenon. However, scholars must find a balance between the personal nature and universality of the experience at hand. For example, conducting me-search related to the

COVID-19 pandemic is challenging because most people throughout the world, including most scholars, have some experience with the pandemic. As a result, scholars who write about COVID-19 may have difficulty convincing reviewers and editors that their perspective is relevant. Second, in the case of significant ubiquitous events, scholars should be wary of jumping on the bandwagon of a popular subject that may quickly abate. Returning to our example, as of June 2021, researchers have inundated journals with COVID-19 papers. Finally, the practical and theoretical importance of research may be short term. For instance, even if a COVID-19 paper is accepted for publication, its longevity may be short as (a new) normality returns after the pandemic. For example, in one paper (Shepherd & Williams, 2022), we highlighted Peloton as a resilient organization yet that same organization is now struggling.

Although challenging, none of these difficulties are new. Indeed, scholars confront these challenges when contemplating a new research stream, especially one related to a popular topic. We do not highlight these issues to deter research; rather, we hope to encourage scholars to me-search important life events by providing recommendations to overcome (or minimize) these research difficulties. Our recommendations in this chapter involve problematizing, abstracting, (re)combining, inducting, abducting, and contextualizing. In the remainder of this chapter, we explain these recommendations in more detail and propose a research agenda that considers where the community of entrepreneurship scholars has been as well as productive paths forward.

Me-Search and Problematizing the Entrepreneurship Literature for Entrepreneurial Theorizing

Problematization is a "methodology for identifying and challenging assumptions that underlie existing theories and, based on that, generating research questions that lead to the development of more interesting and influential theories within management studies" (Alvesson & Sandberg, 2011: 248). Scholars can harness me-search as a useful tool to problematize the entrepreneurship literature and associated theories to formulate research questions that are interlaced with their personal motivation, the foundation for a contribution, and their focal audience. While

problematizing the literature using me-search can enable scholars to question weakly held assumptions, it can also lead to research questions that challenge people's strongly held assumptions. Challenging strongly held assumptions in this way is a more difficult path to publication because readers, who include editors and reviewers, are often reluctant to let go of such assumptions. Instead, scholars need to seek the Goldilocks position—namely, seek interesting topics falling somewhere between the obvious and the absurd (Davis, 1971). Our goal is not to dissuade scholars from challenging firmly held assumptions; we merely wish to provide a realistic understanding of the challenges associated with doing so.

For example, using his experience with the failure of his father's business, Dean Shepherd problematized the literature on learning from failure to challenge the weakly held assumption that learning from failure occurs immediately and automatically. He found that failure generates grief and that in response, entrepreneurs must undergo a process of recovery before learning from the experience. Similarly, using his bushfire experience (that took Auntie Shirley's house), Dean and Trent Williams problematized the venture emergence literature and challenged the assumption that it takes time (months or years) for ventures to emerge. Their me-search led them to theorize about the rapid formation of new ventures (within hours or days) motivated by individuals' compassion. Johan Wiklund used me-search and his experience to problematize the entrepreneurship literature on human capital and capabilities and much of the psychology literature and challenge the assumption that ADHD is a disability. Through his work, he demonstrated that ADHD can be a resource that creates advantages in certain entrepreneurial contexts. Dimo Dimov's me-search led him to problematize the relationship between scholar and entrepreneur—moving from subject-object to subject-subject. His work revealed that just as one's past self is not a simple object of explanation for one's future self, an entrepreneur is not an anonymous object that can be defined or validated through observation. Thus, instead of looking *at* entrepreneurs, scholars can look *with* entrepreneurs to offer alternative perspectives on entrepreneurship scholarship and entrepreneurial phenomena. Finally, Holger Patzelt problematized the literature exploring entrepreneurial resource acquisitions based on his experience observing prosocial ventures that provided aid to refugees in his hometown. After a series of terrorist attacks that were purportedly committed by refugees, these ventures confronted an abrupt decrease in the legitimacy of their aid activities, a

finding that challenged the assumption in the literature that such ventures operate under relatively stable resource conditions. Each of these examples shows how scholars can use me-search to problematize a literature or theory to formulate and explore salient research questions. Based on the above, we offer the following:

Recommendation 1 Use me-search to problematize entrepreneurship theories in the literature to formulate research questions that challenge scholars' weakly (and potentially firmly) held assumptions.

Abstracting from Me-Search for Entrepreneurial Theorizing

Me-search is based on oneself because scholars are typically interested in their own experiences, which also likely applies to readers: "I am interested in reading about you if I can learn something about myself." At the same time, scholars are interested in generalizing explanations and models beyond single individuals' experiences, so me-search confronts a challenge similar to inductive research based on a single case. With both approaches, a researcher must abstract from raw data to generate aggregate theoretical constructs and then link those aggregate constructs to form a more generalizable or easily transferable model. Establishing such generalizability can be especially difficult with me-search because the experiences this approach draws on are deeply personal, and it is often challenging to elicit the general from the specific and personal. However, scholars can take me-search and abstract it to wider constructs and relationships by systematically comparing how their unique personal experiences relate to more general ideas and theories. In turn, readers will be able to more readily contextualize scholars' abstract theorizing and apply it to their personal or research experiences. For instance, Shepherd (2003: 320) describes his personal experience of his father's reaction to the failure of his family business:

> When our family business died, my father exhibited a number of worrying emotions. There were numbness and disbelief that this business he had created twenty odd years ago was no longer "alive." There was some anger toward the economy, competitors, and debtors. A stronger emotion than anger was that of guilt and self-blame: he felt guilty that he had caused the failure of the business, that it could no longer be passed on to my

> brother, and that, as a result, he had failed not only as a businessperson but also as a father. These feelings caused him distress and anxiety. He felt the situation was hopeless and became withdrawn and, at times, depressed.

In the rest of the article, however, he theorizes more abstractly about grief, emotion regulation, learning, and motivation in the context of failure.

Similarly, Wiklund et al. (2016) conducted interviews with entrepreneurs diagnosed with ADHD and then used the data to develop a conceptual model that relates ADHD symptoms to entrepreneurial decision-making, action, and outcomes. Although the model was expressly constructed from empirical observations and interviews, the findings substantiate the authors' personal experiences with decision-making, action, and outcomes in similar situations. As all of these examples highlight, a tangible set of experiences can be collected, analyzed, and then abstracted to offer a more generalizable or transferable theory. Accordingly, we offer the following:

Recommendation 2 Abstract from me-search to develop theoretical constructs and relationships that are more generalizable or transferable.

COMBINING ME-SEARCH WITH KNOWLEDGE ELEMENTS AT HAND FOR ENTREPRENEURIAL THEORIZING

Scholars generally begin their me-search with a personal experience or with a phenomenon. They must then determine how to approach this phenomenon. Namely, me-searchers can typically apply numerous theoretical lenses to provide a perspective of and explain a phenomenon, but how can they determine the best theoretical lens(es) to adopt? When me-searching a phenomenon, the first step is to reflect on the theories and literatures (constructs and relationships) with which one is most familiar, as the focal me-searcher likely resonates with this material on a personal level. As a result, there is likely an inherent fit between the phenomenon and the theory, with the me-searcher serving as a bridge between the two. The same is likely true for the methods, existing data, and set of coauthors the me-searcher is most familiar with. Me-search thus entails the focal scholar considering the resources and capabilities he or she has at hand and then combining and recombining them with personal

experience(s) to create a research opportunity and a plausible theoretical story of the phenomenon under exploration. This process is similar to how entrepreneurs engage in bricolage (Baker & Nelson, 2005) to "assemble various knowledge elements into new organizational theories" (Boxenbaum & Rouleau, 2011: 273). Accordingly, we propose that me-search highlights some of the knowledge elements researchers have at hand and can facilitate experimentation (perhaps as thought experiments) with different (re-)combinations of these knowledge elements to build a conceivable theoretical model.

Indeed, me-search can anchor disciplined imagination (Weick, 1989) to enable researchers to (re-) combine different knowledge elements to build a theoretical model. In other words, scholars can explore whether a particular combination of knowledge elements (e.g., from a thought experiment) seems plausible given their personal experiences with a phenomenon. Through this highly creative and relatively costless process, researchers are likely to identify a research opportunity that they are already somewhat capable of undertaking and motivated to pursue. For instance, both Shepherd and Williams (2014), Williams and Shepherd (2016) and Mittermaier et al. (2021, 2022) used their me-search to help people in need by combining it with their existing knowledge elements on startups, entrepreneurial action, and cognition to generate research opportunities on compassionate venturing, resilience, and resource acquisition. This approach to identifying a research opportunity also shed light on other knowledge elements these authors needed to obtain to develop and communicate conceivable theoretical models—a process that continues today.

Similarly, ADHD is a collection of traits that are visible (and frequently diagnosed) in childhood. These traits and the lived experiences associated with them tend to influence individuals with the disorder throughout their entire lives. Their insight into how early ADHD potentially impacts individuals' outcomes decades later triggered Wiklund's and coauthors' curiosity about how other features of childhood may shape adult life in the entrepreneurial context. Combining this curiosity with their knowledge elements drove them to explore the impact of childhood adversity on entrepreneurial outcomes.

Finally, Dimov reflected on the open-ended nature of the entrepreneurial journey with the acting entrepreneur as the focal point to explore new perspectives and expressive language, thereby going beyond the familiarity of his Ph.D. training. By investigating complexity

science, design science, and the philosophy of mind and language, he uncovered new ways of seeing and comprehending the entrepreneurial experience. While entrepreneurial opportunities have been his primary research theme over time, he has continuously refreshed the topic with each new perspective.

As these examples illustrate, me-search provides knowledge elements that me-searchers can then combine with other at-hand knowledge elements to create research opportunities that they find interesting and have the ability to exploit. Accordingly, we offer the following recommendation

Recommendation 3 Use me-search to uncover knowledge elements that can be combined and recombined with other at-hand knowledge elements to develop a plausible theoretical model.

Inducting from Me-Search for Entrepreneurial Theorizing

When a researcher has difficulty combining their me-search knowledge elements with those from prior literature (e.g., the research is so unique or novel that it is relatively distant from prior literature) or the research question resulting from me-search challenges people's firmly held assumptions, the scholar may need to draw upon inductive research methods to pursue the me-search opportunity. Taking an inductive approach will require some scholars to learn a new research method, which in turn opens new paths for "seeing" and "constructing" research opportunities. However, while it adds a new tool to the focal scholar's toolbox and offers another research lens to view the world, such learning is not risk free.

Like all researchers, inductive researchers have certain expectations for constructing and communicating inductive papers (with different "camps" within this broad method). As a result, it will take time for a scholar new to the inductive approach to learn a new method and the nuances of publishing these studies. We offer simple advice to help facilitate this process: find exemplars of inductive studies, study them, and follow their idiosyncrasies in constructing and communicating inductive theory. For instance, Mike Haynie (a former captain in the Air Force) was an instructor at the Airforce Academy, an experience that made him realize he had trained people to go to war but not to come home. To rectify this situation, he developed an entrepreneurial boot camp for

military veterans who were injured in combat in Afghanistan and Iraq (me-teaching and me-service). Haynie and Shepherd (2011) decided to me-search it. They soon realized an inductive approach was the only way they could explore the research questions that interested them, but they were inexperienced with inductive methods. Thus, to overcome their lack of knowledge, they read different texts on inductive methods and compared and contrasted various inductive approaches (Eisenhardt studies, Gioia studies, and Langley studies). Although this learning took extensive effort, the process and outcomes were highly rewarding, and the experience opened Shepherd's eyes to the promising nature of this method for pursuing other me-search opportunities. Therefore, we offer the following based on the above reasoning:

Recommendation 4 Employ inductive research methods and alternate data sources to construct a plausible theory from me-search that is highly novel.

Abducting from Me-Search for Entrepreneurial Theorizing

Me-search can result in a hunch or the feeling that something else is going on than what appears on the surface, that conditions have changed, or that an anomaly has arisen that existing theories cannot explain. In turn, a hunch can initiate a process of inquiry called abduction—namely, "the creative act of constructing explanations to account for surprising observations in the course of experience (hypothesis generation)" (Hansen, 2008: 457). As a process of inquiry, abduction begins with a guess and then uses doubt to stimulate further inquiry (Locke et al., 2008; Shepherd & Sutcliffe, 2011). However, because guesses can lead to many dead ends before a complete path is found, finding a plausible theoretical explanation for the phenomenon at hand can be a slow process. Moreover, as of yet, most journals do not fully accept abductive research (except the *Academy of Management Discoveries*). Shepherd and Suddaby (2017: 59) attempt to make abduction more palatable by offering pragmatic empirical theorizing as "an approach that uses quantitative empirical findings to stimulate theorizing." This form of empirical theorizing enables me-searchers to "scratch an itch" by investigating a hunch empirically and then theorizing to offer a reasonable explanation of the resulting

empirical findings. As discussed in Chapter 1, this approach to communicating exploratory research is transparent about how the research was conducted. If it becomes accepted and mainstream, this approach to theorizing should eradicate the unethical practice of hypothesizing after results are known (i.e., HARKing).

For instance, due to his work with entrepreneurship policy in various capacities, Johan Wiklund is interested in entrepreneurial ecosystems as well as whether and how large-scale government spending on supporting entrepreneurship leads to intended benefits. Because these ecosystems are complex and the government spending question is broad, generating narrow hypotheses to address this topic is particularly challenging. Thus, rather than proposing hypotheses and conducting traditional regression analyses, he and his colleagues performed exploratory bivariate analyses to explore how a specific national entrepreneurship support program panned out. They then used the resulting findings as a basis for attempting to build a plausible theory.

Abduction represents a major thinking logic for design science and can use theory to look into the future (Romme & Dimov, 2021). Accordingly, the very act of studying entrepreneurship can be seen as a design process to produce knowledge that helps entrepreneurs think forward and consider their experiences. By framing entrepreneurship as an open-ended, iterative journey in which opportunities are seen as design artifacts that entrepreneurs articulate and convey using language, scholars can bring theory and practice into better alignment. Accordingly, we offer the following:

Recommendation 5 Use pragmatic empirical theorizing to investigate a hunch, an anomaly, or anything that inspires a guess of personal interest.

Me-Search to Contextualize Entrepreneurship Research for Entrepreneurial Theorizing

By using me-search, scholars can also gain insights into the role of context to extend the boundaries of established theories or add context to prior models. Context refers to "situational or environmental stimuli that impinge upon focal actors and are often located at a different level of analysis from those actors" (Johns, 2018: 22). According to Welter (2011), a significant portion of entrepreneurship research lacks consideration of

context, so future work needs to be more contextualized. Entrepreneurship scholars can thus use me-search to gain a deeper understanding of context and can then use that contextualization to create new research opportunities. For example, a me-searcher could apply an existing theory originally developed in another context to the entrepreneurship context, which is often more extreme. Johan Wiklund, for instance, studied ADHD and other cognitive conditions frequently considered liabilities in the conventional work context and then theorized how they can become beneficial in certain entrepreneurial contexts. Not only did his me-search into these cognitive conditions open up an important research stream on neurodiversity, but it also shifted our assumptions from the normal work context to specific entrepreneurial contexts, which differ in important ways.

Me-search can also reveal the contexts in which theories do not apply. For example, if a current theory seems to explain one's thoughts, feelings, or actions, it can be valuable to ask, "When doesn't this theory apply to me?" Exploring when a theory does not apply via me-search can add a boundary condition to or extend a theory by adding a moderator or mediator to the associated model. Therefore, research can facilitate theorizing by infusing context into models, but it is necessary to keep in mind our earlier point about the importance of abstracting me-search. Balancing contextualizing through me-search and abstracting from the me-search is thus essential. Based on this reasoning, we offer the following:

Recommendation 6 Use me-search to include context as a moderator or mediator to create boundary conditions or extend existing theories.

Now that we have introduced me-search as a useful way to generate interesting and useful future research, we turn to the future research opportunities offered by prominent scholars in the field (and us).

A Research Agenda of Me-Search for Entrepreneurial Theorizing

In line with the model of me-search we presented above, in the following, we discuss an assortment of recent papers to propose a me-search-based research agenda for theorizing on entrepreneurial phenomena.

Shepherd and Gruber (2021) came to the idea for their paper from recognizing the popularity of the Lean Startup framework among practitioners and from Shepherd's desire to teach the framework in class.

Dean Shepherd generally strives to teach material that is grounded in academic literature, but he found inadequate scholarly attention on this important topic. Marc Gruber has a similar interest in this content and has written a practitioner text on opportunity navigation, so they realized there was an opportunity to expand the framework to the academic context. Together, they set out to build on the practitioner literature on the Lean Startup framework and put some scholarly heft behind some of the practitioner assertions. Focusing on the Lean Startup's building blocks—navigating market opportunities, designing business models, validating learning, using minimum viable products, and pivoting versus persevering—Dean and Marc offered a research agenda for scholars with the belief (and hope) that this future research will help to close the academic-practice gap they initially recognized.

The foundation for George et al. (2021) was built on Gerry George's interest in tackling grand challenges by focusing on the elements of two major trends. Specifically, these authors combined the trend of concern over the climate crisis and the trend of using digital technologies to investigate how digital technologies can help solve the climate crisis. They explained that although most management and entrepreneurship scholars have not given much attention to the climate crisis, practicing entrepreneurs have. As such, this study begins to close the gap between academia and practice on an important topic. In line with the me-search ideas outlined earlier, George and colleagues combined their *personal interest* in solving grand challenges and their *knowledge* of digital technologies and innovation with the climate crisis to *abstract* from their data. They ultimately revealed six managerial problems hampering sustainability and discussed how digital technologies can serve as the pathways and tools to address these problems.

Although the authors of the two previous studies looked to practice to inform scholarship with the ultimate goal of informing practice and reducing the academic-practice divide, Dimov et al. (2021) took a different approach. They viewed the academic-practice divide as a linguistic barrier stemming from different practical interests. In other words, these authors believed the disconnect between entrepreneurs and entrepreneurship scholars is due to a lack of talking. Specifically, entrepreneurs are concerned with what they should do and talk about their specific situations using the first person. Entrepreneurship scholars, on the other hand, observe entrepreneurs to explain what they do and talk about them to other scholars using the third person. Dimov and

colleagues proposed a second-person approach to establish a unified "we" voice between the academic and practitioner spheres that would positively impact both and thus close the gap between them. To successfully use this second-person approach to talk with entrepreneurs, scholars need to balance passively observing entrepreneurs with actively engaging them to obtain insights into their thinking and their perceptions of important phenomena.

Sarasvathy (2021) challenged some commonly held assumptions in entrepreneurship research to in turn develop theoretical tools to address some of the wicked problems of the twenty-first century. In particular, she challenged two assumptions: (1) that entrepreneurs should pursue the goal of growing their ventures to become large organizations and (2) that the churn involved in creating many new ventures is best for an economy. Indeed, these assumptions may be firmly held, so it will be interesting to see how other scholars respond to the associated challenges. Countering these assumptions, Sarasvathy proposed the notion of a middle class of businesses—namely, new ventures that grow to medium size (but no larger) and persist over time. The author further suggested that these middle-class businesses can help co-create other strong businesses and communities that in turn produce improved well-being. Sarasvathy recommended future research focus on firm endurance as the dependent variable of entrepreneurship and explore intersubjectivity and education.

Conclusion

This chapter reflects the move from the need to project external legitimacy within academia (i.e., the old "distinct domain versus phenomenon" conversation) to the need to fulfill academia's promise in terms of personal and societal impact. In other words, scholars have shifted from focusing on establishing legitimacy to reflecting the rich and complex social landscape within which entrepreneurship unfolds. Consistent with Ashby's law of requisite variety (1956), which proclaims that addressing the diversity of problems in the world necessitates a repertoire of equal diversity, we have broadened our theoretical repertoire to acknowledge entrepreneurship as a juncture of questions of practice, technology, social context, economic geographies, and so on. We hope our guidance on conducting me-search provides scholars the tools and the nerve to capitalize on their own experiences to enhance their theorizing and reveal new

insights into entrepreneurial phenomena. Moreover, we hope that leading scholars' reflections on where the field of entrepreneurship has been and where it is going spark future interest and work.

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Anthropomorphizing for Entrepreneurial Theorizing

In this chapter, we explicitly describe a controversial theorizing tool—anthropomorphizing. In doing so, we highlight the usefulness of this tool for furthering our understanding of entrepreneurial phenomena by combining loose and strict thinking (as suggested by Bateson [1941] in the quote below) while also acknowledging its limitations (as expressed in the Allport [1924] quote below).

I want to emphasize that whenever we pride ourselves upon finding a newer, stricter way of thought or exposition; whenever we start insisting too hard upon "operationalism" or symbolic logic or any other of these very essential systems of tramlines, we lose something of the ability to think new thoughts. And equally, of course, whenever we rebel against the sterile rigidity of formal thought and exposition and let our ideas run wild, we likewise lose. As I see it, the advances in scientific thought come from a combination of loose and strict thinking, and this combination is the most precious tool of science. (Bateson, 1941)

Impressed by the closely knit and reciprocal nature of the social behavior, some writers have been led to postulate a kind of "collective

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mind" or "group consciousness" as separate from the minds of the individuals of who the group is composed. No fallacy is more subtle and misleading than this. It has appeared under numerous guises; but has everywhere left the reader in a state of mystical confusion. (Allport, 1924, p. 4)

Anthropomorphizing refers to imbuing non-human agents (e.g., computers, robots, and new ventures) or non-human processes with human characteristics, motivations, intentions, and/or emotions (Epley et al., 2007). While some find this theorizing tool useful, others seem to loathe it, thus making it particularly controversial in the entrepreneurship field. However, as prior research has demonstrated, anthropomorphizing can be vital to developing influential entrepreneurial theories. For example, the importance of anthropomorphizing to the management field (also of relevance to entrepreneurship) is illustrated in the following four award-winning theory papers. First, Van de Ven and Poole (1995) proposed lifecycle theory as one of the four building blocks to explain change in organizations. This notion of lifecycles builds on knowledge of human development and has been applied to organizations, products, and ventures. Second, Adler and Kwon (2002, p. 18) explained the anthropomorphic roots of their model of social capital (including relationships between units within an organization and between organizations): "The core intuition guiding social capital research is that the goodwill that others have toward us is a valuable resource. By 'goodwill', we refer to the sympathy, trust, and forgiveness offered us by friends and acquaintances" (see also Nahapiet & Ghoshal, 1998). Third, McGrath (1999) drew on knowledge about human psychology to understand firms' perceptions of, distaste for, attributions of, and desire to avoid failure. Finally, when exploring change in an organization's identity, Corley and Gioia (2004) acknowledged Albert and Whetten's (1985) original theorizing on organizational identity, which was modeled after important aspects of individual identity.

Beyond these examples, Walsh and Ungson (1991) more generally acknowledged anthropomorphizing in theories that extended work on humans to organizational phenomena, such as theories of organizational learning (Fiol & Lyles, 1985; Starbuck & Hedberg, 1977), including by entrepreneurial firms (Phan et al., 2009; Zahra & Hayton, 2008). Further, Andersen (2008) provided more examples of anthropomorphizing in studies on healthy organizations (Cooper & Cartwright,

1994) (and healthy industries; Miles & Snow, 1986), organizational death (Shepherd, 2009), organizational personality (Hellriegel & Slocum, 1992), and organizational cognition (Huff et al., 2016; Walsh, 1995).

Anthropomorphizing has been a prominent means for enhancing theorizing in the literature, but it is often disparaged, primarily when applied in "scientific" research. For instance, Timberlake (2007: 140) contended that the "primary dependence on unshackled anthropomorphizing for our knowledge about other species is not a promising direction for science to go... [because it can] lead toward automatically adjusting and confirming just-so stories." In a similar vein, Wynne (2007: 154) argued that "anthropomorphizing runs deep and seems to require repeated weeding out" and that "the name anthropomorphizing has a seven century history of standing for an error of thinking." Some scholars have gone as far as including the term "error" when defining anthropomorphizing, emphasizing the prevalence of this error in theorizing about organizations (Andersen, 2008; Schneider & Angelmar, 1993). Indeed, such scholars have claimed that anthropomorphizing often imposes irrelevant information (about humans) onto a focal target (i.e., a non-human agent) and excludes certain information (about humans) so it is not applied to the target (Krippendorff, 1975).

Thus, anthropomorphizing has played a useful role in generating theories that advance knowledge of entrepreneurial phenomena (especially entrepreneurial organizations); however, some still view this tool with concern, distrust, and even scorn. In this chapter, we aim to remove some of the mystery around how anthropomorphizing informs and motivates theorists as they attempt to make guesses about, construct, and tell plausible stories about entrepreneurial phenomena. We take an abduction and sensemaking perspective to investigate the usefulness of anthropomorphizing in generating, developing, and communicating new entrepreneurship theories. Moreover, we center our investigation on ideas that have been well established in the literature—namely, entrepreneurial orientation (e.g., Covin & Slevin, 1989; Lumpkin & Dess, 1996) and organizational knowledge (e.g., Aldrich & Kenworthy, 1999; Zahra et al., 2006), including organizational memory (Dai et al., 2016; Walsh & Ungson, 1991)—and explore their origination and development. In doing so, we hope to achieve three main goals.

First, recent studies have highlighted the value of abduction in the theorizing process, exploring how this process can begin with a guess and progress from doubt (Locke et al., 2008; see also throughout this book).

According to the pragmatic perspective, any initial guess can serve as the framework for further inquiry, theorizing, and understanding (Hansen, 2008). While we appreciate the freedom granted by the relative unimportance of an initial guess, we also argue that individuals' experiences with and knowledge of humans (i.e., themselves and others) can be strong stimuli in triggering abduction and can enrich scholars' early guesses, thereby increasing their chances of revealing novel insights about (non-human) entrepreneurial phenomena. Indeed, long ago, Charles Peirce noted the following:

> I have after long years of the severest examination become fully satisfied that, other things being equal, an anthropomorphic conception, whether it makes the best nucleus for a scientific working hypothesis or not, is far more likely to be approximately true than one that is not anthropomorphic. (Peirce et al., 1935)

Thus, in this chapter, we explore how scholars have used anthropomorphizing for abductive theorizing about organizations' entrepreneurial orientation and knowledge.

Second, over the past decade, scholars have stressed the need to consider the mechanisms underlying entrepreneurship theories (Kim et al., 2016; Shepherd, 2015)—that is, the "theoretical cogs and wheels that explain the how and/or why one thing leads to another" (Anderson et al., 2006: 102). Despite the progress that has been made in this area, less focus has been dedicated to understanding how entrepreneurship scholars come up with these mechanisms. This is one area where anthropomorphizing can be useful as it serves as a rich source of knowledge about the mechanisms behind the outcomes individuals experience. When applied to a "black box" of non-human agents, such knowledge can provide the confidence, control, and understanding (Epley et al., 2007, 2008; Waytz et al., 2010) needed to develop (and refine) stronger entrepreneurship theories (e.g., entrepreneurial organizations). In particular, we explore how anthropomorphizing has enabled both the creation of and "major shifts" in theories on entrepreneurial organizations' entrepreneurial orientation and knowledge. Moreover, we examine how anthropomorphizing seems to have been less useful in facilitating incremental advancements in theory as these domains have become more mature.

Finally, research taking a social constructionism perspective has highlighted the importance of scholars communicating both the theoretical novelty and continuity of their work (McKinley et al., 1999). In this chapter, we show how anthropomorphizing is not only valuable in helping entrepreneurship scholars make sense of organizational phenomena themselves but is also valuable for sensegiving to others (e.g., editors, reviewers, and readers)—namely, it helps entrepreneurship scholars persuasively communicate theorizing outcomes to their readers by providing an organizing framework for such outcomes. Thus, we provide insights into how anthropomorphizing facilitates sensegiving.

To accomplish these goals, this chapter proceeds as follows. First, we begin by introducing anthropomorphizing as a theorizing tool. Second, we outline how anthropomorphizing can be applied to enhance the process of making informed guesses about non-human entrepreneurial phenomena, to generate social mechanisms that can be used to build an explanation, and to tell plausible stories to persuasively communicate theorizing outcomes. To illustrate these possibilities more concretely, we describe how anthropomorphizing has been used in theorizing about organizations' entrepreneurial orientation and knowledge. Finally, we conclude by explaining the conditions under which anthropomorphizing is more or less effective and discussing anthropomorphizing as a specific type of metaphor that facilitates entrepreneurship scholars' sensemaking and sensegiving.

Anthropomorphizing for Entrepreneurial Theorizing

As mentioned earlier, anthropomorphizing is a process of inference whereby humans imbue non-human agents and processes with human-like characteristics, motivations, intentions, or emotions (Epley et al., 2007: 864; Kwan & Fiske, 2008). Stemming from the "Greek words of anthropos (meaning human) and morphe (meaning shape or form)," the term captures individuals' propensity to ascribe higher-order cognitive and emotional capacities, such as awareness, conscious will, and personality, to non-human agents or things (Epley et al., 2007: 865).

Indeed, in entrepreneurship research, such higher-order cognitive and emotional capabilities have been attributed to organizations, with research suggesting that organizations are deviant (Chirayath et al., 2002), believers (Floyd & Wooldridge, 1999), and motivated (Bouwen &

Steyaert, 1990). Furthermore, scholars have proposed that organizations have wishes (Culbertson et al., 2011), values (Bansal, 2003), and compassion (Shepherd & Williams, 2014; Williams & Shepherd, 2016, 2021) and that they are aggressive, nurturing, caring, accommodating, and respectful (Brickson, 2007). Likewise, anthropomorphizing is also evident in the entrepreneurship literature on organizational knowledge. According to this research, organizations intentionally and unintentionally learn (Lumpkin & Lichtenstein, 2005); form beliefs based on organizational learning (Floyd & Wooldridge, 1999), including from trial and error (Zahra et al., 2006); accidentally forget (de Holan & Phillips, 2004); and have blind spots (Hodgkinson & Healey, 2011) and illusions of control (Durand, 2003). Society also tends to view organizations as individuals, often giving them legal status (Gioia et al., 2010), and entrepreneurs frequently anthropomorphize their organizations by giving them identities that are distinct from themselves and their employees (e.g., an entrepreneur describes a venture as their baby [Cardon et al., 2005]).

People anthropomorphize because they have a high level of knowledge about themselves (via direct experiences). These knowledge structures about themselves are rich and highly accessible, meaning individuals can apply them both to understand other people (Epley et al., 2004) and to make inferences about non-human agents (Morewedge et al., 2007). For instance, as humans, people can directly access the phenomenological experience of being human, but they do not have access to the experience of being "a bat (Nagel, 1974), a sloth (Gould, 1996), or any other non-human agent" (Epley et al., 2007: 686). Moreover, personal experiences as a human are a richer source of information for theorizing about organizational phenomena compared to other metaphors, such as machines (e.g., Taylor, 1911) or organisms (e.g., Burrell & Morgan, 1979), with the possible exception of entrepreneurship scholars with considerable knowledge of, for example, mechanical engineering or biology, respectively.

As these different aspects demonstrate, anthropomorphizing serves as a foundation for making everyday inferences about non-human agents using one's current knowledge structures (about the self and other humans) as a starting point. Thus, anthropomorphizing "at the very least... provides a rich source of testable hypotheses to guide a person's behavior toward an unknown agent or stimulus" (Epley et al., 2007:

866). Since anthropomorphizing can be a starting point to better understand non-human agents and processes, it follows that this tool can also facilitate abductive theorizing on entrepreneurial phenomena, to which we now turn.

Abducting Entrepreneurial Theorizing Through Anthropomorphizing

As the essence of pragmatism, abduction refers to "the creative act of constructing explanations to account for surprising observations in the course of experience (hypothesis generation)" (Hansen, 2008: 457). In general, pragmatism (and abduction more specifically) depicts inquiry as a process in line with some notions of theorizing. For instance, according to Weick (1995: 285),

> Products of theorizing processes seldom emerge as full-blown theories, which mean that what passes for theory in organizational studies consists of approximations. … [Incomplete theories] may represent lazy theorizing … [but] may also represent interim struggles in which people intentionally inch toward stronger theories.

Likewise, although anthropomorphizing as a step in theorizing about organizing could reflect lazy theorizing, it could also represent a temporary struggle that helps guide and motivate theorists as they undertake the theorizing process. This idea that anthropomorphizing organizations can be a significant step in the theorizing process is illustrated in the following statement by Gioia et al. (2002: 270):

> Most organizations, after all, were initially constructed in somebody's own image. At their essence, therefore, they are human constructions. Should we be surprised then, that as a firm approximation, they are sometimes describable in some essential ways as person-like? … Should we really predicate our understanding of organizations more on the basis of an argument that organizations are more like machines than they are like the people who constructed them?

Indeed, entrepreneurship scholars are constantly challenged to enhance their theories by improving both the validation process (which some argue has received much attention; Locke & Golden-Biddle, 1997) and the discovery process (Locke & Golden-Biddle, 1997; Weick, 1989). In light

of this challenge, in the following sections, we demonstrate how scholars have used anthropomorphizing to improve their entrepreneurship theories, especially in the early stages of the theorizing process.

ANTHROPOMORPHIZING TO MAKE GUESSES FOR ENTREPRENEURIAL THEORIZING

Abduction entails experiencing the world and then applying one's existing knowledge structures to the resulting experiences to understand them. When individuals' existing knowledge structures highlight inconsistencies in their understanding, they first try to assimilate the anomalies. In other words, they "try to preserve the old stocks of knowledge, stretching them just enough to make them admit the novelty" (James, 1907: 35). This "stretching" provides the basis for individuals to notice and assimilate additional experiences (Hansen, 2008). At the core of this noticing and assimilating is following a hunch or making a guess, both of which can be difficult because they require a leap of faith (Hansen, 2008). However, an initial hunch or guess feeds subsequent actions and experiences. Accordingly, abduction requires individuals to be bold and permissive (i.e., to loosen the boundaries of their thinking) so they can generate guesses that give meaning to anomalies (Locke et al., 2008: 909).

While the pragmatic tradition suggests that any guess will do (Hansen, 2008; Weick, 1995), we argue that grounding such guesses in something one is knowledgeable about provides a stronger foundation for leaps of faith. People's in-depth understanding of themselves (and of others to a lesser degree) can serve as such grounding, providing a fruitful starting point for making sense of non-human agents and processes (Epley et al., 2007; Waytz et al., 2010). Indeed, Peirce et al. (1935) proposed that the fundamental aspects of the human experience often stimulate scientific inquiry and offer a conception of causality by enabling individuals to formulate hypotheses via analogies connecting the human experience to the inexperienced.

Because entrepreneurship scholars engage in contexts "characterized by high levels of uncertainty, novelty, emotion, and time pressure" (Baron, 1998: 275), those who anthropomorphize can draw on a wealth of personal experiences with these contextual attributes to develop conjectures that are richer, clearer, and more explicit about underlying assumptions than those developed without anthropomorphizing. Such

experiences include, for example, organizing one's life in terms of uncertainty (e.g., looking for a job after college, deciding whether to buy a house or move to another country, or starting a new job with a new organization in a new country), organizing others (e.g., students, a spouse, children, parents, sporting team members, colleagues, volunteers, etc.) under such conditions, and being organized by others (e.g., a boss, a spouse, children, extended family, coach, colleges, etc.). This pool of accessible experiences and related knowledge provides not only the feedstock for guessing but also the specifics needed to build conjectures about entrepreneurial phenomena at the organizational level of analysis.

While scholars can begin their anthropomorphizing efforts by harnessing their understanding of themselves or others, they can also begin by diving (perhaps directed by experiential learning) into a research stream about individuals more generally, such as a specific domain of human psychology. Building on literature about humans to make guesses about organizational phenomena in this way is in line with Bateson's idea (1941: 59) that "a vague 'hunch' derived from some other science leads into the precise formulations of that other science in terms of which it is possible to think more fruitfully about our own material." Accordingly, a hunch about an organizational phenomenon derived from experience with or knowledge of humans can lead to a deeper exploration of humans (e.g., a specific domain of human psychology), thereby moving entrepreneurial theorizing forward. Against this important background, it is likely unsurprising that our review of leading entrepreneurship theories revealed just how significant anthropomorphizing has been in triggering the theoretical development of concepts related to both organizations' entrepreneurial orientation and knowledge.

Entrepreneurial orientation. According to Miller (1993: 771), "An entrepreneurial firm engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with 'proactive' innovations, beating competitors to the punch." This description brings a question to light: can a non-human object even have an orientation? While it possibly can, a human must be involved in the first place to provide this object direction. Indeed, the assumptions that an organization is entrepreneurial and has an orientation rely on the notion that organizations have human attributes. This implied anthropomorphizing has triggered considerable entrepreneurial theorizing at the organizational level. In particular, until the concept of entrepreneurial

orientation was introduced, entrepreneurship was seen as an individual-level phenomenon (despite it impacting the creation of organizations and other organizational-level outcomes). However, initial ideas about entrepreneurship at the organizational level of analysis prompted an intriguing discussion about the dimensions of entrepreneurial orientation, including their nature, number, and interrelationships, and the ways they influence firm performance given specific external environments (Covin & Slevin, 1989; Lumpkin & Dess, 1996). We describe this early theorizing on entrepreneurial orientation not as a critique but as an indication of the important role anthropomorphizing has played in generating a significant stream of research in the field of entrepreneurship.

Organizational knowledge. Similar to it triggering theorizing on organizations' entrepreneurial orientation, anthropomorphizing has also provided a crucial framework for theorizing about organizational knowledge (including organizational memory). For instance, Walsh and Ungson (1991, p. 57) highlighted anthropomorphizing in their work:

> To the extent that organizations exhibit characteristics of information processing, they should incorporate some sort of memory, although not necessarily resembling human memory. … Theories, however, have not elaborated on the nature and function of any type of memory.

Anthropomorphizing is also reflected in these authors' definition of organizational memory as "mental and structural artifacts that have consequential effects on performance" (58), in their investigation of the requirements of an organization's retention structures in terms of "the processes by which information can be acquired, stored, and retrieved from this retention structure" (61–62), and in their descriptions of the outcomes of organizational memory (e.g., the influence of an organization's history and the inertial force of automatic information retrieval on its decision-making).

As these examples demonstrate, entrepreneurship scholars can use anthropomorphizing to trigger abduction. However, in entrepreneurial theorizing, an early guess is merely a starting point, initial direction, and first step as full-blown theory building comprises more than one step—it is a process of doubting and formulating explanations to eliminate that doubt. Indeed, in pragmatism, the nature of inquiry is based on resolving doubt (i.e., the experience of not knowing), which in turn stimulates the process of inquiry (Burks, 1946; Locke et al., 2008). In other words,

doubt "drives us to generate possibilities, try them out, modify, transform, abandon them, try again, and so on until new concepts or patterns are generated that productively satisfy doubt" (Locke et al., 2008: 908). The resulting new concepts or patterns can be sources of insights, and while the resulting insights can be highly fallible (Peirce, 1955) and wildly incorrect (Hansen, 2008), they push scholars toward solving problems (James, 1907), generating imaginative understandings, and ultimately building theories (Fann, 1970). Next, we turn to how scholars can use anthropomorphizing to build more robust entrepreneurship theories from early guesses.

Anthropomorphizing to Build Explanations

Organizational theory scholars generally theorize about organizations (i.e., non-human agents) but nevertheless have humans embedded in them in some way—a point widely recognized in numerous studies on organizational identity and organizational knowledge. Huy (1999: 333), for instance, described organizations as "patterns of coordinated activities of interdependent parts, including people." Feldman and Rafaeli (2002: 309) similarly explained that "organizations consist of people producing some form of work" and that "much of organization theory has been concerned with how to coordinate the activities of people in organizations." Indeed, many scholars see organizations as "hierarchically nested systems" (Klein & Kozlowski, 2000: 232; e.g., Katz & Kahn, 1976; Scott, 1974), contending that individuals and groups are components and subsystems of organizations, which are in turn components and subsystems of societies (Miller, 1972). Anthropomorphizing can enable a deeper understanding of the "how" and "why" underlying these relationships at the organizational level by shedding light on the theoretical mechanisms linking relevant constructs. To begin using anthropomorphizing for this purpose, theorists can draw on their rich knowledge of themselves and other humans, for example, by recalling being assigned to workgroups or sporting teams, being on successful and unsuccessful teams, exchanging information with others, coordinating actions with others, remembering feelings conflict brought up, and recollecting how others' feelings influenced how one felt. This knowledge of the feelings, activities, and processes individuals have experienced as humans can inform and stimulate theorizing on organizing by enabling theorists to articulate the social mechanisms underlying concepts to explain how things

function at the individual level (e.g., exploring the mechanisms behind individuals' attention, interpretation, and learning to understand their actions). They can then begin to form a deeper understanding of how to connect concepts at the organizational level to clarify how things function in organizations (e.g., exploring the mechanisms of organizations' attention, strategic issue diagnosis, and learning to understand organizations' actions).

Thus, while theorizing simply about relationships between constructs is required, it is not enough to generate strong theories; theorists must also articulate the social mechanisms underlying their assumptions about organizing. Social mechanisms—namely, the cogs and wheels of social scientists' theorizing—explain the relationships among and between constructs. In other words, they explain how and why one construct influences another (see Anderson et al., 2006; Davis, 2006; Hedstrom & Ylikoski, 2010). For example, in recounting her efforts to theorize on the mechanisms involved in her research, Spreitzer affirmed that theorizing about mechanisms enabled her and her coauthors to "uncover important patterns that [they] had not seen before" (cited Anderson et al., 2006: 104). In a similar vein, Bunderson explained that by questioning the mechanisms behind proposed relationships, he was able to discover implicit assumptions that could then be contested in future studies (reported in Anderson et al., 2006). While the significance of articulating the mechanisms underlying theorized relationships is well recognized (Sutton & Staw, 1995), theorists who develop such mechanisms often face challenges in going beyond mere statistical associations and identifying alternative generative mechanisms (Hedstrom & Swedberg, 1998: 17).

Anthropomorphizing can help with these challenges. Specifically, when facing uncertainty about a non-human agent's (e.g., a firm's) organizing, scholars typically begin by considering how their own stocks of accumulated knowledge, experiences, intentions, emotions, actions, etc., are organized (Waytz et al., 2010) as a basis for understanding (in this case, understanding organizing within a firm) (Epley et al., 2008). Organizing refers to mobilizing "ongoing interdependent actions into sensible sequences" (Weick, 1979: 3), which can direct individuals' attention to make sense of potential changes in the environment (Weick & Sutcliffe, 2007), achieve convergence among members (Weick, 1979), coordinate movement and inputs (Weick, 1989), funnel action toward specific outcomes (Tsoukas & Chia, 2002), lessen ambiguity to

establish order (although ambiguity can never be completely eliminated) (e.g., Christianson et al., 2009), and regulate emotions (Huy, 1999). Furthermore, organizing frequently entails recurring interactions between individuals (Weick & Quinn, 1999). Since most people have substantial experience interacting with other people (Mead, 1934; Stryker & Stratham, 1985), these interactions are stored as highly accessible knowledge (Baldwin, 1992) and can thus be used for anthropomorphizing. Therefore, anthropomorphizing can inform theorizing on the mechanisms connecting constructs and enable a deeper understanding of the "why" and "how" essential to constructing more robust theories. We explore how anthropomorphizing has been used to develop the research streams of entrepreneurial orientation and organizational knowledge.

Entrepreneurial orientation. Covin and Slevin (1989) outlined three formative indicators of entrepreneurial orientation—innovativeness, risk taking, and proactiveness. In contrast, Lumpkin and Dess (1996) argued that the dimensions of entrepreneurial orientation vary independently, so they added two more dimensions—autonomy and competitive aggressiveness. First, innovativeness refers to "a firm's propensity to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or processes" (Lumpkin & Dess, 1996: 142). In theorizing innovativeness as a dimension of entrepreneurial orientation, Lumpkin and Dess (1996: 142) discussed firms' "tendency," "willingness to depart from existing technologies or products," and "emphasis on technical expertise." Can non-human agents have tendencies, a willingness to depart, or the ability to emphasize, or are these instead human qualities projected onto organizations? These qualities seem to reflect anthropomorphizing organizations to categorize them as more or less entrepreneurial.

Second, Miller (1993) defined risk taking as a "firm's proclivity to engage in risky projects and managers' preferences for bold versus cautious action to achieve firm objectives" (Lumpkin & Dess, 1996: 146). Initially, justification for this dimension started with references to early research wherein risk taking was applied to entrepreneurs who created and managed organizations. One of the first studies to develop the notion of organizations having an entrepreneurial orientation discussed risk taking at the individual level (but also crossed to the organizational level) as "the degree to which managers are willing to make large and risky resource commitments—i.e., those which have a reasonable chance of costly failures" (Miller & Friesen, 1978: 923). However, as a dimension

of entrepreneurial orientation, risk taking seems to reflect anthropomorphizing in human qualities like "willingness," "commitment," and "reasonableness" are applied to organizations.

Third, proactiveness refers to a "firm's tendency to lead rather than follow in developing new procedures and technologies and the introduction of new products or services" (Lumpkin & Dess, 1996: 148). In defining and theorizing about this dimension, Lumpkin and Dess (2006: 146) relied on a dictionary definition of proactiveness: "acting in anticipation of future problems, needs, or changes". Humans anticipate, so proposing that organizations can *anticipate* problems or market demand and stating they have the "*foresight* to seize new opportunities" (Lumpkin & Dess, 1996: 147) are examples of anthropomorphizing organizations.

Fourth, autonomy refers to organizations not constraining "strong leaders, unfettered teams or creative individuals" (Lumpkin & Dess, 1996: 140). According to this definition, organizations may not have autonomy themselves but may instead provide a context for humans to have autonomy (which may therefore not be anthropomorphizing). While Lumpkin and Dess (1996) justified the salience of this dimension by referencing early work on the autonomy of entrepreneurial individuals (e.g., Bourgeois & Brodwin, 1984; Miller, 1993; Mintzberg & Waters, 1985), they still argued that organizations must "*grant* autonomy." However, being able to grant something is a human quality, which means that this theorizing also likely entails anthropomorphizing.

Finally, competitive aggressiveness is "a firm's propensity to directly and intensely challenge its competitors to achieve entry or improve position, that is, to outperform industry rivals in the marketplace" (Lumpkin & Dess, 1996: 140). In formulating this dimension, Lumpkin and Dess (1996) proposed that organizations "*respond* to trends"; *compete* for demand; and are opportunity *seeking*, *aggressive*, and passive through *indifference*. Similar to above, responding, competing, seeking, and feeling aggressive or indifferent are human qualities, so applying them to non-human agents—organizations—represents anthropomorphizing.

Organizational knowledge. Scholars have also applied anthropomorphizing to theorize about organizational knowledge and organizational knowing mechanisms. For instance, Patriotta (2003) started his theorizing to explain how organizations obtain knowledge by describing how narratives help people make sense of the world. He then outlined how

understanding the ways narratives and storytelling shape human cognition can inform understanding of the mechanisms whereby organizations obtain knowledge:

> The narrative mode of cognition is important for understanding how perspective making and perspective taking occur within a community of knowing. … Narratives appear to be fundamental diagnostic devices, enabling operators to perform a coherent description of machine breakdowns. … [Narratives facilitate] the circulation of organizational knowledge within the community of workers … connecting modes of knowing with modes of organizing … [and they] identify a distinctive mode of thought. … [Narratives] provide access to the controversy-based dynamics through which organizational actors deal with the equivocality of everyday action … turn action into text and text into action … show how knowledge in organizations is mobilized through discourse, and therefore highlight a distinctive mode of knowing related to everyday coping with the world. … [Narratives] are the carriers of such a deep-seated, sticky, commonsensical stock of knowledge … emphasize the processual nature of knowing and organizing … act as carriers of tacit knowledge as well as storage devices … exhibit organizations as enacted through discourse and characterized by ongoing processes of transformation and social becoming … [and] can be seen as material traces of learning and collective remembering processes, social imprints of meaningful course of events, documents and records of human action. (Patriotta, 2003: 352–354)

Walsh and Ungson (1991) also applied a prior understanding of how the human brain acquires, retains, and retrieves knowledge and experience to theorize how organizations' information processing influences their outcomes and performance. Many entrepreneurship scholars have referred to these early studies to examine entrepreneurial firms' organizational knowledge without necessarily documenting the anthropomorphizing roots of this construct (e.g., Yli-Renko et al., 2001; Zahra et al., 2006).

These examples demonstrate how anthropomorphizing can be a useful tool in formulating robust theories from novel guesses by explicitly recognizing the social mechanisms underlying proposed relationships. As we discussed earlier, using one's knowledge of humans to generate explanations and making the underlying social mechanisms of those explanations explicit are central to theorists' anthropomorphizing. The goal here is to come up with a theorizing outcome that forms a sufficiently plausible story to inspire others (and oneself) to take further

action—namely, to engage in additional entrepreneurial theorizing and data collection to pave the way for further discussion, negotiation, and persuasion that advances our understanding of venturing. Thus, anthropomorphizing holds promise for revealing interesting insights into organizational phenomena and offers entrepreneurship theorists a discursive tool to build and communicate persuasive accounts of organizing.

Thus far, we have shown how anthropomorphizing serves as a useful framework for sensemaking. Now, we turn to how it can also provide a framework for sensegiving.

Anthropomorphizing to Tell Entrepreneurship Theories as Plausible Stories

Anthropomorphizing is instrumental in sensemaking, enabling entrepreneurship scholars to build and rebuild meaning as they gradually form an understanding of different phenomena—for our examples above, understanding of organizations' entrepreneurial orientation and knowledge. However, scholars also need their theorizing outcomes to make sense to others. For instance, McKinley et al. (1999) contended that if a theory is to receive scholarly attention and have an impact, it must exhibit both novelty (i.e., it must be significantly different from theories in the established literature) and continuity (i.e., it must be linked to the established literature). Entrepreneurship scholars can communicate novelty by providing new insights—that is, "suggestions of relationships and connections that had previously not been suspected" (Weick, 1989: 524)—and they can convey continuity by connecting new inferences and assumptions to ideas that are already grounded in the literature. Articulating the social mechanisms underlying proposed relationships, as we discussed earlier, helps scholars focus on verbs (i.e., causal links) rather than nouns (i.e., variables) (Weick, 1974). As Glynn argued, "One of the utilities of a mechanism-based approach... is that it enables you to articulate the causal linkages" (quoted in Anderson et al., 2006: 104), thereby helping authors convey how a story unfolds to their audiences (Anderson et al., 2006; Sutton & Staw, 1995). This reasoning suggests that entrepreneurship scholars need to enable their audiences to make sense of their theorizing—that is, they need to engage in sensegiving. Sensegiving is "the process of attempting to influence the sensemaking and meaning construction of others toward a preferred redefinition of" reality (Gioia & Chittipeddi, 1991: 442). Anthropomorphizing may help

with sensegiving as it is a useful tool in convincing editors, reviewers, and other audiences about the plausibility of certain outcomes. Specifically, it enables scholars to connect novel outcomes with their audiences' rich knowledge of themselves and other humans so these audiences' can make more sense of the outcomes. In reviewing the literatures on entrepreneurial orientation and organizational knowledge, we found several instances of anthropomorphizing playing a sensegiving role in theorizing outcomes.

To begin, we found that some scholars juxtapose organizational- and individual-level studies to highlight a commonality that is sufficient enough to justify jumping from theorizing at the individual level to theorizing at the organizational level. While establishing commonalities across levels is more effective in some cases than others, we contend that such connections increase the believability of theorizing outcomes and help persuade readers. In other words, these connections serve as bridges, helping readers move from the mainland of an established literature (and their personal knowledge) at the individual level to the island of an idea or a conjecture at the organizational level.

Some scholars establish a different type of connection by explicitly acknowledging distinctions between individuals and organizations. In particular, some help readers step from the individual level to the organizational level by delineating the mechanisms whereby individuals influence organizations (e.g., von Krogh et al., 1994: 59), while others help readers step from the organizational level to the individual level by delineating the mechanisms whereby organizations influence individuals (e.g., Hargadon & Fanelli, 2002: 294). In turn, highlighting distinctions between levels and building steps from one level to another helps scholars communicate their theorizing outcomes.

Entrepreneurial orientation. As an example of juxtaposing studies at different levels to emphasize commonality, Covin and Slevin (1998: 77) linked top managers' inclination "to take business-related risks, to favor change and innovation to obtain a competitive advantage for their firm and to compete aggressively with other firms (Miller, 1993) [and] entrepreneurial top management styles, as evidenced from the firms' strategic decisions and operating management philosophy" to firms' entrepreneurial orientation. They then shifted their theorizing to firms' entrepreneurial behaviors by citing Miller (1993), Miller and Friesen (1983), and Khandwalla (1977), theorizing small firms' entrepreneurial strategic postures are more positively related to firm performance in

hostile environments than in benign environments (Covin & Slevin, 1989: 78).

On the other hand, Lumpkin and Dess (1996: 164) highlighted distinctions across levels (individual, group, and organizational) to discuss the autonomy dimension of entrepreneurial orientation:

> Another critical component of an EO [of an organization] is a tendency toward independent and autonomous action. Start-up firms must exercise intentionality to carry forward the specific actions required to launch new ventures (Bird, 1998; Katz & Gartner, 1988). Layers of bureaucracy and organizational tradition rarely contribute to new-entry activities in existing firms (Kanter, 1983). Instead, it requires the exercise of autonomy by strong leaders, unfettered teams or creative individuals who are disengaged from organizational constraints to lead to new entry. This was the conclusion of Burgelman (1983: 241), who found that, in the case of internal corporate venturing, "the motor of corporate entrepreneurship reside in the autonomous strategic initiative of individuals at the operational levels in the organization."

While we recognize the difficulty in establishing these connections, when it comes to conveying the plausibility of theorizing outcomes from anthropomorphizing, we believe a bridge with missing planks is better than no bridge at all. Next, we discuss the bridges for organizational knowledge.

Organizational knowledge. Scholars have also used anthropomorphizing to communicate theories of organizational knowledge and memory by emphasizing commonalities across levels that justify a jump from the individual level to the organizational level. For instance, in developing the concept of organizational memory, Walsh and Ungson (1991: 63) used the ideas of records and files to highlight a commonality across levels and then linked the literature on the psychology of human memory to that on organizations' information processing:

> Briefly, individuals store their organization's memory in their own capacity to remember and articulate experience, and in the cognitive orientations they employ to facilitate information processing. Moreover, individuals and organizations keep records and files as a memory aid. … Such information technologies help to constitute an organization's memory.

As an example of acknowledging distinctions between individuals and organizations and then connecting the two levels of analysis, Galunic and Rodan (1998: 1199) explained how knowledge produced by an individual can become knowledge at the organizational level and, vice versa, how organizational knowledge can affect the knowledge of organizational members:

> As individuals interact (say around a new technology or an emergent process within a young firm) a particular body of language and symbols (both social and technical) develop over time, facilitating information exchange. The use of a common (often unique) language improves the efficiency of knowledge exchange first by allowing exchanges to take place more quickly and second by avoiding the necessity for ideas to be translated into a higher-level language for exchange (Kogut & Zander, 1992). Such an esoteric language itself represents a store of tacit knowledge since it often contains words with highly specific associations and meanings that are seldom (if ever) documented. More generally, this process suggests the construction and solidification of perceived reality through the imparting of common meaning to repeated exchanges and patterns of action (e.g., Rorty, 1991). These "externalized" actions and routines (see Zucker, 1977) create mental models by which actors are guided in subsequent interactions.

In this section, we described how anthropomorphizing can help articulate entrepreneurial theorizing outcomes. However, it is also necessary to recognize the role storytelling plays in building entrepreneurship theory. Although a lot of the knowledge for guessing and building a theory is idiosyncratic—that is, it depends on the focal scholar's unique experiences of being human—others can often identify with such experiences (given their own knowledge of being human). Accordingly, anthropomorphizing provides entrepreneurship scholars a foundation for labeling and categorizing the constructs of an emerging theory such that they form connections in readers' minds when communicated. In turn, these connections serve as the basis for interactive talk (Taylor & Van Every, 2000). Via this process, scholars' tacit knowledge becomes explicit, thereby providing them opportunities (either alone or conjointly with others) to improve the plausibility of their stories. That is, anthropomorphizing (1) enables an entrepreneurship scholar to communicate the complex ideas and mechanisms underlying their emerging theory to others; (2) allows others to apply their own rich knowledge (of

being human) to understand these ideas and mechanisms, identify issues, come up with solutions, and communicate them to the entrepreneurship scholar; and (3) helps the entrepreneurship scholar revise, retell, and retest the plausibility of their story to ultimately build a more robust theory. Thus, by enabling scholars to communicate novel entrepreneurship theories, anthropomorphizing can help "lift equivocal knowledge out of the tacit, private, complex, random, and past to make it explicit, public, simpler, ordered, and relevant to the situation at hand" (Weick et al., 2005: 413).

Criticisms of Anthropomorphizing for Theorizing

Although anthropomorphizing can be a very useful tool for theorizing, some scholars believe it hinders theorizing (Sullivan, 1995; Wynne, 2004). For example, some criticize how natural selection has been anthropomorphized using non-neutral terms. Indeed, natural selection has been described as a "battle" rather than a "competition," as "victory" rather than "survival," and as stemming from a "selfish" gene rather than "selection." While these descriptions are fanciful (Sullivan, 1995), picturesque, and colorful (Rousseau, 1985), some contend that these terms result in folk theories instead of scientific theories (Wynne, 2004). In addition, some scholars believe that anthropomorphizing generates constructs that are difficult (if not impossible) to operationalize to allow for experimental tests of central relationships (Blumberg & Wasserman, 1995; Panksepp, 2003). Indeed, Wynne (2007: 154) argued that anthropomorphizing "hides causes inside imaginary structures that cannot be operationalized in objective observable phenomenon."

While some critics admit that anthropomorphizing has potential benefits in stimulating thinking (known as "mock anthropomorphizing"; Blumberg & Wasserman, 1995; Kennedy, 1992), Rousseau (1985) explained that when it comes to theorizing about organizations, such "literary license" can itself become a theory over time.[1] Similarly, Andersen (2008) argued that notions that start as "as if" frequently become "is," which can create major problems. For instance, instead of writing "as if"

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[1] However, we argue that this scenario may be no worse than what occurs with theorizing more generally—namely, sometimes, a theory proliferates without ever being tested (or with being only insufficiently tested) and thus eventually becomes of taken for granted.

in the following quote, Brown and Starkey (2000: 103) contended that the organization "is" "self-reflective," "wise," and "secure":

> If skillfully managed, the outcome of critical reflection upon the nature of identity is a self-reflexive and wise organization, secure in its ability to negotiate identity change. ... For Kohut, wisdom represents "the ego's ultimate mastery over the narcissistic self, the final control of the rider over the horse."

According to Andersen (2008: 181), these forms of anthropomorphizing can have major repercussions: "When organizations are seen as actors the consequence is grave. It implies that the people in the organizations are not actors. Their initiative and efforts are of no importance. Anthropomorphizing 'kills' human, individual action." Here, it is important to stress that the micro-process of anthropomorphizing in an entrepreneurship theorist's mind is unlikely to "kill" any individual's action (which is itself a potentially anthropomorphic idea). However, ironically, some scholars have highlighted the role of anthropomorphizing in lessening the importance of the individual in organizational research. Entrepreneurship scholars need to make sure we do not follow strategic management's lead in this regard. Rather, as Hambrick (2004: 94) proposed, we need to reintroduce the human component in our work: "During the last two decades, human beings have largely been discarded from a great part of the strategic management research as scholars have sought to anthropomorphize organizations, treating them as willful, purposive entities... [which is] barking up the wrong tree." Similarly, although not directly suggesting that humans be reintroduced, Shepherd (2015: 489) discussed the importance of human attributes in further advancing the field of entrepreneurship:

> Future contributions from entrepreneurial studies will come from viewing the entrepreneurial process as one of generating and refining potential opportunities through building, engaging, and transforming communities of inquiry; as one constituted by a pattern of activities that is dynamic, recursive, and immersed in entrepreneurial practice; as one in which the head engages the heart and the heart engages the head; and as one of motivations beyond solely those of financial goals. I believe that such an approach will increase our understanding of how entrepreneurial action will meet some of the grand challenges of our time and thereby make important contributions to the field of entrepreneurship.

In this call for future entrepreneurship research, Shepherd outlined the central role humans play in progressing the field of entrepreneurship by viewing the entrepreneurship process as generating and refining potential opportunities and interacting with different groups of people who collectively comprise communities of inquiry, by exploring the micro-activities of entrepreneurial individuals and individuals working in entrepreneurial organizations, and by considering how individuals' cognitions and emotions interact.

In general, the critiques of anthropomorphizing center on two major theorizing shortfalls. The first occurs when a theorizing outcome is separated from its original assumptions, propositions, and associated observables (Schoeneborn et al., 2013), which in turn results in a missed opportunity to undertake multilevel theorizing (Thompson, 2011). The second stems from borrowing concepts, relationships, and theories without adequate consideration of their relevance for organizational theories (Whetten et al., 2009). Obviously, these challenges can arise for any theorist, but they may be especially salient for entrepreneurship scholars who anthropomorphize (and the theorizing outcomes from anthropomorphizing may also be scrutinized more heavily in cases of "borrowing").

When anthropomorphizing leads entrepreneurship scholars merely to affirm (through labeling or otherwise) that a human behavior, attribute, or characteristic also applies to an organization, the resulting theorizing outcome is likely to be limited (and maybe even detrimental). In other words, such anthropomorphizing simply contextualizes human behaviors/characteristics in organizations and borrows from other disciplines or fields (e.g., a theory of human psychology) without significantly contributing back to those disciplines or fields. This "demonstrative research"—namely, research that demonstrates "it" applies in another context—provides few contributions to the disciplines or fields involved (Heath & Sitkin, 2001).

To gauge the value of theorizing on organizational behavior, Heath and Sitkin (2001: 53) proposed an "organizational centrality test," which asks, "How much would we understand about organizations if we understood everything there was to know about" the source of potential knowledge—here, an anthropomorphizing source. Building on this idea of the organizational centrality test, we contend that anthropomorphizing is unlikely to lead to significant contributions to the organizational literature if scholars merely relabel constructs and relationships found in

contexts other than organizations and/or the topic at hand is tangential to understanding "how organizations accomplish their task of organizing" (Heath & Sitkin, 2001: 53). However, the reverse also applies: when anthropomorphizing motivates and informs theorizing (as discussed earlier in this chapter) that results in a plausible story about an organization's entrepreneurial tasks, it has the potential to generate valuable contributions to the literature.

Indeed, scholarly entrepreneurship frequently borrows theories from disciplinary research, but the entrepreneurial context is often so extreme compared to the contexts in which those theories originated (and their empirical testing) that the theories need to be adapted by extending their boundary conditions. Such extension can contribute to both the entrepreneurship literature and the source literature (from which a focal theory was borrowed). Accordingly, entrepreneurship scholars are likely in a strong position to borrow from and then adapt anthropomorphizing to theorize about non-human entrepreneurial phenomena, such as entrepreneurial organizations.

Implications for Anthropomorphizing in Entrepreneurship

While all entrepreneurship scholars have substantial experience being human (as do all adults) and can likely benefit from using anthropomorphizing in their theorizing, some are likely to benefit more. First, beyond differences in their knowledge about human actors and other sources of metaphors, entrepreneurship scholars have different levels of confidence in their ability to theorize. Indeed, scholars who are likely to be less confident in their ability to undertake successful research include doctoral students and junior faculty (Meyer & Evans, 2003) as well as those who have received less research training (Phillips & Russell, 1994), scarce encouragement or modeling by more senior faculty (Galassi & Moss, 1986), and less mentoring (Feldman et al., 2010). For such scholars, anthropomorphizing can offer more confidence for theorizing as it enables people to feel more efficacious in explaining non-human agents (Epley et al., 2007; Waytz et al., 2010). Thus, anthropomorphizing can help scholars feel like they are more capable of organizing and performing the tasks involved in entrepreneurial theorizing than when they do not use anthropomorphizing or use metaphors they are less familiar with. This increased self-efficacy in theorizing from anthropomorphizing likely drives

entrepreneurship to complete theorizing tasks, persist through interim struggles, and eventually build more robust theories. Therefore, anthropomorphizing could be a vital tool for entrepreneurship scholars who lack expertise or do not fully believe in their ability to theorize.

Second, the breadth and depth of scholars' experiences differ. For instance, some scholars may have a greater variety of experiences from, say, living and working in numerous culturally diverse countries; obtaining a broader education; taking on different roles within one organization, different organizations, and/or different industries; experiencing adversity; investigating diverse topics from varying theoretical and philosophical standpoints and with different coauthors; etc. Entrepreneurship scholars who have a greater variety of experiences typically have a deeper pool of knowledge to draw upon to enable anthropomorphizing and inform theorizing compared to those with less variety. Likewise, people vary in their imaginative and creative abilities (Bacharach, 1989), both of which are likely to enable anthropomorphizing and thereby help scholars build robust theories of entrepreneurial organizations and venturing.

Finally, there are certain conditions under which anthropomorphizing is likely to be most effective at enabling scholars to advance our understanding of entrepreneurial phenomenon. In particular, anthropomorphizing is likely to be especially effective when it passes Heath and Sitkin's (2001) organizational centrality test (as discussed above). Moreover, entrepreneurship scholars may need to rely on anthropomorphizing less as their knowledge of non-human agents grows (e.g., knowledge of organizational behavior) (for more on the relationship between knowledge of non-human agents and the level of anthropomorphizing, see Waytz et al., 2010). For example, there are hundreds of studies on entrepreneurial orientation such that the early considerations of its anthropomorphizing roots have moved further to the background, and the dimensions at the organizational level have become taken for granted (particularly by new scholars).

As such, anthropomorphizing offers entrepreneurship scholars (including senior scholars) a knowledge base from which they can theorize in underdeveloped areas—where little to no literature or in-depth understanding exists (e.g., the development of a theory of organizational knowledge in the 1970s)—and from which they can perhaps revitalize research on relatively static and stable organizational attributes. However, even when scholars have substantial knowledge of non-human agents that can serve as a source of metaphors for entrepreneurial theorizing,

for some entrepreneurship scholars and some topics, anthropomorphizing may stimulate theorizing even further. Moreover, even when entrepreneurship scholars apply such non-human metaphors, some still choose to anthropomorphize, using their rich knowledge of themselves and others to fuel their theorizing.

Research Opportunities

In offering a few suggestions for entrepreneurship topics that could potentially benefit from anthropomorphizing, we open ourselves up to the same critiques of anthropomorphizing discussed above. More specifically, since anthropomorphizing for entrepreneurial theorizing starts with a guess, that guess can itself seem more like a fantasy, dream, or science fiction than a theory that would contribute to the field of entrepreneurship. However, we believe this is exactly the allure and creative input that should be encouraged and fostered in scholars. A guess is only the beginning of the entrepreneurial theorizing process—a process that also necessitates adaptation, the development of social mechanisms, and the generation of a plausible story. As an illustration of an initial guess, let us begin with a guess about venturing based on our knowledge of humans. People typically grieve after losing a loved one (and other things that are important to them), but they can reduce the resulting grief and learn from the focal experience by oscillating between a loss orientation and a restoration orientation (Shepherd et al., 2011). Given this knowledge, we can begin to form a guess for theorizing about whether and how entrepreneurial organizations feel and manage grief. In turn, this guess prompts a series of questions: what is essential to organizations; how are collective emotions triggered by loss; and how are these emotions sustained, expressed, and organized? Indeed, prior research exploring how emotions become collective (e.g., emotion contagion; Barsade, 2002) and organized (e.g., emotional capability; Huy, 1999) would likely be useful in this entrepreneurial theorizing effort.

Throughout the process of refining the initial anthropomorphic guess with successive guesses, considering the mechanisms connecting constructs, and constructing a plausible story, the theorizing outcome will likely change substantially. The process becomes more than simply an exercise in relabeling a human quality as an organizational quality and instead becomes a creative process of building and (re)combining to form something new—namely, a novel theory about an entrepreneurial

phenomenon. Accordingly, much work needs to be done to construct a plausible entrepreneurial theorizing outcome from a fanciful initial anthropomorphic guess. While anthropomorphizing will sometimes lead to a dead-end, we believe it can infuse the theorizing process with creativity, with some efforts resulting in significant contributions to the field of entrepreneurship.

Conclusion

Despite its potential criticisms (Aggarwal & McGill, 2007), anthropomorphizing can be a useful tool in building new theories of entrepreneurship. With this tool, entrepreneurship scholars can access a rich body of knowledge about humans (i.e., themselves and others) to theorize about organizational phenomena and, in doing so, can gain confidence in their ability to use this rich knowledge to achieve the highly uncertain task of offering new insights into entrepreneurship, including venturing. As our review of the literatures on organizations' entrepreneurial orientation and organizational knowledge demonstrated, entrepreneurship theorists use anthropomorphizing to inform and motivate their guessing about, building of, and telling of plausible stories.

Scholars have shed considerable light on theory testing, but less is known about theory generation (Locke et al., 2008). Since abduction requires scholars to make a mental leap to investigate an experienced anomaly (Hansen, 2008; Peirce, 1955), it can result in very novel propositions—it is itself an entrepreneurial process of scholarship. However, the processes that prompt these mental leaps are still relatively underexplored and underarticulated. Therefore, we introduce anthropomorphizing to the abductive process to provide an informed basis from which scholars can make guesses and thus generate novel propositions. Indeed, Epley et al. (2007) showed that individuals are skilled in using anthropomorphizing to explain happenings in their day-to-day lives. We similarly contend that anthropomorphizing can also be beneficial for scholars' entrepreneurial theorizing.

Anthropomorphizing offers scholars a rich body of knowledge they can use to address entrepreneurship-related anomalies. If no additional inquiry is pursued after the initial guess (e.g., the focal scholar merely relabels human attributes as organizational attributes) and/or the focus is on aspects tangential to venturing activities, the critics of using anthropomorphizing in research have a strong case. However, in the face of uncertainty

(e.g., when trying to explain a venturing anomaly), anthropomorphizing can be a source of understanding, control, and confidence (Meltzoff, 2007; Nickerson, 1999; Waytz et al., 2010) that empowers scholars to take additional steps in the entrepreneurial theorizing process. Furthermore, we propose that anthropomorphizing is a theorizing process that entails guessing, building, and telling stories based on one's knowledge of humans to advance knowledge of non-human agents/systems. In reviewing the literatures on anthropomorphizing, entrepreneurial orientation, and organizational knowledge, we hope we have eliminated some of the mystery around anthropomorphizing in entrepreneurial theorizing and shown its usefulness in stimulating richer theories of entrepreneurship in general and venturing in particular.

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Managing Trade-Offs in Entrepreneurial Theorizing

Have you received a journal review criticizing your paper for lack of depth in investigating the subtleties of the focal entrepreneurial phenomena or perhaps one criticizing your paper for not being adequately generalizable beyond the focal entrepreneurial context? We have—and for the same paper, nonetheless!

These criticisms bring up important points and put authors in the challenging position of having to address requests for both depth *and* breadth of their theoretical arguments within the confined page limits set by journals. Indeed, attempts to extend the depth of an argument may inherently detract from the theoretical breadth and vice versa. Thus, how can authors address these apparently conflicting criticisms of entrepreneurial theorizing and also communicate these trade-offs to reviewers, editors, and readers? On the other hand, how can reviewers and editors weigh their preferences against a paper's contributions to the field? While we do not resolve all of these issues in this chapter, we do offer a framework that provides some guidance (1) for entrepreneurship scholars on balancing breadth and depth to maximize their contributions and

(2) for reviewers and editors on managing the revise-and-resubmit (R&R) process to further the entrepreneurship field.

As we have discussed throughout this book so far, we acknowledge that building theory is challenging and complex (Cornelissen, 2017), especially theory about entrepreneurial phenomena (for helpful advice on positioning and articulating the contributions of entrepreneurship theory papers, see Chrisman et al. [2021]). Scholars must generate and explain constructs, determine the scope and boundaries of their theorizing, and communicate clear contributions (Fulmer, 2012; Rindova, 2008; Suddaby, 2014; Whetten, 1989). Although numerous editors and scholars have provided important insights into the art of writing theory papers (e.g., Byron & Thatcher, 2016; Cornelissen, 2017; Locke & Golden-Biddle, 1997), a critical part of publishing such papers remains less clear—namely, how expert reviewers and authors engage through the review process—which has a substantial impact on theory. This lack of clarity mainly derives from the challenge of accessing this process as reviewer–author interactions are private, decentralized, and (necessarily) double-blind. Nevertheless, this lack of clarity is especially harmful to entrepreneurial theorizing because, like the phenomena we scholars investigate, the entrepreneurship field is dynamic and emergent (Chandra, 2018; Landström & Harirchi, 2018; McMullen et al., 2021; Shepherd, 2015; van Gelderen et al., 2021).

The field of entrepreneurship is still relatively new (McMullen et al., 2021; Shepherd, 2015). As such, entrepreneurship scholarship needs to continue developing new theories and elaborating upon current theories to *best* explain entrepreneurial phenomena (not to mention the changing nature of entrepreneurial phenomena). While the scholars providing theory-based contributions are primarily responsible for this field development, some responsibility also falls on the gatekeepers—namely, reviewers and editors—in terms of selecting high-potential papers, developing these papers through the R&R process, and publishing papers that make considerable contributions to our understanding of entrepreneurial phenomena. Indeed, the double-blind review process holds great promise for making significant improvements to theory, thereby contributing to the focal paper and the entrepreneurship field more generally. Nevertheless, unrealistic expectations (e.g., requiring both considerable depth and considerable breadth in a single manuscript) in the review process have the potential to undermine emergent theory, which could in turn delay or inhibit much-needed entrepreneurial theorizing.

Data on the interactions that unfold in the double-blind review process is extremely limited; however, one promising way to gain insights into this process is to assess critiques of entrepreneurship theory and the associated responses. These critiques come in the form of dialogues and editorials that analyze theorizing efforts and provide guidance for better scholarship. Assessing critiques of entrepreneurship theory has four main benefits. First, this approach reveals the quality of entrepreneurial theorizing, which in turn helps validate current entrepreneurship models. Second, it highlights possible routes to uncover future theoretical insights into entrepreneurial phenomena. Third, it shows how scholars (and the review process more generally) can take a more scientific approach to entrepreneurial theorizing, including making critiques, responses, and amendments to models to advance knowledge of entrepreneurship. Fourth, this approach offers a unique opportunity to obtain deeper insights into how scholars can build more effective entrepreneurial theorizing to generate impactful papers (conceptual and empirical). In particular, critiques of entrepreneurship papers are likely to help scholars prevent theorizing pitfalls, better understand entrepreneurial theorizing approaches to comprehend the validity of reviewers' comments and communicate with them, and enhance their entrepreneurial theorizing so they can make more impactful contributions to the field.

Therefore, in this chapter, we aim to answer the following questions: what trade-offs do scholars face when engaging in entrepreneurial theorizing, and how can these trade-offs be managed to generate more robust and impactful entrepreneurship papers and further the field of entrepreneurship? In answering these questions, we outline three main challenges associated with entrepreneurship papers that provide a foundation for improving contributions to knowledge: (1) *the scope* of the entrepreneurial theorizing (either too narrow or too shallow); (2) the common features of a paper's *contextualization, boundary conditions,* and *time considerations*; and (3) the *point of view of an entrepreneurship paper's perspective*—theoretical, philosophical, level, and purpose (Shepherd & Williams, 2022). In formulating our arguments on the major trade-offs of papers' entrepreneurial theorizing, we apply a mapping metaphor to demonstrate how each of the above themes affects the overarching "domain" of an entrepreneurship paper's contribution. Similar to written language, maps represent an external expression of thinking (Wood, 1994) and help illustrate portrayals of boundaries that shape the human condition. As French cartographer J. L. Lagrange explained

(in 1770), a "map is a plane figure representing the surface of the earth, or part of it" (Bagrow, 2017: 22).

We contend that applying a mapping metaphor to explain entrepreneurial theorizing sheds light on important boundaries, areas yet to be explored, and places where greater clarity is needed. In particular, in this chapter, we assess entrepreneurship papers in terms of their explanatory terrain of entrepreneurial phenomena (i.e., metaphorical "surface of the earth"). Indeed, entrepreneurial theorizing that covers too little or too much terrain contributes less to the literature than theorizing that takes the middle route between these extremes, which we call the *optimal explanatory terrain*. We admit that this idea of the "entrepreneurial-phenomenon terrain covered" by a paper is rather abstract and subjective. However, in what follows, we do our best to make this notion more concrete and argue that this conceptualization can improve scholars' understanding of paper criticisms to ultimately improve their entrepreneurial theorizing and advance the entrepreneurship field.

Trade-Offs, Explanatory Terrain, and Contribution

Overview and Mapping Framework

We begin by offering our mapping framework of a paper's contribution to the entrepreneurship field. Our framework utilizes a mapping metaphor and emphasizes the importance of considering breadth and depth to cover an optimal amount of the entrepreneurial-phenomenon terrain to contribute to the field of entrepreneurship. Reviewers of entrepreneurial theorizing and theory building[1] generally concentrate on issues surrounding a paper's boundary conditions (contextual, temporal, and theoretical) and theoretical scope (breadth and depth of theorizing), and they tend to implicitly or explicitly recommend changing the entrepreneurial-phenomenon terrain covered in a single paper. Accordingly, these reviewers' comments (and their respective recommendations) provide important clarifying guidance for scholars on how to improve

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[1] In this chapter (and the original article [Shepherd & Williams, 2022]), we draw on multiple sources to assess criticisms, including *Academy of Management Review* dialogues, editorials on theory development, and other review articles that explore theorizing. These critiques are of theory papers published in *AMR*. Thus, while the theory papers have undergone a thorough review process, they still face criticisms from readers.

their entrepreneurial theorizing to enhance their papers' contributions. In the following sections, we outline the common reviewer comments on entrepreneurship theory papers and offer direction on how to integrate these insights when writing or reviewing entrepreneurship papers.

Theoretical Scope—Trading off an Entrepreneurship Paper's Depth and Breadth

Among the most frequent reviewer comments about entrepreneurship papers are those referring to deficiencies in the breadth and/or depth of theorizing. Regarding *breadth*, we mean the diversity of entrepreneurship domains a paper covers. The more domains a model covers, the more generalized that model is across those domains. The resource-based view (Peteraf, 1993; Wernerfelt, 1984), which theorizes that firms obtain competitive advantage through their possession of valuable, rare, inimitable, and substitutable resources (Barney, 1991), is an example of a broad model that scholars have applied extensively across theoretical domains. One way to conceptualize the breadth of papers is through classification systems that capture the scope of a topic, field, or phenomenon—a broader paper includes more classes from a given classification system. For example, Sharma and Chrisman's (1999) classification system for corporate entrepreneurship could be used to establish the breadth of a corporate entrepreneurship paper's theorizing—a broader paper covers more corporate entrepreneurship classes (e.g., it covers internal corporate venturing, external corporate venturing, innovation, and strategic renewal compared to a narrower paper focusing only on internal corporate venturing). Regarding *depth*, we mean the number of links between elements (e.g., constructs, events, activities, etc.) in a model. Deeper models have more links between their various elements.

Despite the apparent polarity between a paper's breadth and depth, we argue that these two aspects are not mutually exclusive. Due to publication constraints (e.g., page limits for a theory paper), however, there is a clear trade-off between the breadth and depth of a paper's entrepreneurial theorizing. Here, we build on our mapping metaphor to suggest that a paper's breadth and depth determine its "area" of exploration, providing either a wider view of the referents on a map and their interrelation (breadth) or a narrower, more detailed exposition of a specific section of a map (depth).

Thus, we detail how a paper's breadth and depth establish the explanatory terrain it covers. First, since publication constraints limit the length of a single paper, we consider the *optimal amount of entrepreneurial-phenomenon terrain* a paper covers. Similar to optimal distinctiveness (Brewer, 2003), this concept involves making *adequate* reference to broad map features while also acknowledging the relevance of depth irrespective of the main orientation of the focal theoretical manuscript (deep or broad entrepreneurial theorizing). Entrepreneurship papers that fail to cover this optimally distinct amount of terrain have underutilized potential in contributing to the entrepreneurship literature. Second, to cover more explanatory terrain, scholars can broaden a paper's scope, deepen (complexify [see Tsoukas, 2017]) its model, or both until they reach the optimal entrepreneurial-phenomenon terrain. Finally, any paper can be criticized for not being broad or deep enough. Here, we take a relatively extreme stance, proposing that such criticisms are apt in two scenarios: (1) the entrepreneurship paper does not cover the optimal amount of explanatory terrain of an entrepreneurial phenomenon, or (2) there is the realization that increasing one aspect (e.g., breadth) will require the author to decrease the other aspect (depth), and there is a strong reason to prefer one ratio of depth to breadth over another such ratio. Thus, entrepreneurship scholars need to be more explicitly aware of the potential scope of their papers—namely, the depth-to-breadth ratio—and avoid providing content outside their papers' optimal terrain.

In line with the above reasoning, some reviewers criticize papers for being *too narrow* and then conjecture how the authors could have broadened such papers. This common reviewer critique supports our claim that despite the criteria for breadth/depth typically remaining unclear to authors, some critics highlight overly narrow arguments. For example, Harvey (2014) developed a model to explain how some teams depend on processes that facilitate creativity to generate new ideas. In a critique of this work, Chen and Adamson (2015) argued in two different sections that Harvey's (2014) model is overly narrow:

> Theoretically, creative synthesis emphasizes the dynamics of dialectical reasoning through affirmation rather than negation. Although Harvey's model is compelling, *we propose that its contribution can be increased by integrating it with negation in dialectical reasoning and the same random variation that it was intended to replace*. To this end, we first articulate the assumptions and limitations of creative synthesis, then develop a

hybrid model called evolutionary synthesis, and end with further research implications. (Chen & Adamson, 2015: 461, emphasis added)

> By recognizing *the compatibility of different models of the creative process and their limitations*, our evolutionary synthesis model may open up exciting avenues for new research, beyond explaining the creative process, such as the generation, evolution, and renewal of knowledge, theory, innovation, organization, and entrepreneurial opportunity. (Chen & Adamson, 2015: 463, emphasis added)

As summarized in this critique, the main concern with Harvey's (2014) theorizing is that it fails to broaden the theory to neighboring fields, which in turn limits its potential breadth in covering the terrain of creative and innovation processes.

On the other hand, reviewers sometimes criticize papers for being *too shallow* and then speculate on how the focal authors could have deepened their entrepreneurial theorizing. For instance, in criticizing Afuah and Tucci's article (2013) on crowdsourcing as a solution to distant search, Bloodgood (2013: 455) argued that their model is limited because it does not elaborate on the underlying theoretical mechanisms:

> It is also important how the problem gets solved. Afuah and Tucci do not adequately address the advantages of each of the three approaches they discuss. A primary benefit to internal problem solving is that the answer is more concealed than it would be using contracted problem solving, and significantly more concealed than if crowdsourcing were used. Concealment of the solution—and even the problem in many cases—provides the focal firm with a stronger potential advantage over its rival.

As such, Bloodgood (2013) contended that failing to provide sufficient depth will adversely affect future research attempting to explain decision-making better. Afuah and Tucci's original paper could have made a more significant contribution had it incorporated theories of competitive advantage to explain value capture. As this example shows, a contribution is less about linking to a dispersed and broad set of concepts and more about deeply expounding upon the "building blocks" of the theorizing and erring "in favor of including too many factors, recognizing that over time, their [authors'] ideas will be refined [as] it is generally easier to delete

unnecessary or invalid elements than it is to justify additions" (Whetten, 1989: 490). Indeed, a typical way to increase depth is to define and elaborate the mechanisms linking key features of a model (i.e., explaining the how, what, and why) (Anderson et al., 2006; Shepherd & Suddaby, 2017; Westphal & Zajac, 2013).

Writing Better-Scoped Entrepreneurship Papers

Considering the conflicting criticisms of a paper being either too narrow or too shallow in scope (in terms of covering the entrepreneurial phenomenon), one may presume that authors are stuck in a Catch-22: too much depth *or* breadth may subject an author to the risk of criticism and rejection. We attempt to offer a route out of this predicament in Fig. 4.1, in which we combine a paper's breadth (x-axis) and depth (y-axis) to highlight the amount of entrepreneurial-phenomenon terrain covered (the diagonal line). We argue that criticisms of entrepreneurial theorizing focusing on the breadth and/or depth are valuable for papers falling below the optimal entrepreneurial-phenomenon terrain covered but are not especially valuable for papers that already cover the optimal amount of entrepreneurial-phenomenon terrain.

In setting the stage for the relationship between the breadth and depth of an entrepreneurship paper, we aim to develop a more objective view of theoretical contributions to the entrepreneurship field to ultimately help improve entrepreneurial theorizing within and across papers and increase the quality of reviewers' critiques and recommendations. Nevertheless, we acknowledge that individuals likely have different opinions of what represents a paper's breadth, depth, and the ratio of the two. While we do not believe we can resolve these differences (nor is it necessary for us to do so), we hope our model offers a useful framework to understand others' differences and communicate these differences to improve the contributions of entrepreneurship papers.

Thus, we contend that having a shared understanding of the trade-offs between a paper's breadth and depth can provide more detailed guidelines for assessing the often hazy concept of a "theoretical contribution" to the entrepreneurship literature. Using the guidance illustrated in Fig. 4.1, entrepreneurship scholars can more thoroughly and objectively evaluate whether their papers cover adequate entrepreneurial-phenomenon terrain and whether their depth-to-breadth ratios need to be altered. More generally, entrepreneurship scholars need to acknowledge that papers vary
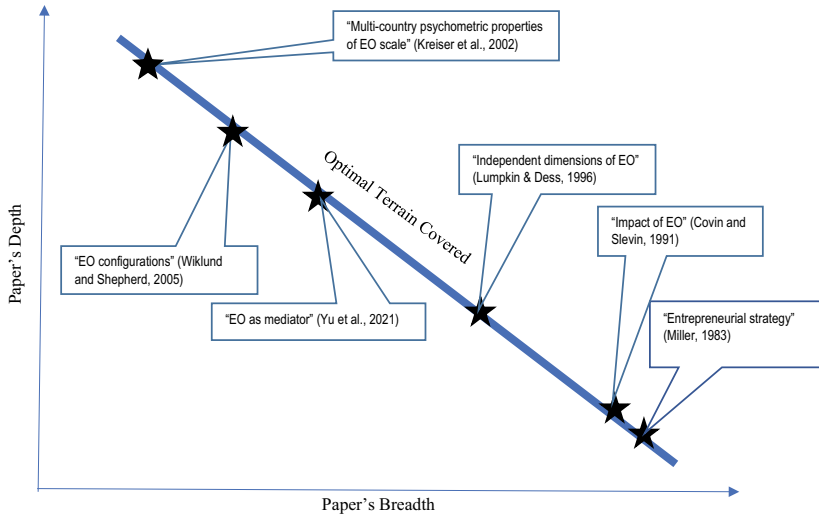
Fig. 4.1 Breadth, depth, and optimal coverage of the entrepreneurial-orientation terrain

in the breadth and depth of their entrepreneurial theorizing and that they need to thoughtfully combine breadth and depth to *optimize the entrepreneurial-phenomenon terrain* they cover (not too much or too little explanatory terrain covered). In other words, they need to justify their ratios of depth to breadth in anticipation of readers' preferences for higher or lower ratios.

Figure 4.1 portrays our understanding of papers with different depth-to-breadth ratios (Shepherd & Williams, 2022). However, it is important to note that each paper covers an optimal amount of explanatory terrain and contributes to the entrepreneurship literature. We recognize that the position of a paper's breadth and depth and optimal terrain covered is rather a subjective assessment, but we offer it as a conceptualization to enhance entrepreneurial theorizing, the review process, and contributions to the entrepreneurship field. In Fig. 4.1, we offer some examples of such subjective assessments of papers on entrepreneurial orientation (EO). We selected EO because it is a popular topic and, as Fig. 4.1 shows, encompasses a wide range of depth-to-breadth ratios that result in an optimal amount of terrain covered. Starting with the bottom right

of Fig. 4.1, we highlight Miller's (1983) work, which conceptualizes the idea of an entrepreneurial strategy—the genesis of the EO construct—and links it to strategy, organizational, and economics theories. Covin and Slevin's (1991) study, which is less broad but deeper, centers on EO as a strategic posture and examines its antecedents and consequences. Still less broad but deeper is Lumpkin and Dess's (1996) study, which divides the EO construct into five dimensions and proposes a range of models connecting EO to the performance that can be tested in future research. Yu et al.'s (2021) work is again less broad but deeper, exploring the mediating role of EO in the relationship between symptoms of attention deficit hyperactivity disorder and firm performance and thus providing a richer understanding of individual antecedents to firms' EO than Covin and Slevin's (1991) broader study detailed above. Wiklund and Shepherd's (2005) study adds even more depth to the understanding of EO by investigating different configurations of EO, access to capital, and environmental dynamism (i.e., a three-way interaction) to explain small businesses' performance. Finally, Kreiser et al.'s (2002) research explores the operationalization of EO dimensions and the robustness of this measure across countries.

As Fig. 4.1 shows, the earlier EO papers fall at the broader yet shallower end of the optimal-terrain continuum, but as the topic matures, research becomes narrower and deeper. It could be that entrepreneurship scholars first decide on the breadth of a paper and then, given that level of breadth, establish the depth needed to cover an optimal amount of terrain. However, the reverse is also possible: based on the available data (for a quantitative or qualitative study), how deep can the theorizing be, and given that depth, what is the ideal breadth to cover the optimal amount of terrain?

Next, we discuss specific issues related to breadth and depth as well as suggestions for how authors can address them. These issues relate to studies' *boundary conditions*, including their contextualization, temporal considerations, and theorizing logic.

Boundary Conditions: Situating Theorizing and Optimizing the Explanatory Terrain

Boundary conditions are an important aspect of theorizing outcomes that entail the "who, where, and when" of theory (Dubin, 1976; Whetten, 1989), including context, temporality, and theorizing logic.

Issues related to boundary conditions often involve the breadth and depth of entrepreneurial-phenomenon terrain covered as they shape the overall scope of a paper. For instance, Coffman and Sunny (2021) recently critiqued how Dencker et al. (2021) conceptualized necessity entrepreneurship. In particular, Coffman and Sunny (2021) argued that by disregarding a previously held boundary (dichotomous—push or pull into entrepreneurship) related to necessity entrepreneurship, Dencker et al. (2021) ended up eliminating "the need to group entrepreneurs into either necessity or opportunity categories" altogether. Coffman and Sunny (2021: 824) went on to argue that "a needs-based view of entrepreneurial motivation can be broadened to include start-up activity traditionally referred to as opportunity entrepreneurship." Overall, Coffman and Sunny (2021) maintained that Dencker et al.'s (2021) boundary conditions are too narrow and thus need to be expanded.

In contrast to the previous example encouraging expansion, in another example, Varendh-Mansson et al. (2020: 230) criticized Grimes et al.'s (2019) mission-drift theory as being too broad—a "potentially misguided attempt to develop a general theory"—and recommended additional detail:

> While the treatment that Grimes et al. (2019) develop is likely relevant to some organizations, their argument is built on a shaky foundation, where "mission" is conceptualized in simplistic terms as an organization's single, orienting purpose. . . . This dialog details our concerns, and suggests that it is vital to go upstream, and theorize mission as a nuanced and variegated construct if we are going to generate meaningful insight about the nature, causes, and consequences of drift. Grimes et al. (2019) open their paper by noting that "organizational mission" is severely undertheorized in extant studies. Yet rather than grappling with the complexity of this construct, the authors assume that all organizations have a clear, singular mission that is understood and accepted by all key stakeholders.

As these examples show, critics' comments about boundary conditions are mainly related to either relaxing or restricting these conditions to improve a paper's contribution to the literature. Indeed, Parker et al. (2019: 478) captured the idea of a paper's optimal theorizing terrain (i.e., criticisms that a paper can do more can always be made but are not always valuable or productive) in their response to a critique of their paper on discretion and firm reputation: "No theoretical framework can

be so exhaustive as to adequately address all of the nuances and exceptions that might be fruitful for scholars to pursue, but we believe that our framework is a good first step."

Addressing General Boundary-Condition Issues

Regarding recommendations, *scholars need to ensure they establish boundary conditions for their theorizing* (Bacharach, 1989; Dubin, 1976; Whetten, 1989). Indeed, as Busse et al. (2017: 575) claimed, "the most widespread scholarly attitude toward boundary conditions has been inattention." However, boundary conditions are important because they determine the generalizability of theories (Busse et al., 2017; Whetten, 1989). A more dynamic stance on boundary conditions entails utilizing boundary conditions as a tool in the entrepreneurial theorizing process.

To help scholars explore the boundary conditions of their work, Busse et al. (2017) proposed the following three approaches. First, inside-out exploration of boundary conditions requires scholars to reflect on the boundary conditions—specifically, the when—of a newly created theory (Busse et al., 2017; e.g., Green et al., 2008; Townsend et al., 2018). This approach begins with the known territory of a theoretical model and then speculates beyond the existing boundary conditions into unknown territory. Because the resulting speculations are not part of the focal theoretical model, they have little influence on theorizing breadth and depth, but they may still stimulate theorizing.

Second, outside-in exploration of boundary conditions begins with a situation (or who, when, where) wherein an existing theoretical model is expected *not* to apply. This disconnect (and the associated feedback loops and iterations) then informs theorizing such that existing accounts are modified to accommodate the novel situation or a new (indigenous) theory is generated (Busse et al., 2017; e.g., positioning strategies and complex rules in dynamic markets [Bingham & Eisenhardt, 2011]). Gray and Cooper (2010) called this approach pursuing failure—namely, applying a theoretical approach that is unlikely to be applicable (i.e., one that disfavors a theory)—to create a theory that fits the focal situation better. For example, by applying learning theories to entrepreneurs of failed businesses, Shepherd (2003) highlighted the inapplicability of assumptions that learning from failure is automatic and instantaneous, instead replacing them with a grief model of learning from failure that necessitates a process of regulating negative emotions.

Finally, uncertain or serendipitous exploration of boundary conditions entails scholars investigating phenomena they are interested in. With this approach, scholars may begin with a theoretical perspective but are uncertain whether this perspective will be valid for their research (given the uncertainty) or whether opportunities for theorizing will emerge by chance (Busse et al., 2017). For instance, McMullen and Bergman (2017) set out to explore the positive effects of a social venture's efforts (providing clean water) on rural villages in Africa but were surprised by the beneficiaries' lack of appreciation toward the social entrepreneurs, which led them to generate a model of the paradox of prosocial motivation.

These three approaches to exploring boundary conditions have significance for our contribution framework. In particular, some critics argue that entrepreneurship papers can contribute to the field more effectively by relaxing their boundary conditions (Berglund & Korsgaard, 2017; Gupta et al., 2016). To do so, a researcher needs to consider more domains and thus broaden their coverage of the entrepreneurial-phenomenon terrain, thereby extending the boundary conditions of the focal paper (e.g., Alvarez & Busenitz, 2001; Calás et al., 2009; Dencker et al., 2021). In the case of a paper that already covers an optimal amount of the entrepreneurial-phenomenon terrain, broadening its scope will necessitate shallower theorizing (e.g., less theorizing on the complexity of relationships, such as potential three-way interactions or moderated mediated relationships) to preserve this optimality. On the other hand, restricting boundary conditions requires researchers to place greater constraints on which entrepreneurship domains to include. Therefore, when an entrepreneurship paper already covers the optimal amount of entrepreneurial-phenomenon terrain, addressing such recommendations will necessitate deeper theorizing on the nuances of a more limited set of entrepreneurship domains.

After reviewing the general role boundary conditions play in establishing the optimal entrepreneurial-phenomenon terrain covered in a paper, we searched for deeper insights into the common elements of a "boundary condition" that scholars need to consider. Indeed, although reviewers frequently highlight concerns over papers' boundary conditions (Whetten, 1989), their boundary-condition criticisms often fail to indicate *the specific nature of the violation*. Clearly outlining the criteria for "appropriate" boundary conditions is crucial for assessing the quality of theoretical contributions (Corley & Gioia, 2011) and is essential for

effective theory building overall (Dubin, 1976; Smith & Hitt, 2005; Whetten, 2009). Next, we review the most common failures associated with establishing appropriate boundary conditions in terms of papers' (1) contextualization, (2) temporality, and (3) theorizing logic and how these failures affect the construction of a contribution to the entrepreneurship literature.

Contextualization

Although contextualization has become increasingly important in entrepreneurial theorizing, critics still argue that authors pay inadequate attention to its implications for theory (Welter, 2011; Zahra, 2007; for reviews, see Shepherd et al., 2019; Welter et al., 2019), particularly about a paper's depth-breadth terrain coverage and ratio. Contextualization (or context) encompasses the "where" of entrepreneurship, including, for example, the "stage of life-cycles of industries and markets" (business context), "structure of networks" (social context), "characteristics of local communities and regions" (spatial context), and "societal attitudes and norms" (institutional context) (Welter, 2011: 168). Critics' concerns over insufficient contextualization generally center on the overemphasis on a specific context and its lack of applicability to other areas. For instance, by excessively focusing on entrepreneurship in high-tech businesses, scholars may overlook the heterogeneity of day-to-day entrepreneurship (Welter et al., 2019; Welter & Baker, 2021). Criticisms citing insufficient contextualization of entrepreneurship research stress scholars' lack of attention to contextual nuances that need to be accounted for in entrepreneurial theorizing. For example, Ahsan (2017: 145–146, emphasis added) noted the following about context in Navis and Ozbek's (2017) theorizing on entrepreneurial entry and successful opportunity realization:

> Navis and Ozbek implicitly connect venture context to novelty of technology and its related components (2017: 114). For instance, they use examples of early internet companies (eBay, Priceline, Yahoo, Webvan) and technology product companies (Solyndra, satellite-based entertainment) to describe the difference between familiar and novel venture contexts. *This is problematic since not all new technologies are the same and vary in terms of complexity and gestation period* (e.g., apps, biotechnology, medical devices). This means that in some cases a venture context might be novel for a few months, whereas in other situations a venture context might remain novel

for more than a decade. . . . Simply put, Navis and Ozbek's conceptualization of "context" *limits our understanding of how the relationships explored by the authors impact entrepreneurial outcomes*. More important, it creates issues in the theoretical development of what the authors describe as the "linchpin constructs for demonstrating how and why 'context matters' in entrepreneurship research" (2017: 111), which I discuss next.

In another example, Jaskiewicz et al. (2019) claimed that Nason et al. (2019) overly contextualized their model:

> The situation will be quite different within enmeshed and chaotic families. Enmeshment fuels an internally oriented focus on harmony and sharing time together, while chaos implies a lack of clear leadership and an impulsive responsiveness to new stimuli (Olson, 2000). Accordingly, reference points might shift frequently as these families harmoniously but impulsively respond to each new piece of knowledge contributed by any family member.

According to Jaskiewicz et al. (2019), Nason et al.'s (2019) failure to include a broad set of family contexts limits their study's contribution because the relatively narrow theoretical scope (family business) prevented them from fully considering family firms' diversity (i.e., a lack of breadth).

Recommendations to Address Contextualizing Entrepreneurial Phenomena

With these gaps in contextualization, what does it mean to consider context more fully in entrepreneurship studies? Likewise, how can scholars incorporate context in their work while avoiding theoretical arguments that are overly narrow? Whetten (2009) suggested that scholars can incorporate context in their theorizing in one of two ways: (1) by putting theories *in context* and (2) developing theories *of context*. Putting theories in context suggests that theorizing is sensitive to the potential role of context and entails "situational linking" that improves a theoretical model's accuracy, interpretation, and robustness (Rousseau & Fried, 2001). According to Bamberger (2008), papers explaining theories in context usually include a speculative post hoc discussion of how context can be addressed in subsequent theorizing—for instance, how a meta-analysis could be used to test context as a moderator of a focal relationship across numerous studies (Eden, 2002; although such a meta-analysis of

context may be difficult [Johns, 2006]). To put theories in context, scholars must detail the relevant (i.e., to theory) contextual conditions in their papers (Whetten, 2009).

When a paper is highly focused on a particular entrepreneurial context, its breadth is narrowed—namely, the focal scholar limits the domain of the paper. As a result, the paper's generalizability may also be limited to the respective entrepreneurial context. Based on our notion of the optimal amount of entrepreneurial-phenomenon terrain covered, we expect that a paper with a narrow breadth needs to dig deeper to contribute to the literature.

Theories of context rely on the notion that context serves as a driver of certain outcomes or as a moderator of certain relationships (usually relationships at a lower level of analysis than the contextual factor). Going beyond merely acknowledging a model's sensitivity to an entrepreneurial context, this type of theorizing instead incorporates contextual factors into a theoretical model that explicitly explains heterogeneity (Bamberger, 2008; Johns, 2006) across entrepreneurial contexts (e.g., Dencker et al., 2021). A theory of context that includes the direct effects of contextual factors on a model's outcome (Johns, 2018) introduces factors to the model from a higher level of analysis. Accordingly, the focal theorist likely includes a new domain and thus increases theorizing breadth. In contrast, theories of context that add moderators to specific relationships (Johns, 2018) alter the nature of relationships between lower-level variables, for example, by introducing two-way cross-level interactions. Although this approach adds to the domain of theorizing (i.e., via the moderator), it mainly explains the increased complexity (or richness) of these relationships by adding connections between constructs. In turn, this increased complexity represents a paper's increased depth. As such, developing theories of context can increase papers' depth but may necessitate restricting the domains investigated (i.e., reducing breadth to avoid doing too much in one paper).

Overall, greater contextualization seems to narrow the breadth and increase the depth of papers but for different reasons for different approaches. When an entrepreneurship paper already covers the optimal amount of entrepreneurial-phenomenon terrain, *theorizing in context* narrows its breadth, thus requiring an increase in depth, while *theorizing on context* increases depth, thus requiring a narrowing of breadth.

Temporal Considerations

The second major criticism related to papers' boundary conditions involves insufficient temporal considerations. Attending to temporal considerations is vital in answering questions related to *why* and *when* a theoretical perspective is applicable (Whetten, 1989) since "temporality hugely matters in organizational life" (Langley et al., 2013: 4). In addition, temporal considerations help establish the quality of a theory in terms of its "originality (classified as either incremental or revelatory) and utility (scientific and/or pragmatic usefulness)" (Corley & Gioia, 2011: 26). Indeed, as Bird and West (1998: 5) argued, "temporal dynamics are at the heart of entrepreneurship." Despite the clear relevance and importance of temporality in entrepreneurship scholarship, however, entrepreneurship research has not adequately explored temporality, as indicated by the numerous calls for more research focusing on time (Lévesque & Stephan, 2020; Wadhwani et al., 2020), processes, and the entrepreneurial journey (McMullen & Dimov, 2013) and the many critiques referencing concerns with temporal considerations. In particular, many critics decry what they believe is deficient consideration of the role of time in entrepreneurship models. For instance, Berglund and Korsgaard (2017: 731) made the following critique of Ramoglou and Tsang's (2016) model of opportunities as propensities:

> The authors paint a very deterministic picture that downplays the many empirical and conceptual accounts of entrepreneurship as an open ended and collective process that unfolds in real time and transforms individuals, ventures, and environments in largely unpredictable ways. . . . In fact, the analogy of a seed actualizing into a flower treats time as something that influences only whether and how fast a seed becomes a flower; regardless of time passed, the seed will never be anything but a flower.

Recommendations for Incorporating Temporal Boundary Conditions in Entrepreneurship Papers

One of the best ways to incorporate temporality into entrepreneurship theory is by applying a process perspective (McMullen & Dimov, 2013; see also Langley, 1999). Proponents of a process perspective claim that considering time is crucial for entrepreneurial theorizing because focusing on the "entrepreneurial journey that explicitly transpires over time" can lead to new insights into "the transformative process by which desires

become goals, action, and systematic outcomes," a process that may be "the distinctive hallmark of entrepreneurship research" (McMullen & Dimov, 2013: 1482). A process perspective draws attention to "how and why things emerge, develop, grow, and terminate over time" (Langley et al., 2013: 1). The resulting explanations often capture interactions between constructs across multiple levels of analysis (Langley et al., 2013), the dynamic nature of the associated activities (Lévesque & Stephan, 2020; Wadhwani et al., 2020), and other types of level-crossing feedback loops (Hofstadter, 2008). As a result, this approach can lead to theorizing on entrepreneurial phenomena that is rich (e.g., Gehman et al., 2013), elegant (e.g., Wright & Zammuto, 2013), integrative (e.g., Pryor et al., 2016), and iterative (Webb et al., 2010).

Although a process perspective does not generally add new domains to entrepreneurial theorizing, it does typically add *complexity* by elucidating temporally evolving phenomena (Lévesque & Stephans, 2020; McMullen & Dimov, 2013; Wadhwani et al., 2020). This complexity (or richness) involves depth in covering the entrepreneurial-phenomenon terrain. Thus, when critics highlight the need for more temporal considerations or a process perspective, they are asking for deeper theorizing in papers. For entrepreneurship papers that do not cover enough entrepreneurial-phenomenon terrain, considering time is a way to deepen their respective models to cover more terrain. For entrepreneurship papers that already cover an optimal amount of entrepreneurial-phenomenon terrain, however, such deeper theorizing may lead them to "do too much." In these cases, a "corresponding" reduction in breadth may be needed, or the position of these papers may need to be moved along the diagonal (see Fig. 4.1) with no increase in contribution to the entrepreneurship literature. However, a new paper can contribute to the literature by building on the theory of an existing entrepreneurship model—namely, by expanding upon (and thus complementing) the original theory paper using a process perspective to deepen the model (i.e., narrowing the entrepreneurial theorizing) (for a related discussion on the benefits of theory elaboration, see Fisher & Aguinis, 2017).

Scholars' efforts to incorporate temporality to contribute to the literature can be further improved by providing greater model specificity and *expressing the purpose* of models—namely, is the underlying argument based on a variance theory (linear and contingency based) or a process theory (flow, recursive, and outcome driven)? According to

Pratt (2009: 860), conventional "boxes and arrows" models are typically interpreted as variance-based theoretical arguments. He, therefore, recommended that authors "be especially careful... if you are using boxes and arrows to tell a process story, make sure that this [the focus on a process] is clear to the reader." Process studies, also known as "progression studies" (Kouamé & Langley, 2018), shed light on the dynamic concepts of entrepreneurial phenomena and can be employed through several approaches, including flow matrices (e.g., Burgelman, 1983) and outcome-driven narratives (e.g., Vuori & Huy, 2016). Indeed, theoretical models are often used to guide readers through different aspects of a theoretical argument. However, we encourage authors to go one step further by carefully considering how they conceive, frame, and communicate their entrepreneurship models to ensure they align with the overall logic, assumptions, and purpose of their entrepreneurial theorizing. Such careful consideration is vital when temporality is involved (for a review, see Lévesque & Stephans, 2020; McMullen & Dimov, 2013; Wadhwani et al., 2020).

Theorizing-Logic Considerations

Another critical boundary condition that critics often mention relates to scholars being more precise in explaining the logic and philosophical perspectives driving their theorizing. This precision could encompass a theory's particular theoretical domain, its philosophical foundations, and the level of analysis. For instance, because entrepreneurship reviewers frequently come from different theoretical "homes," they may recommend different points of view according to the assumptions underlying their varying perspectives. In their critique of a theory of compassion-driven social entrepreneurship, for example, Pan et al. (2019: 214, emphasis added) advocated for a different *theoretical perspective*, closing with the following:

> If social entrepreneurship is about venturing in the service of others (Miller et al., 2012), then it follows that we should *use theoretical lenses that allow us to examine the variance in how social entrepreneurs perceive and support others*. Social identity theory allows us to do exactly this and, thus, in our view is essential to the study of social entrepreneurship. Moreover, by combining social identity theory and role identity theory, we can investigate interesting role identity-based variation in social entrepreneurship that exists within the three primary social identities. (see Gruber & MacMillan, 2017)

Several other critiques (e.g., Alvarez & Barney, 2013; Hwang & Colyvas, 2020; McBride & Packard, 2020) also highlighted the need for greater precision in specifying theoretical arguments' ontological and epistemological underpinnings. Such precision provides the basis for a stronger theoretical contribution by (1) setting the boundary conditions of arguments and (2) making authors "take a stand" regarding their view of reality.

Finally, reviewers often take issue when the level of analysis of boundary conditions is too narrow. For instance, in his critique of Afuah and Tucci's (2013) model of crowdsourcing as a solution to distant search, Bloodgood (2013: 456) argued for a change in perspective that would lead to a different purpose for the theorizing:

> When would crowdsourcing be useful compared to internal and contracted problem solving? The relationships posited by Afuah and Tucci would need to be re-examined to answer this question, but for the most part they may hold with the qualification that value capture is not affected. I argue that this qualification is suspect; however, we can still learn about the relationships between these variables of interest by using it.

Recommendations for Theorizing-Logic Considerations

These different perspectives for entrepreneurial theorizing—namely, theoretical, philosophical, and level of analysis—can either increase the number of domains a paper covers (i.e., increase breadth) or increase the links between constructs, activities, and/or events modeled (i.e., increase depth). Undoubtedly, comments to broaden or narrow the scope of a paper based on its central features (theory, philosophy, level of analysis, etc.) subject entrepreneurship papers to a wide range of boundaries. Thus, as we discussed earlier, such comments and the associated implicit/explicit suggestions to increase breadth, depth, or both are relevant only when a paper does not cover the optimal entrepreneurial-phenomenon terrain and therefore needs to cover more terrain to contribute to the entrepreneurship literature. Otherwise, any entrepreneurship paper could receive a nearly unlimited number of recommendations to change or reposition its attempted contribution to the literature.

Thus, even when a reviewer's alternative perspective could generate a theorizing outcome that covers an optimal entrepreneurial-phenomenon terrain, this perspective does not necessarily warrant a critique of the focal

entrepreneurial theorizing. Instead, the alternative perspective needs to be better than the focal paper's perspective (i.e., cover optimal terrain whereas the focal paper does not), not merely different. Therefore, reviews need to submit to a similar rigorous evaluation of their suggestions, or else it is a rather easy (and, we maintain, pointless) task for reviewers to suggest domains or phenomena that could potentially be included in an entrepreneurship paper. That being said, when a criticism and corresponding recommendation are simply different from (but not superior to) the focal theorizing, they can still advance this theorizing by stimulating future theorizing that builds on the foundation provided by the focal paper to develop a different depth-to-breadth ratio. In such cases, the comment and recommendation do not represent a criticism of the focal paper (or should not be seen as such) as much as an exercise in disciplined imagination that the paper's author can incorporate into the future research section so others can expound upon the current theorizing to further the entrepreneurship field.

Implications

Above, we aimed to identify and explain the challenges and opportunities associated with contributing to the entrepreneurship literature. Having outlined the major issues raised by critics (as proxies for reviewers) and then providing recommendations to overcome these challenges, we now turn to summarizing the implications for entrepreneurship scholars—namely, for authors, reviewers, and editors.

Author Implication 1: Focus on Covering the Optimal Entrepreneurial-Phenomenon Terrain for a Single Paper

On the one hand, entrepreneurship scholars (possible through friendly reviews) need to recognize whether and when their current entrepreneurial theorizing does not cover an optimal amount of entrepreneurial-phenomenon terrain. They can then cover more terrain by increasing their papers' breadth, depth, or both. On the other hand, entrepreneurship papers sometimes try to accomplish too much—that is, they try to cover too much terrain for a single paper. For example, a revised entrepreneurship paper may cover too much terrain when the author tries to appease reviewers' differing requests. The resulting terrain coverage is likely to be excessive and thus ineffective, leading the

reviewers to ultimately reject the paper. In such cases, authors need to make stronger claims about the nature of their contributions (see next implication), perhaps guided by editors' recommendations.

Author Implication 2: Stake a Claim for the Nature of the Contribution to the Entrepreneurship Literature

Authors can shield themselves from reviewers' critiques (in advance, to some degree) by clearly stating the combination of breadth and depth in their papers. In other words, they can argue that their papers cover an optimal amount of entrepreneurial-phenomenon terrain. In making such a claim, an author can acknowledge that different combinations of breadth and depth would contribute to the literature but so does their paper's particular depth-to-breadth ratio. This difference between a paper's depth-to-breadth ratio versus that of a published paper can itself be the source of a contribution. For instance, Simsek and Heavey (2011: 81–82) described the contribution of their study as follows:

> An effort to enrich theoretical explanations of the association between CE [corporate entrepreneurship] and firm performance, we propose a deeper explanation, based on the premise that pursuing CE is a dynamic capability that involves stretching and extending the firm's knowledge-based resources. . . . Even as the elements of a firm's knowledge-based capital might take many forms and emphases (Borch et al., 1999; Floyd & Wooldridge, 1999; Hitt et al., 2000), they are fundamentally distinct in how they accumulate and distribute knowledge—namely, through individuals (human capital), relational ties (social capital), and organizational systems (organizational capital).

In addition, an author can outline other valuable combinations of depth and breadth (perhaps even those proposed by reviewers) in the future research section of their papers. Such an acknowledgment represents more than "throwing reviewers a bone," instead offering potentially productive paths for other scholars to build off the focal paper to make further contributions to the entrepreneurship literature (see next implication).

Author Implication 3: Generate New Ideas for Future Research by Changing the Ratio of Breadth to Depth of an Existing Entrepreneurship Model

Either in the future research section of a paper or as the foundation for a new paper, scholars can adjust the depth-to-breadth ratio (while preserving the optimal terrain covered) to expand the current theorizing and make a contribution to the entrepreneurship field. Thus, scholars looking for research opportunities to contribute to the literature can use a published paper they find interesting as a starting point and then design a new study that moves up or down the diagonal line of optimal terrain (see Fig. 4.1). This approach not only generates an idea for a new paper but also serves as the basis for positioning its contribution vis-à-vis the initially published paper. What can be learned from the resulting entrepreneurial theorizing (compared to the published paper) by going deeper (with less scope) or broader (with less depth)? As an example, Kier et al. (2021: 20) referenced another study's call for future research when discussing their study's contribution and then proposed (in the second quote) that future research extend the scope further:

> Our findings answer the call by Sleesman et al. (2018) for "future research that could offer insight into the escalation literature by examining the degree to which leader attributes influence the commitment to failing endeavors" (p. 190) by explaining heterogeneity among individuals' decisions to persist in new product development. To operationalize this heterogeneity, we introduced theories of self-regulation, specifically locomotion and assessment (Kruglanski et al., 2000), to explain variance in entrepreneurs' responsiveness to interpersonal influence from their team to persist.

> While our study focuses on dispositional approach and avoidance orientations, each may also be evoked situationally (Higgins, 1997), which might be especially relevant during the COVID-19 pandemic that could make even the most eager entrepreneur hyper vigilant. We therefore encourage future research to examine how situational and dispositional approach and avoidance orientations interact to influence undue persistence.

Author Implication 4: Make Explicit the Boundary Conditions to Defend an Entrepreneurship Paper from Some Potential Criticisms

Direct statements detailing an entrepreneurship paper's boundary conditions specify the paper's position on the "optimal-terrain" frontier. In turn, such statements help establish expectations and evaluation criteria for readers and reviewers based on the focal paper's depth-to-breadth ratio. These direct statements on boundary conditions (as well as key assumptions) are usually placed early in the theory development section of deductive and conceptual papers. In their deductive study, for example, Grégoire and Shepherd (2012) outlined four key assumptions as the boundary conditions of their theorizing on opportunity ideas and opportunity-belief formation. In inductive studies, boundary conditions are typically located in the discussion section near where the transferability of findings is discussed. For instance, Powell and Baker (2014) included a subheading in their discussion section titled "Boundary Conditions and Future Research."

Author Implication 5: Use Context to Problematize a Current Entrepreneurship Model to Motivate Further Theorizing

Future entrepreneurial theorizing can problematize prior research by incorporating context using disciplined imagination. In particular, entrepreneurship scholars can generate contributions by putting previous *theories in context* and thus broadening models (perhaps with less depth). Boso et al. (2013: 710), for instance, broadened models of entrepreneurial orientation by challenging previous boundary conditions in a new, yet important, context:

> The boundary conditions of the effects of firms' strategic orientations on performance are under-researched. In particular, the paucity of research into strategic orientations in emerging market contexts is telling, since the literature indicates that the beneficial effects of firms' strategic orientations may be context specific as opposed to being universally applicable (e.g., Li & Zhou, 2010; Luo et al., 2008; Stam & Elfring, 2008). Accordingly, drawing on the contextual idiosyncrasies of developing economies, we present a modified theory of the likely performance consequences of EO [entrepreneurial orientation] and MO [market orientation] in an emerging market environment.

Scholars can also contribute to the entrepreneurship literature by developing *theories of context* such that their papers investigate the role of macro effects on more micro relationships as a foundation for creating deeper and richer entrepreneurship models (while also potentially narrowing the scope of papers). For example, Hmieleski and Baron (2009) developed a theory of context to explain how the negative relationship between dispositional optimism and new venture performance is strengthened (i.e., is more negative) in more dynamic industries than in less dynamic industries, thus providing a richer understanding of the role optimism plays in new venture performance.

Author Implication 6: Use Time to Problematize a Current Entrepreneurship Model to Motivate Further Entrepreneurial Theorizing

Researchers can also contribute to the entrepreneurship field by exploring existing theories of static relationships and variance-based explanations as a basis for theorizing about dynamic relationships and process-based models. Both Lévesque and Stephan (2020) and McMullen and Dimov (2013) stressed the importance of such a time-based approach for generating research with high potential to contribute to the knowledge of entrepreneurial phenomena. Indeed, numerous studies have incorporated time (e.g., Bakker & Shepherd, 2017; Mittermaier et al., 2021), explored processes (e.g., Burton et al., 2016; Powell & Baker, 2017), and delineated trajectories (e.g., Henfridsson & Yoo, 2014; Preller et al., 2020; Williams & Shepherd, 2021) to contribute to the entrepreneurship literature. As one example, Burton et al. (2016: 237) problematized entrepreneurial careers by incorporating time and establishing their paper's contribution:

> To date, a primary focus of entrepreneurship scholars has been on the founding of a new venture as an end in and of itself, or more generally on transitions to entrepreneurship. There can be no doubt that this is an important and fruitful area of research, one that we each have contributed to ourselves. However, as life course scholars have long recognized, "transitions are always embedded in trajectories that give them distinctive form and meaning" (Elder, 1985 p. 31). Work transitions, in other words, should be understood in the context of a career—"career" both in the sense of a sequence of past states, and in the sense of an imagined future

trajectory. For example, many researchers approach the question of who becomes an entrepreneur by examining the characteristics of the people who become entrepreneurs rather than the characteristics of the pathways that lead to entrepreneurship. To the extent that researchers have considered the role of career experiences, these experiences have been conceptualized as accumulated human capital rather than a series of steps that may or may not build on one another (Spilerman, 1977).

Author Implication 7: Use a Different Perspective to Problematize a Current Entrepreneurship Model to Motivate Further Theorizing

For new research, scholars can problematize earlier work by shifting the perspective (i.e., theoretical, philosophical, or level of analysis) to provide a different depth-to-breadth ratio to cover an optimal entrepreneurial-phenomenon terrain. For instance, by taking a different theoretical perspective—namely, compassion and prosocial motivation—Miller et al. (2012) were able to uncover new insights into social entrepreneurship. In a similar vein, Ramoglou and Tsang (2016) applied a realist perspective to provide new insights into opportunities (i.e., opportunities as propensities). Further, Shepherd et al. (2021: 1) took a micro perspective of bribery to contribute to the entrepreneurship literature, whereas Peredo and Chrisman (2006: 309) took a macro perspective of entrepreneurship to provide new insights into "sustainable local development in poor populations" by considering the community as both an "entrepreneur and enterprise."

Author Implication 8: Avoid Sticking to One Combination of Breadth and Depth Vis-À-Vis Other Combinations

The entrepreneurship field benefits from having papers along the entire optimal-terrain frontier—that is, theorizing that is narrow and deep, broad and shallow, and all the points in between. Likewise, the field would suffer if all papers are located at the same point of the optimal-terrain frontier. In other words, entrepreneurship research (across papers) that is diverse in terms of depth-to-breadth ratios (while still maintaining the optimal terrain) is likely to result in a "better understanding" of entrepreneurial phenomena. Thus, if a group of entrepreneurship papers is clustered on an optimal-terrain point (i.e., a specific depth-to-breadth ratio), research opportunities arise for related studies occupying different

positions in the optimal terrain (i.e., the diagonal line of Fig. 4.1)—deeper or broader. Literature review papers generally explore and summarize research activity to highlight future research opportunities where less or no work has been conducted. For instance, in their review of the literature examining the initiation of entrepreneurial endeavors as the dependent variable, Shepherd et al. (2019: 166) summarized their recommendations for future research to either go deeper or broader in the following way:

> Although research has substantially increased our knowledge of the initial steps of the entrepreneurial journey, there are many opportunities for future research to contribute to the entrepreneurship literature, including research on (1) a richer and deeper investigation of opportunity, (2) a more micro perspective of self-employment entry, and (3) an expanded range of initiation contexts.

In addition to the implications for authors, our contribution framework also has implications for reviewers (and editors), which we briefly touch upon next.

Reviewer Implication 1: Start with the Authors' Claims of Breadth and Depth

A good review begins with authors' claims about the trade-off between breadth and depth in positioning their papers. Accordingly, reviewers need to ask, "Does this combination of breadth and depth provide adequate coverage of the entrepreneurial-phenomenon terrain?" If the answer to this question is yes, reviewers should then focus on providing comments that help authors strengthen and deliver on these claimed contributions to the entrepreneurship literature and should avoid suggesting how authors can broaden or deepen their models. If the answer is no, the paper does not cover adequate terrain, reviewers can then offer authors recommendations for how to increase the breadth and/or depth. Similarly, if they answer no because the paper does too much, reviewers can suggest ways to narrow the scope and/or reduce the depth (by raising the level of abstraction).

Reviewer Implication 2: Don't Be Egocentric

Authors often make decisions that are different from what reviewers would have decided had they written the papers they review, and that is okay. Indeed, unproductive reviews often criticize papers for not being broad enough (without considering the papers' depth), for not incorporating numerous domains, or for not capturing all possible nuances (without considering the papers' scope). Such reviews set authors up for failure by pushing them to do too much in their papers, thereby weakening their contributions to the entrepreneurship literature and increasing their likelihood of journal rejection. Unproductive reviews can also drive authors to change their depth-to-breadth ratios without increasing the terrain they cover, leading to different, but not necessarily better, contributions. Similarly, unproductive reviews also sometimes criticize a paper from a different theoretical or philosophical perspective or from a different level of analysis than that established in the paper. Even in cases when an author takes a different perspective from the one a reviewer would have taken had he or she written the paper, the author's perspective can still be valid, and pushing the author to use a different perspective may result in a different depth-to-breadth ratio (and no stronger contribution to the literature) or doing too much in the paper (weakening its potential contribution).

Reviewer Implication 3: Remember that not All Entrepreneurship Papers Need to Be Highly Contextualized or Widely Generalizable

While many reviewers may believe entrepreneurship research needs greater contextualization, some authors produce papers with broad models. Again, reviewers need to ask, "Does the paper offer adequate breadth to cover the optimal level of entrepreneurial-phenomenon terrain given the lack of depth that contextualization could have offered?" Broad papers also have the potential to make contributions to the entrepreneurship literature and need to be evaluated with that possibility in mind, not based on some other research question in a particular entrepreneurial context. Likewise, papers that examine a context in depth should not automatically face reviewer criticism for their limited generalizability or lack of transferability to other contexts. In these cases, reviewers need to ask, "Does the depth of the paper cover adequate terrain given the model's lack of breadth?" Reviewers need to carefully contemplate authors' context choices and critique their papers from that position.

Editor Implication 1: Watch Out for Unproductive Reviews

Above, we argued that it is relatively easy for reviewers to make suggestions for ways to increase a paper's breadth and depth. At times, however, such suggestions can diminish a paper's value and weaken its contribution, resulting in its rejection or decreased impact on the field. For editors, it is sometimes tempting to catalog all the additions and changes an author could make to a paper, but to inspire productive papers, it is essential to work with reviewers' comments such that authors can improve their papers. This chapter focuses on the author's claims about their depth-to-breadth ratios and the amount of entrepreneurial-phenomenon terrain their papers cover. Consistent with this focus, reviewers need to assess papers based on the entrepreneurial-phenomenon terrain authors intended to cover and not necessarily the terrain the reviewers would have covered had they written the respective papers. Indeed, as the old (and rather morbid) saying goes, "There are many ways to skin a cat." As such, it is crucial that editors not recount the various ways that reviewers would have skinned the cat but instead ask how valid is an author's approach to skinning the cat and what recommendations can enhance the effectiveness of that approach.

Editor Implication 2: Reconcile Opposing Productive Reviews

For papers that do not cover sufficient terrain but have the potential to do so, reasonable reviewers could have different opinions regarding how to improve the paper's entrepreneurial theorizing, possibly including both recommendations for increasing breadth and recommendations for increasing depth for the same paper. Indeed, reviewers frequently disagree with each other (Chrisman et al., 2017) and suggest conflicting recommendations. In such cases, the editor needs to provide the focal author guidance, or else the author may try to appease both reviewers and fail by trying to do too much in one paper. The editor can acknowledge the pros and cons of both possibilities but should recommend one path as potentially stronger, or at least urge the author to avoid pursuing both paths. The author may find it difficult to go against a reviewer's suggestions, so it is vitally important for the editor to provide a clear guiding statement. Hopefully, the reviewer whose recommendations were not followed understands the editor's decision for the paper revision. If not, the editor must be ready to overrule a reviewer demanding a certain depth-to-breadth ratio when the author chooses a different ratio to cover the optimal terrain.

Editor Implication 3: Reward Different Ratios of the Optimal Terrain for a Paper

While all entrepreneurial theorizing should pursue a depth-to-breadth ratio that covers an optimal amount of terrain, not all ratios will lead to equal contributions. Take, for example, the scenario where many papers on the same topic have roughly the same ratio of depth to breadth (e.g., low depth and high breadth). A paper with a different ratio (e.g., greater depth and less breadth) is likely to contribute to our understanding of entrepreneurial phenomena more than another paper with similar breadth and depth as those already published and thus make a greater contribution to advancing the field. This recognition is even more important when the reviewers for the new paper are among those who have published on the topic at the current (populated) depth-to-breadth ratio and may expect the new paper to conform to their ratio preference and existing norm (despite this preference and norm weakening the focal paper's contribution). Therefore, a paper with a different ratio from that of published papers and reviewers' own papers could be more challenging to see through the R&R process (e.g., necessitate more work by editors) but may provide a more valuable contribution to entrepreneurial theorizing. Considering papers with different depth-to-breadth ratios than published papers may facilitate editors in balancing the quality-quantity trade-off in running their journals (for editors' quality-quantity trade-off, see Chrisman et al. [2017]).

Conclusion

Writing highly impactful entrepreneurship papers is challenging. Furthermore, the notion of what constitutes a good contribution to entrepreneurial theorizing can feel nebulous for authors, and the appropriate balance between a paper's breadth and depth is not always obvious. Compounding matters further, reviewers typically come from diverse (and anonymous) backgrounds, which affects how they "receive" the entrepreneurship papers they review. Our goal in this chapter was to offer insights and recommendations to help entrepreneurship scholars improve their papers to further the field of entrepreneurship (i.e., building a barn) such that others will have increased difficulty criticizing their outcomes (i.e., pulling the barn down). Given our discussion on contributing to the entrepreneurship literature, we hope reviewers remember the following saying when assessing papers: "It is easier to pull a barn down than to build one."

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Writing Entrepreneurial-Theorizing Outcomes

In this chapter, we offer some advice on writing papers based on entrepreneurial theorizing. Although editors from several notable journals have written notes on writing, these notes tend to be rather general (e.g., the "From the Editors" seven-paper series from the *Academy of Management Journal* [2011] or the note on writing introductions for theory papers [Barney, 2018]). As such, we take a perspective directly applicable to entrepreneurship and entrepreneurial theorizing to offer something more hands-on. We believe the time is ripe for a discussion on writing entrepreneurship papers due to the growing number of such papers submitted to entrepreneurship journals. As editors of some of the top entrepreneurship journals, our experience is that papers are often "unnecessarily" rejected not because the underlying research is fundamentally faulty but because authors neglect some of the basics that make a strong paper.

Thus, we begin by offering 11 simple rules to guide entrepreneurial theorizing when developing an entrepreneurship paper based on what has worked for us in the past. Second, we provide a template outlining what

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content to include in each section of an entrepreneurship paper as well as examples of how we have undertaken these tasks in previous papers. Finally, we discuss some writing heuristics to improve authors' writing quality.[1]

We mainly use excerpts from our own work as examples (independent, together, and with coauthors) not because we believe our writing is the best but because we know these papers well and crafted them using the simple rules, paper templates, and writing heuristics outlined in this chapter. Now, we turn to the simple rules.

Simple Rules for Developing an Entrepreneurship Paper

Simple Rule 1: Ensure Your Paper Is Relevant to Entrepreneurship Scholarship

Most general advice about writing papers applies to writing entrepreneurship papers. However, we can still add a few hints that are specific to entrepreneurship papers, particularly papers submitted to entrepreneurship journals. It is not ground-breaking advice that an entrepreneurship paper needs to explain or otherwise inform readers about an entrepreneurial phenomenon that is relevant to people beyond entrepreneurship scholars. In some recent papers, we have discussed why entrepreneurial phenomena are important, why the field of entrepreneurship is well situated to provide such relevance, and how entrepreneurship research can be undertaken (Shepherd, 2015; Shepherd & Patzelt, 2017; Wiklund et al., 2019; and many of this book's chapters). Although grounding a paper in a relevant entrepreneurial phenomenon is essential, it is not enough to stimulate an academic study. This grounding needs to be accompanied by the importance of the study for the entrepreneurship literature. While many works have attempted to demarcate the field of entrepreneurship, including what does and does not belong within this literature (Shane & Venkataraman (2000) is likely the most well-known), we do not consider it productive for individual papers to undertake such discussions (unless that is a paper's primary purpose; see also Shepherd [2015] for an expansion on this point). Rather, we believe it is

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[1] We wrote the third section with Stella Seyb and Ali Ferguson.

more valuable to define the main concepts of a paper and then demonstrate—however briefly—how they connect to current conversations in the entrepreneurship literature.

Our approach of combining wider relevance and importance to the existing literature when developing an entrepreneurship paper resolves the dichotomy between basic and applied research. We encourage and strive for research that aims to provide fundamental understanding as well as wider relevance. In our own papers, we like to clarify our work's relevance to entrepreneurship, entrepreneurial theorizing, and entrepreneurship scholarship from the very beginning. For example, the following excerpt from the beginning of a paper illustrates Simple Rule 1 well. The very first sentence establishes the paper's relevance for entrepreneurship, and the subsequent sentences turn to discuss the current state of knowledge and the gap in the literature (Bakker & Shepherd, 2017: 130):

> The exploration and exploitation of potential opportunities is critical to firm performance (Bingham & Eisenhardt, 2011; Ireland, Hitt, Camp & Sexton, 2001; Sirmon, Hitt & Ireland, 2007). Consequently, the concept of opportunities has emerged as a central notion in a number of fields of research, including entrepreneurship (Shane & Venkataraman, 2000), strategic management (Foss, Lyngsie & Zahra, 2013; Suarez, Grodal & Gotsopoulos, 2014), and institutional theory (Battilana & Casciaro, 2012; Zietsma & Lawrence, 2010). Despite the progress we have made toward understanding opportunities and the manner in which they are explored and exploited, most prior research has assumed that actors typically identify and assess a single opportunity at a time (Gruber, MacMillan & Thompson, 2008). Recent research, however, has found that firms often identify multiple potential opportunities simultaneously (e.g., Barreto, 2012; Gruber et al., 2008; 2013).

Simple Rule 2: Contribute to the Entrepreneurship Literature by Theorizing from Another Literature[2]

When writing an entrepreneurship paper, it is useful to consider the process as involving (at least) two literatures. The first is the entrepreneurship literature, wherein there is a gap that needs to be filled or a problem

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[2] This logic is less applicable for inductive (and maybe abductive) papers. To a large degree, the second theoretical literature is replaced by data as the second information source for theorizing.

that needs to be solved. Authors can discuss the specific entrepreneurship literature they draw on in the introduction of their papers by conveying what scholars do and do not know from this literature and why it is vital to fill the focal gap or solve the focal problem. The second literature, which should be different from the first, provides the theoretical basis for filling the gap in/solving the problem from the first literature.[3] There are two major implications from this simple rule of including two literatures. First, breaking this simple by using only the entrepreneurship literature results in the following reasoning: the literature with the gap/problem will be used to fill the gap/solve the problem in itself. This reasoning rarely makes sense to readers. Second, breaking this rule by discussing contributions to numerous (disparate) literatures typically leaves a reader asking, "Are you talking to me?" and "Who is the primary audience for this paper?".

The thrust of the contributions stated in a paper needs to be to the specific entrepreneurship literature that had the gap/problem. This approach makes a paper's main audience clear. However, while most of a paper's contributions need to be to the entrepreneurship literature with the gap/problem, the final contribution should be to the theoretical literature from which the solution came. This final contribution back to the literature from which the solution was drawn (i.e., Literature 2) is necessary because it ensures that we, as scholars, are not merely borrowers. Indeed, entrepreneurship scholars may borrow a theory from psychology, for example, and simply apply it in the entrepreneurial context without modification. However, in many cases, it is important to reflect on how a theory needs to be adapted, altered, or otherwise changed to "work" in the entrepreneurial context. Given the extreme nature of the entrepreneurial context due to the associated uncertainty, time pressures, cognitive load, emotional reactions, social interactions, and so on, there is an opportunity for entrepreneurship scholars to go beyond simply borrowing current theories to extending and expanding those theories. For instance, the following excerpt not only explains the gap in the literature and how the paper contributes to the entrepreneurship literature by

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[3] While we discuss two literatures for simplicity, the second literature—namely, the basis for addressing the gap in/solving the problem from the first—can be two literatures (but rarely more) that are joined (e.g., bricolage in theorizing [Boxenbaum and Rouleau, 2011]) to form a basis of the paper's theorizing.

filling this gap but also details what the paper provides back to appraisal theory, the theoretical basis of the study (Jenkins et al., 2014: 18–19):

> Some assume that failure has strong positive implications for the individual entrepreneur and represents the "fire that tempers the steel" (Timmons, 1999: 47). Others assume that failure has devastating implications for the individual (Singh et al., 2007). In this research . . . we are able to conceptually and empirically resolve this apparent conflict in individuals' interpretations of failure. . . . Finally, we contribute to appraisal theory by considering the role of prior failure for the appraisal-emotion relationship in stressful situations. . . . We suggest that previously experiencing a similar failure can provide an individual with coping resources that act as a buffer in the appraisal-emotion relationship. This finding is likely to be relevant in other settings in which bouncing back after prior failures is important for achieving goals, such as elite sports (Jones, 2002) and job loss. (Leana & Feldman, 1988)

Simple Rule 3: Be a Barn Builder, Not a Barn Destroyer

Given all this talk about gaps in the literature and the need to contribute by filling these gaps, it may seem easy to criticize prior studies. However, we avoid being too critical of other studies because as the old saying goes (and as we discussed in Chapter 4), "It is easier to tear a barn down than to build a barn." Thus, we offer critics an alternative approach, one that we have found to be particularly useful in generating something new that is also of value. According to this approach, authors should (1) respect the studies that have come before theirs, (2) realize that one paper cannot do everything, and (3) recognize that all papers have flaws (even one's own). This approach provides authors with a sturdier foundation for developing a paper (and for living life as an entrepreneurship scholar). Nevertheless, we recognize that some individuals prefer to be critics, and although it can sometimes be valuable to tear a barn down, we argue that barn builders make more considerable contributions to entrepreneurial theorizing and to advancing the entrepreneurship field. Accordingly, as authors, reviewers, and colleagues, we beseech you to be barn builders. For instance, in the following excerpt discussing our paper's contribution, we acknowledged the exceptional research that has come before ours (Shepherd et al., 2014: 537):

In this study, we contribute to the scholarly conversation on learning from failure and on the implications of the timing of project termination by exploring the contextual factors that help explain the link between speed of termination (i.e., delayed or rapid) and learning from the failure experience. Research has identified the cognition underlying the timing of the decision to terminate poorly performing projects (Ross & Staw, 1993; Staw & Ross, 1987) and its organizational learning implications (Corbett et al., 2007). Although these studies have deepened our understanding of those who decide on project termination (i.e., who "own the option"), they do not explore (because it is not their purpose) the contextual mechanisms that link timing of termination to the reactions of those working on the project (i.e., those who "are the option"; McGrath et al., 2004). Our analysis, findings, and theorizing offer an initial step in this direction. In doing so, we make contributions to the literature on both learning from failure and project termination.

Simple Rule 4: Be Clear Regarding What Your Paper Is Not About

Although the introduction identifies what a paper is about, for many papers (particularly theory papers or papers utilizing deductive entrepreneurial theorizing), it is also useful to specify what the paper is not about. In doing so, authors can set readers' expectations regarding the focus on of the entrepreneurial theorizing. Indeed, there are generally many more factors and explanations for variation in a dependent variable than one paper's theorizing can capture. By acknowledging these numerous factors while also directly stating that investigating them is beyond the scope of the focal paper (they could be used as control variables however), authors can prevent readers from becoming disappointed due to their initial expectations about a paper's theorizing not being met.

The factors and explanations that a paper does not cover may inform the assumptions and boundary conditions of that paper's entrepreneurial theorizing. Boundary conditions set the *amount of entrepreneurial-phenomenon terrain* a paper covers, as reflected in the paper's breadth and depth of entrepreneurial theorizing (see Chapter 4). Authors can explain their papers' assumptions and boundary conditions before beginning their main theorizing (i.e., after the introduction). In Patzelt and Shepherd (2011b), for example, we stated the following:

Further, we acknowledge our model's underlying assumptions and boundary conditions. First, we focus on the recognition of sustainable development opportunities for someone (third-person opportunities), but we do not investigate individuals' assessments whether these opportunities represent opportunities for themselves (and thus, their intentions and decisions to exploit those opportunities [first-person opportunities]). Both are distinct, subsequent steps in models of entrepreneurial action (McMullen & Shepherd, 2006; Shepherd et al., 2008). We acknowledge the extant literature on entrepreneurial cognition and psychology that in contrast to our work, focuses more on the second step and investigates entrepreneurial decisions to act on opportunities (e.g., Krueger, 2000). Second, we assume that sustainable development entrepreneurs are motivated by more than just personal economic gain. We acknowledge that pure personal economic gains can also motivate individuals to direct their attention toward sustainable development opportunities (Dean & McMullen, 2007; Solow, 1993). However, consistent with our definition of sustainable development opportunities, we focus on gains for those other than the entrepreneur because these (perhaps additional) gains distinguish sustainable development from purely economic opportunities (Cohen, Smith, & Mitchell, 2008; Young & Tilley, 2006). Finally, we acknowledge that many factors beyond the knowledge and motivation variables of our model—such as the individuals' networks (Ozgen & Baron, 2007), cognitive structures (Baron & Ensley, 2006; Krueger, 2007), and values (Davidsson & Wiklund, 1997)—may influence individuals' recognition of sustainable development opportunities. Investigating all these factors is beyond the scope of our study. We will now present our model by first investigating aspects of knowledge and then motivation.

Simple Rule 5: In the Literature Review, Tell Your Story; Don't Summarize Others' Stories

We have noticed that some people misconstrue the label "Literature Review" in one of two ways. First, some authors review the entrepreneurship literature they discussed in the introduction. However, the theoretical framework section needs to center on the solution—what fills the gap—and thus comprises the domain of the theory borrowed and modified for the entrepreneurial context to fill the gap (see Simple Rule 2). Simple Rule 5 thus helps decrease redundancies in the first sections of a paper. Second, some people misconstrue "review" as the need for a "summary" of all related papers. A strong indication of a summary is when most paragraphs in the literature review begin with the name of a study

or authors. Such an approach typically provides a hodgepodge of paper synopses that are only loosely connected.

An alternative approach, which we believe is ultimately more productive, is to name the section "Theoretical Framework" to signal to readers that the section goes beyond merely summarizing others' work to offer the focal paper's story. When telling a story is the primary goal, citations of prior work simply support characters. Indeed, theorizing can be conceptualized as strong storytelling such that audiences appreciate those stories they find more plausible and interesting (Pollock & Bono, 2013; Shepherd & Suddaby, 2017; Weick, 2012; also see Chapter 1). A helpful method to assist with storytelling in the literature review (or theoretical framework) section is to write the main text of the story with "(xx)" where citations need to be added in the next draft. This approach ensures that citations support a story instead of entirely comprising the story. Importantly, we are not trying to imply that citations are unnecessary; they are critical but, again, in *supporting* a story. Authors can improve the narrative flow of their papers by defining concepts early on in the literature review/theoretical framework and then using them consistently throughout the rest of their papers. Each paragraph and sentence should build upon the preceding ideas such that readers are driven toward a specific set of conclusions clearly and straightforwardly that avoids repetition and theorizing by citation.

Finally, in a deductive paper, it is typically helpful to provide readers with the big picture first (i.e., in the opening paragraph and in the description of the model) and then develop each part thereafter. (In an inductive paper, the author typically describes the parts first and then builds up to the big picture.) By providing the big picture first, the authors give readers a roadmap to navigate the rest of the focal paper. This big picture is frequently a paragraph that presents the theoretical approach (from Literature 2) used to address an issue (from Literature 1) through a series of relationships that are introduced in this paragraph but developed in later sections. The following excerpt exemplifies the big-picture idea of this simple rule:

> We build on affective events theory (AET, Weiss & Cropanzano, 1996) and the leadership literature (House, 1981; Rooney & Gottlieb, 2007; Sharma & Pearsall, 2016) to develop our supportive leadership model of managing employees' negative emotions after entrepreneurial project failure. We illustrate this model in Fig. 1. Specifically, we explain how

supportive leadership (from the employee's perspective) and time since project failure conjointly moderate the relationship between employees' recalled negative emotions after their last major project failure and their current job satisfaction, and through job satisfaction, their current job performance. We detail the nature of these relationships in the sections that follow. (Patzelt et al., 2021: 3)

Simple Rule 6: Think Strategically About What to Cite

Flowing from the simple rule above, Simple Rule 6 has three main aspects. First, in the introduction, it is crucial to join the ongoing scholarly discourse in the entrepreneurship literature. Accordingly, authors need to cite recent papers from the literature, most likely including recent papers from the journal to which a focal paper will be submitted. Citing the literature in this way is not meant to curry favor with the editor of the journal but instead represents a real attempt to enter and contribute to the ongoing discourse and speak to the journal's audience (plus, one or two of the reviewers are likely to be authors who have themselves published papers on the topic in the journal). This same advice applies to the entrepreneurship literature mentioned in Simple Rule 2.

Second, citations from the literature used to build a theoretical model need to include seminal citations as the basis of this theoretical approach. In other words, when developing the plausibility of a theoretical approach, it is beneficial to provide some knowledge about its foundations (without providing a full-blown historical account of its formation). It is also helpful to highlight recent applications of the focal theory and advancements in that literature.

Finally, citations need to reflect the foundations of the author's reasoning. For instance, if an author applies a specific theoretical perspective, the author's citations then need to align with that perspective. Likewise, if the point an author cites refers to a certain level of analysis, the paper(s) cited to support that point must be at the same level of analysis. In Simple Rule 5, we discussed the method of writing the main text of one's story and then adding citations later. An opposite method is to read only the citations of one's story to see if they flow together coherently (i.e., a citation is coherent within a set of citations, and sets of citations are coherent within the section of a paper). Mixing citations for different perspectives, theories, levels of analysis, etc., can lead to confusion and incoherence for shrewd readers of entrepreneurship research.

Simple Rule 7: Contextualize the Context

For this rule, the question is whether to put context in the foreground or the background. While we are not sure we can provide any definitive answer to this question, we hope that by highlighting our difficulties in handling this issue, we help other scholars find their own way. For instance, we have investigated the entrepreneurial orientation of Swedish small businesses (Wiklund & Shepherd, 2003, 2005; Wiklund et al., 2009) and entrepreneurs with mental disorders, such as attention deficit and hyperactivity disorder (ADHD) (Wiklund et al., 2018). Reflecting on these papers, we see that the context for the first topic (Swedish small businesses) was in the background (e.g., discussed in the research method section), whereas the context for the second topic was in the foreground. Putting context in the background tends to make theorizing more generalizable (in our case, we simply tested a more general theory in a specific context) while putting context in the foreground usually makes theorizing richer. A simple rule of thumb for this issue could be to bring context to the foreground when there is reason to believe it is unique in such a way that it influences theorizing (e.g., it reverses the direction of correlations [e.g., Wiklund et al., 2017]); otherwise, context should be put in the background. Indeed, contextualization is a significant issue that goes beyond the scope of this chapter (see Chapter 4). For more on this topic, we refer interested readers to the following paper on the entrepreneurial context (e.g., Welter, 2011) as well as to further examples of context in the foreground (e.g., Bakker & Shepherd, 2017; Hsu et al., 2016; Mittermaier et al., 2021a) and in the background (e.g., McKelvie et al., 2018; Wiklund & Shepherd, 2005).

Simple Rule 8: Don't Reinvent the Wheel; Use an Exemplar

While most authors want to emphasize the novelty of their papers, we recommend that they find novelty in content, not in structure. Indeed, maybe the most important writing advice we can give entrepreneurship scholars is to find and emulate an exemplar paper—namely, a paper that has different content than the in-progress paper but the "right" structure. For our own writing, we consult exemplars for both macro-structure (i.e., headings and subheadings) and micro-structure issues (i.e., the flow of ideas from one sentence to the next in a particular paragraph and from one paragraph to the next in a subsection). Using an exemplar helps

avoid some of the anxiety and uncertainty surrounding how to organize a paper's content (also see the structure template below).

Different types of entrepreneurship studies require different structures, such as (1) deductive empirical studies with the context in the background (e.g., Breugst & Shepherd, 2017; Patzelt & Shepherd, 2011a; Wiklund & Shepherd, 2005) and with the context in the foreground (e.g., Bakker & Shepherd, 2017); (2) inductive studies based on constant comparisons of multiple cases (see Eisenhardt & Graebner, 2007, for a description of the approach; e.g., see Preller et al., 2020; Wiklund et al., 2016; or Williams & Shepherd, 2016, for application), the Gioia method (see Gioia et al., 2013, for a description of the approach; e.g., see Shepherd et al., 2017a, 2017b for application), and understanding processes (McMullen & Dimov, 2013; e.g., Burgelman, 1983); and (3) literature review and research agenda papers (Short, 2009; e.g., Shepherd et al., 2015; Ucbasaran et al., 2013; Wiklund et al., 2018). (4) Deductive theory papers typically have a less formulaic structure, but a few potential entrepreneurship exemplars include Miller et al. (2012); Patzelt and Shepherd (2011a, 2011b); Sarasvathy (2001); and Shepherd et al. (2017a, 2017b). Exemplars also exist for (5) multilevel studies (Shepherd, 2011; e.g., Breugst et al., 2020; Shepherd, 2009; Tracey et al., 2011;), (6) multiple study papers (e.g., Hsu et al., 2017; Peng et al., 2019), (7) formal models (e.g., Lévesque & Minniti, 2011; Lévesque et al., 2009), (8) simulations (Breig et al., 2018; e.g., Johnson et al., 2018; Welter & Kim, 2018), and (9) more abductive studies (Shepherd & Suddaby, 2017; e.g., Bullough & Renko, 2017; Mollick, 2014).

Simple Rule 9: Illustrate with Figures

Overall, authors want to tell plausible stories, and figures can help significantly in this regard. First, providing a holistic picture of a paper's conceptual model at the start of the theory section gives readers a roadmap for the rest of the paper. Arguably, this is the most popular use of a figure. Second, figures can be used to illustrate entrepreneurial processes, or the sequencing of decisions, activities, and/or events. Third, figures are vital in helping readers understand non-linear relationships, including curvilinear (e.g., Patzelt et al., 2020; Shepherd et al., 2003), contingent (e.g., Wiklund & Shepherd, 2003), and configurational relationships (e.g., Tryba et al., 2022; Wiklund & Shepherd, 2005). An additional advantage of offering such figures is that readers can more

fully comprehend the effect sizes of different relationships (when the scale is provided on both axes). Finally, figures are also helpful in showing the results of "less normal" methods, such as fuzzy-set analysis (e.g., Lisboa et al., 2016), and of more complex data-collection processes (e.g., Shepherd et al., 2014; Williams & Shepherd, 2016).

Simple Rule 10: Discuss How Our Understanding of the Topic Has Changed

By the end of writing a paper, authors are often so relieved to be near the finish line that they do not give the discussion section the attention it deserves. While many find their energy starting to fade when it comes time to write this section, the discussion is an author's chance to complete the arc of plausible storytelling. Said differently, the discussion should tie a paper's story together, ensuring there are no loose ends. In particular, we like to write the discussion while keeping the introduction as well as the gap and contributions established there in mind to ensure the discussion clarifies and expands upon how the paper fills the gap, makes specific contributions to entrepreneurial theorizing, and directs readers to think about the topic differently after finishing the paper. When beginning to write the discussion, we typically take the three or four contributions mentioned in the introduction (see Simple Rule 2) and elaborate on them (roughly two paragraphs for each contribution) in the discussion. This elaboration process entails the author's reflections on the study's contributions to both the entrepreneurship literature and the literature used to develop the study's theorizing. Here, the key is not to center on the study's findings as much as on the insights stemming from those findings. To communicate these new insights, the discussion needs to reconnect to the entrepreneurship literature and highlight the non-trivial, non-obvious aspects of the study's findings.

An effective discussion sparks readers' imagination and leaves them excited from learning something new (e.g., "I never considered that," "I can apply that," "That gives me an idea"). For direction, there are many helpful guides to writing a discussion (i.e., Geletkanycz & Tepper, 2012) as well as good exemplars of discussions in the entrepreneurship papers we listed for Simple Rule 8. Moreover, an effective discussion acknowledges the focal study's limitations (since all studies have weaknesses) and recommends opportunities for future research to further extend knowledge of entrepreneurial phenomena by overcoming the current study's

limitations and boundary conditions. Identifying future research opportunities also underscores a study's relevance and interesting conclusions. Indeed, highly impactful research reveals new perspectives and paths for future research that were hidden before.

A final common mistake in the discussion section is simply not having a discussion. This issue can manifest in the form of repeating major findings or moving directly to the conclusion. Moreover, some scholars explore very broadly in the discussion section—too broadly, going beyond the scope of the focal paper. Rather, an effective discussion helps readers reflect on the study at hand and appreciate how their understanding of the entrepreneurial phenomenon and entrepreneurship literature has been changed, extended, or otherwise altered because of the current paper.

Simple Rule 11: Work on Your Writing Skills

Just as most people believe they are above-average drivers, most scholars believe they are above-average writers. This, of course, cannot be true—everyone cannot be above average. As such, it is important to improve one's writing skills as poor writing quality, including spelling errors, omitted references, and other evident weaknesses, is an instant turnoff and cast doubt on all other aspects of a paper's quality.

Regardless of what we believe our writing prowess to be, the following lessons have served us well in enhancing our own writing skills. First, to improve our writing skills and become better writers, we seek out and learn from feedback on our writing as well as study the writing of published papers. Second, writing a good paper takes time and typically involves many drafts and rewrites. Third, we ensure the writing process is collaborative—we are comfortable rewriting our coauthors' sentences, and they are comfortable rewriting ours. Indeed, a story becomes increasingly more plausible the more we work on it, especially as we tell and retell the story to others. Finally, we frequently hire a professional copyeditor to "polish" our manuscripts (with the added benefit of learning the feedback).

A Template for an Entrepreneurship Paper

Now that we have gone through the 11 simple rules, we offer a template for how to structure a typical paper. To demonstrate this concept more fully, we structure this section just as we usually structure our papers.

However, instead of an entrepreneurship topic, the topic here is "how to write a paper." We are in no way claiming that ours is the only way or even the best way to structure papers, but it is "a way, our way." In addition, the template is likely most suitable for empirical papers that use quantitative methods, which represent the most common type of entrepreneurship research, and thus offers the best format to apply the simple rules just discussed and to demonstrate some attributes of the craft of writing entrepreneurship papers. Undoubtedly, other types of papers can make significant contributions to the entrepreneurship field (most of which are discussed in Simple Rule 8), but we offer the following to provide authors with a start.

Template Section 1: Introduction to the Paper

The first paragraph of a paper is vital because it sets the stage, introducing readers to the paper's overall theme and the ongoing scientific conversation the authors are engaging with. We like to think of the introduction as the opening chord of a song. Indeed, it typically takes listeners mere seconds to identify the music style of a song, and they often decide within that short timeframe whether or not they like the song. Similarly, readers often decide whether or not they like a paper after the first few sentences. Authors should therefore ensure the opening sentences of their papers arouses readers' interest and gives them a taste of what is to follow. In our own papers, we typically begin by stating something about why the focal topic is important, preferably to society more generally but, if not, to the research community more specifically. For instance, the first few sentences of Wiklund and Shepherd (2003: 72) specify why entrepreneurial orientation is salient to businesses and managers:

> A general tendency in today's business environment is the shortening of product and business model life cycles (Hamel, 2000). Consequently, the future profit streams from existing operations are uncertain and businesses need to constantly seek out new opportunities. Therefore, they may benefit from adopting an entrepreneurial strategic orientation (EO).

Another way authors can convey the importance of a study in the introduction is to offer a practical example or quote from a practitioner demonstrating the study's topic. Such examples need to closely connect to the core of the study at hand and not be too general. As a result, it

may be difficult or even impossible to find a practical example that is spot on for many studies. However, when an example fits well, it can be a great way to start a paper. In Shepherd et al., (2013: 1251), for instance, we began with the following example to illustrate the potential negative consequences stemming from entrepreneurs disengaging their values when making decisions regarding opportunity exploitation (we looked a long time for this example [see also Simple Rule 1]):

> Götz Werner, founder and owner of dm (Germany's largest chain of pharmacies), has repeatedly stated that society "cannot develop if we destroy nature" and has further noted that dm customers expect the company to sell only products consistent with this credo. However, dm is known to sell products containing palm oil produced in unsustainable ways that can ultimately result in the destruction of rain forests. When confronted with this fact, Mr. Werner commented, "If a producer makes shower gel that customers want [to buy], we sell it. It is the responsibility of the producers [to comply with environmental standards]" (ARD, 2012). Situations such as this, in which individuals overtly state strong moral values yet act in ways inconsistent with them, pose a paradox: How can such persons express strong support for certain values but then openly violate them?

In the rest of the first paragraph of this paper, we explained what we know about the topic from the current entrepreneurship literature.

In the second paragraph of a paper, we usually offer a brief overview of relevant entrepreneurship research to highlight outstanding questions, conflicting results, or something else that signals a research gap (or problem), and we also typically argue why this gap needs to be filled (or problem solved). Indeed, while a research gap is necessary for conducting research, a gap alone is not enough because some gaps end up leading to research questions that are not very interesting—the answers may be obvious. Thus, arguing why it is important to fill the identified research gap is important, but doing so can be quite difficult, with many authors (including ourselves at times) falling short in doing so. The following example shows how we articulated a gap in the literature, argued the importance of filling the gap, and outlined how we intended to fill it (Dahlqvist & Wiklund, 2012: 186):

Despite the fact that over the past decade, the opportunity-based conceptualization suggested by Shane and Venkataraman (2000) has received extraordinary following, it appears that entrepreneurship scholars do not study opportunities empirically. . . . We maintain that one important reason is that relevant measures of opportunity have been lacking. Our paper develops such a measure. Thus, it can assist scholars in empirically studying entrepreneurship in a way consistent with their definitions of their field or research.

After we establish a gap in the literature and justify our approach to filling it, we then explain the purpose of the paper and the intended contributions. While the purpose can usually be explained in one sentence, the contributions typically cover a few paragraphs, constituting the bulk of the remainder of the introduction. In general, we try to list at least three contributions to the entrepreneurship literature that has the research gap/problem (see Simple Rule 2).

If we have enough space after outlining the paper's contributions, we sometimes write a short paragraph summarizing the structure of the rest of the paper.

Template Section 2: The Theoretical Framework and Hypothesis Development Section

After the introduction, we move to entrepreneurial theorizing. While we sometimes separate the description of our theoretical framework from our hypothesis development, more often, we include several different subsections under a general heading, as we do below.

Template Section 2.1: Theoretical Framework

In general, we find it helpful to present our overarching theoretical framework before putting forth our hypotheses. We try to use active voice when presenting our framework and to tell our story with appropriate citations as support instead of merely summarizing the literature (see Simple Rule 5). To remind ourselves of this aim and to signal it to readers, we tend to label this section "Theoretical Framework" instead of "Review," or in some cases, we decide to be more specific about the theorizing to come by naming the section after the model we are developing. We also like to provide an overarching figure and big-picture description of the theoretical model if possible (see Simple Rule 9). Doing so provides readers with

a better understanding of the entrepreneurial theorizing and hypothesis development to come.

A common mistake in this section is presenting a theoretical framework that attempts to incorporate numerous different theories, sometimes even including incompatible theoretical approaches (see Simple Rules 2, 4, and 5). In our own work, we typically develop more focused theoretical frameworks that build on a single theory or integrate no more than two different theories. For instance, in Jenkins et al. (2014), we explain how the paper builds on a general theory—appraisal theory—and include a figure of the overarching theoretical model. Still, this example breaks from our own norm by presenting the figure after the subsection(s) justifying and presenting all the hypotheses. We usually place this figure after the first paragraph introducing the model but before the hypothesis subsection(s). In this case, we thought about presenting the model up front but felt it made more sense to develop the different parts of our framework and then bring them together at the end to tell the big-picture story of the study (an approach often used for more inductive and abductive studies).

Template Section 2.2: Hypotheses
This subsection develops the hypotheses that will be empirically tested in the paper and thus serves as a bridge between the theoretical framework and the empirical results. Since hypotheses are anchored in theory, in this subsection, we usually focus on explaining how theoretical constructs are related instead of describing the actual empirical indicators used in the empirical study. For instance, in Wennberg et al. (2011), the construct representing the dependent variable is "performance," which we captured with several different indicators. Thus, we wrote the hypotheses in the following way (1130):

> H1: Firms started by university-educated entrepreneurs as commercial spinoffs perform better than firms started by university-educated entrepreneurs as university spinoffs in terms of (a) growth in sales revenue, (b) growth in employment, and (c) survivability.

Thus, we formulated the hypothesis to indicate both the construct of interest (performance) and the indicators of that construct (sales growth, employee growth, and survival). Although this approach does not always

work, when it does, we find it helps build a stronger link between the theory and empirical sections of a paper.

Papers usually present more than one hypothesis. While some authors like to build one long theoretical argument and then list all of their hypotheses collectively at the end, we prefer presenting separate arguments for each hypothesis because this approach forces us to theorize on each hypothesis. The content leading up to a hypothesis centers on explaining the causal mechanisms for that hypothesis—namely, *why* a particular construct relates to another. We typically word our hypotheses to ensure the text makes both the direction (positive or negative) and form (unless it is linear, which is the implicit assumption) of the relationship clear.

Template Section 3: The Methods Section

The methods section—of all the sections in a paper—is the most standardized across journals. As such, following the structure of an exemplar is easiest and most useful in this section (see Simple Rule 8). Due to this standardization, our approach to writing this section, including the subheadings, organization, and text within each subsection, is very similar to that of many other scholars. When scholars use a different structure for this section than what is expected, it tends to send a negative signal to readers about the author's competence and sometimes annoys readers because "things are not where they should be."

Template Section 3.1: Research Design and Sample

We begin this subsection by first explaining why the sample we selected is appropriate for the research question. In general, there are no ideal samples. Instead, the most important aspect of a sample is its appropriateness for the paper at hand, so clearly explaining this appropriateness is quite helpful in persuading readers of the data's validity. Next, we move on to describe the overall research design, sampling frame, and sampling process. The goal here is to give enough detail so others could reproduce the study if they desired. We usually describe the respective sample in terms of size, response rate, representativeness, potential tests of non-response bias, and other applicable sample characteristics (e.g., age, gender balance, and education). Pérez-Luño et al. (2011) is an excellent exemplar for this section.

Template Section 3.2: Variables and Measures
For this subsection, we generally discuss each dependent and independent variable under separate headings and all the control variables under a joint heading. In addition to explaining how we measured each variable, we either describe each measure's source (if it is someone else's measure) and any changes we made to it or validate a new measure. These descriptions can be rather long at times, for instance, when detailing why we opted for a certain operationalization (e.g., ADHD [Wiklund et al., 2017]) or how we created and validated a new measure to test our hypotheses (e.g., Covin et al., 2015; Patzelt et al., 2020; Shepherd et al., 2011, 2013).

Template Section 4: The Analyses and Results Section

We usually begin this section by presenting a table with the descriptive statistics and bivariate correlations and some descriptives of the sample in the text. This basic information is essential because it helps readers assess the nature of the research and also possibly re-analyze the data, such as in a meta-analysis.[4] Next, we discuss the tests of the hypotheses mainly by presenting the results in various tables and referencing them in the text. We like to first restate each hypothesis verbatim, then move to present the exact results for the specific hypothesis, and end by commenting on whether the hypothesis was supported. We also find it helpful to discuss the hypotheses in the same order we presented them earlier in the paper to avoid reader confusion and ensure narrative flow. Likewise, we present the variables in the same order we initially presented them and use the same names for these variables throughout the text rather than abbreviations (unless common abbreviations such as EO). This approach demonstrates the authors' attention to detail and concern for making readers' lives easier, both of which reviewers and editors appreciate. In this section, we also comment on other aspects of the results if appropriate. For instance, sometimes it is necessary to discuss the effect sizes of the results instead of merely relying on p values below a certain threshold. Furthermore, journals increasingly require additional tests and/or post hoc analyses, which

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[4] Although the issue of endogeneity is beyond the scope of this chapter, if a study has potential endogeneity issues, they need to be explicitly addressed in the analysis and results section. For details on the nature of endogeneity and how to address it, see Semadeni, Withers, and Certo (2014).

we describe after presenting the results of the hypothesis testing (e.g., see Bakker & Shepherd, 2017; Wiklund et al., 2017; which may require additional data collection [e.g., see Shepherd et al., 2013]).

Template Section 5: The Discussion Section

To ensure the discussion section is not too myopic, it can be helpful for a coauthor who did not conduct the analysis to write the first draft of this section or for the author who conducted the analysis to wait a few days between writing the results and discussion sections (see Simple Rule 10). To open the discussion section, we typically restate the overall research question and describe how the results answered that question. We then outline how the paper informs or otherwise contributes to the relevant literature(s) (see Simple Rule 2). As we discussed earlier, we like to revisit the intended contributions articulated in the introduction to make sure we recapture them in the discussion section without going on a tangent, such as by bringing up potential contributions to literatures not previously mentioned in the paper (see Simple Rule 10). We then tend to elaborate on each intended contribution with one or two paragraphs each. This elaboration incudes our reflections on the study's contributions to and implications for the entrepreneurship literature (Literature 1 in Simple Rule2) and the literature used to build the study's theorizing (Literature 2 in Simple Rule 2).

We also generally dedicate a couple of paragraphs to discussing the study's implications for practice, whether for entrepreneurs, educators, or policymakers. We urge authors to think deeply about such implications and whether they can be gleaned from their studies' findings. Indeed, a common mistake in the discussion section of many entrepreneurship papers is that the practical implications are too far removed from the focal study's findings and do not go beyond the general idea that "practitioners should be aware of the findings of the study." For example, Wiklund et al. (2018) briefly discussed how their findings can inform counselors working with entrepreneurs who have ADHD, and Wennberg et al. (2011) extensively discussed the policy implications of their study. To develop tangible and practical implications, authors can draw on previous literature outlining particular tools and approaches that practitioners can use to act on a study's implications. For example, Patzelt et al. (2021) described how managers can utilize supportive leadership to help employees regulate negative emotions stemming from project failure. We

expounded upon the specific practices involved in such supportive leadership when discussing the practical implications of this finding (Patzelt et al., 2021: 15):

> The supportive leadership literature identifies different ways leaders can provide support to employees, thus potentially helping them deal with the negative impact of recent project failure. For example, it emphasizes that supportive leaders should encourage employees to work together, trust each other, and focus on collaborating to achieve goals important to their shared projects rather than on achieving their personal goals (Choi et al., 2003; Euwema et al., 2007). Such behaviors are consistent with the notion that leaders can facilitate social interactions in project transitions (Patzelt et al., 2020). In addition, studies emphasize that supportive leaders should show respect and concern for employees and their particular situations (House, 1981; Judge et al., 2004; Rafferty and Griffin, 2006), such as a recent experience of project failure. Finally, supportive leaders should directly interact with employees to encourage initiative and demonstrate trust in them (Carmeli et al., 2010; Jansen et al., 2016; Van de Ven & Chu, 1989). Our study suggests that these leadership behaviors may be valuable for employees after they have experienced the failure of an entrepreneurial project.

After discussing the implications, we then articulate the study's limitations. This subsection is very straightforward to write—we are merely honest and demonstrate awareness of the study's actual weaknesses. Some of these limitations may be identified through the review process. Any reader with research experience knows that every study has limitations (see Simple Rules 3 and 4), so editors and reviewers tend to find it irritating when authors simply do not see any weaknesses in their studies or try to conceal them. We always advocate for self-awareness and transparency in research, and this is one place to demonstrate them. After listing the limitations, we also generally mention future research opportunities to build on the study's implications for research, implications for practice, and limitations, and we articulate a few questions that make the most sense in terms of further advancing the study's contributions.

Template Section 6: The Conclusion Section

For the conclusion, we usually write only one paragraph or a couple of short paragraphs; however, we sometimes do not include a conclusion at all (e.g., Wiklund et al., 2016). Essentially, we do not consider the conclusion to be a particularly critical section of a paper, but that said, we often like to leave readers with something positive at the end of a paper (consistent with Simple Rule 3).

Some Heuristics for Improving Writing Quality[5]

Academic writing is a highly iterative process requiring in-depth thinking, organizing, writing, and revising. Throughout this process, authors have to make numerous decisions regarding their work's content, style, and structure, which makes creating a publication-worthy document a significant endeavor. Although this chapter is by no means a comprehensive guide, we hope the previous material and the writing heuristics below help entrepreneurship scholars write and revise their work (and thus their entrepreneurial theorizing) effectively and efficiently.
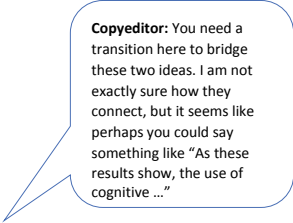
Writing Heuristic 1: Write and Rewrite for Clarity

While most people talk about "writing a paper," we believe the phrase "rewriting a paper" is perhaps more appropriate. Indeed, like many scholars, we frequently go through several dozen rounds of rewrites before a paper is fully accepted and published. For instance, Bakker and Shepherd (2017) went through 125 versions before it was accepted for publication. Indeed, when it comes to the writing process, the quote "How do I know what I think until I see what I say" (often attributed to E.M. Forster) seems appropriate. As this quote indicates, there are advantages to writing a very rough first draft to spark the momentum for a paper. The roughness of such a draft reduces pressure and thereby helps decrease the likelihood of writer's block. Although this highly iterative process is time-consuming, requiring considerable attention to detail and diligence, the improved writing quality is worth the extra work because it increases a manuscript's chance of being accepted for publication.

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[5] This section is based on a working paper (Shepherd, Seyb, and Ferguson).

These iterations also involve attempts to increase argument clarity. While the meaning of and connections between statements and paragraphs may seem clear to authors when they are fully immersed in the literature, these details may be less obvious to less immersed readers. Indeed, everyone approaches specific topics from different vantage points, even knowledgeable audiences, so it is important to ensure arguments are well organized and cohesive. For instance, "transitions" showing readers how two ideas within a paragraph relate help improve clarity. Transitions guide readers through a paper's reasoning and establish how all of the components of a piece of writing contribute to the overall argument. The example below shows revised wording and the introduction of a transition in response to the copyeditor's comment regarding clarity:

Example Writing Heuristic 1 We found in entrepreneurs' narratives that while negative emotions may trigger sensemaking efforts, the presence of positive emotions provided an emotional context in which cognitive strategies could be used. We also found in entrepreneurs' narratives that emotion-focused coping played a key role in the emergence of these positive emotions. While the Now Feeling Good group reported these effects firsthand, the entrepreneurs' narratives in the Delayed Suffering group did not because their negative emotions reportedly increased after the business failure event, while their positive emotions remained low. As these results suggest, the use of cognitive strategies represents a link between the "broaden-and-build" role of positive emotions (Fredrickson, 1998, 2001) and making sense of one's failure experience. (Byrne & Shepherd, 2015: 395)

Copyeditor: You need a transition here to bridge these two ideas. I am not exactly sure how they connect, but it seems like perhaps you could say something like "As these results show, the use of cognitive …"

Writing Heuristic 2: Use Active Voice

Just like the third-person narrative voice, the use of passive voice in academic writing became customary due to scholars' desire to come across as more objective. Although passive voice is often used in academic writing in some languages (e.g., German), in English, it tends to result in wordy, overly complex sentences that leave readers asking, "Who is doing what?" People usually speak in an active voice in their day-to-day conversations, centering stories on people doing things, and performing specific actions. Accordingly, as readers, people are more receptive to active voice and can follow the meaning of material written in an active voice more easily. Active voice also reduces wordiness and results in less complex sentence structures, both of which are important in clearly conveying an argument. Although authors often think about active voice in terms of themselves (i.e., what they did), this heuristic also applies when referring to others' work, as the following example illustrates:

Example Writing Issue 2 To date, numerous definitions have been employed by researchers.

> **Copyeditor:** Passive language. Make active.

Example Revised—Writing Heuristic 2 To date, researchers have used numerous definitions for business failure, which vary in terms of their inclusivity. . . (Ucbasaran et al., 2013: 166)

Writing Heuristic 3: Start Paragraphs with a Topic Sentence

In general, each paragraph in a paper should focus on one central topic and then elaborate on it. If a paragraph covers two topics, it might be better to divide the paragraph to make each topic more prominent and digestible. To introduce the topic of a paragraph and thus guide readers, authors should begin each paragraph with a "topic sentence," as illustrated in the following example:

Example Writing Issue 5 Compassion refers to "the feeling that arises in witnessing another's suffering, and that motivates a subsequent desire to help" (Goetz et al., 2010, p. 351). According to the organizational perspective, individuals often start organizing activities to alleviate suffering by noticing, feeling, and responding compassionately to others' needs (Dutton et al., 2006; Frost, 1999). Therefore, compassion involves feelings that can lead to action. For example, within existing organizations, compassionate individuals may realign and redeploy the existing infrastructure—routines, systems, and resources—in a way that minimizes organizational members' suffering (Dutton et al., 2006; Lilius et al., 2008, 2011; Rynes et al., 2012). Complementing work on compassion organizing, the prosocial venturing literature has revealed that founders' compassion can drive the emergence of prosocial ventures to alleviate the suffering of those outside the focal organization (Drabek & McEntire, 2002). Both the organizational perspective (Dutton et al., 2006) and the prosocial venturing literature (Bacq & Alt, 2018; Miller et al., 2012) assume that compassion is the key motivational trigger that increases individuals' likelihood of taking action to alleviate others' suffering.

Example Revised—Writing Heuristic 5: Both the organizational perspective (Dutton et al., 2006) and the prosocial venturing literature (Bacq & Alt, 2018; Miller et al., 2012) assume that compassion is the key motivational trigger that increases individuals' likelihood of taking action to alleviate others' suffering. Compassion refers to "the feeling that arises in witnessing another's suffering, and that motivates a subsequent desire to help" (Goetz et al., 2010, p. 351). According to the organizational perspective, individuals often start organizing activities to alleviate suffering by

Copyeditor: Is this the overall point of the paragraph? If so, this needs to come earlier—probably as the topic sentence. Then you can build your paragraph to support this idea.

noticing, feeling, and responding compassion-ately to others' needs (Dutton et al., 2006; Frost, 1999). Therefore, compassion involves feelings that can lead to action. For example, within existing organizations, compassionate individuals may realign and redeploy the existing infrastructure—routines, systems, and resources—in a way that minimizes organi-zational members' suffering (Dutton et al., 2006; Lilius et al., 2008, 2011; Rynes et al., 2012). Complementing work on compassion organizing, the prosocial venturing literature has revealed that founders' compassion can drive the emergence of prosocial ventures to alleviate the suffering of those outside the focal organization (Drabek & McEntire, 2002). (Mittermaier et al., 2021b: 4)

Writing Heuristic 4: Connect Ideas and Paragraphs

The transition example we gave for Writing Heuristic 1 was at the sentence level, but it is also important to add transitions at the para-graph level to connect the ideas presented in one paragraph to those presented in the next paragraph. Like with sentences, successfully tran-sitioning between paragraphs improves the clarity, flow, and plausibility of the focal story. In the following example, the copyeditor indicated that we needed to use signposts to tell readers what is to come and thus connect ideas between paragraphs (each mechanism had its own para-graph). Signaling ideas in this way demonstrates that the focal author has carefully considered the structure and content of their argument. When readers know what an author intends to discuss, it helps them grasp the author's perspective, even if they would have made different narrative choices in their writing.

Example Writing Issue 4 Therefore, an orga-nization's perception is likely broadened by self-compassion via three distinct mechanisms.

Copyeditor: What are the three mechanisms? List them here to guide the reader.

Example Revised—Writing Heuristic 4: Therefore, an organization's perception is likely

broadened by self-compassion via three distinct mechanisms—self-kindness, common humanity, and mindfulness. (Shepherd et al., 2016: 48)

Writing Heuristic 5: Provide Descriptive Examples to Illustrate Arguments

Providing supplementary details or an example to illustrate a point makes writing deeper and more comprehensive and thus helps convey meaning to readers. However, adding an example, particularly a well-known example, could end up detracting from the arguments established in a paper because people can interpret an example from numerous perspectives. Therefore, a hypothetical example is sometimes a better option because it can be tailored to directly support the point being made in the paper. Alternatively, authors can use an example that has already been cited in the literature. The following is an example of this heuristic:

Example Writing Issue 5 Legislation may validate the social meaning of an act, thereby making an act more or less socially acceptable and even prompting the erosion of well-established norms (Efrat, 2006). To illustrate this point, Efrat (2006) details how legislative reform in Japan has reduced the entrenched traditional stigma of bankruptcy. In summary, the more the law penalizes failure, the greater the likelihood that failure is stigmatized.

Copyeditor: You need to add more detail to this example or delete it because the way it is written now doesn't really add anything to your argument. You need to show your readers (through a detailed explanation) more details.

  Example Revised—Writing Heuristic 5: Legislation may validate the social meaning of an act, thereby making an act more or less socially acceptable and even prompting the erosion of well-established norms (Efrat, 2006). To illustrate this point, Efrat (2006) details how legislative reform in Japan has reduced the entrenched traditional stigma of bankruptcy; he points to evidence reporting a causal relationship between the increasing leniency of insolvency laws and a decline in suicide (which has historically followed

the shame associated with insolvency and bankruptcy). In summary, extant work suggests that the more the law penalizes failure, the greater the likelihood that failure is stigmatized. (Ucbasaran et al., 2013: 177)

Writing Heuristic 6: Make Items in a List Parallel

Lists can help authors effectively and concisely communicate important information. To reduce readers' burden, make sure the wording of each element in a list is parallel (e.g., all elements begin with a verb, all begin with a noun, or all begin with question words [e.g., how, why, where, how, who]). Here is an example:

Example Writing Issue 6 Although there are many research opportunities possible from taking a more activity-based perspective, I propose that important future research avenues worth exploring include (1) the activities that lead to the identification of what is believed (or doubted) to be an opportunity (third- and/or first-person opportunity), (2) how and why an individual's prior knowledge impacts the types of activities undertaken to form an opportunity belief (third- and/or first-person opportunity), (3) how and why the nature of an individual's motivation impacts the types of activities undertaken to form an opportunity belief (third- and/or first-person opportunity), (4) the interrelationship between activities contribute to an opportunity belief (third- and/or first-person opportunity), (5) how and why specific activities influence an individual's prior knowledge and motivation (which in turn can influence subsequent activities), (6) how and why changed knowledge in the evaluation stage impacts knowledge in the attention stage

> **Copyeditor:** Can you make this list more parallel? That is, some list elements start with nouns, whereas others start with question words. Can you make them either all start with nouns or all start with question words?

for the identification of subsequent potential third-person opportunities, and (7) how and why the changed motivation of the evaluation stage impacts motivation in the attention stage for the identification of subsequent third-person opportunities.

Example Revised—Writing Heuristic 6: Although there are many research opportunities possible from taking a more activity-based perspective, I propose that important future research avenues worth exploring include (1) which activities lead to the identification of what is believed (or doubted) to be an opportunity (third- and/or first-person opportunity), (2) how and why an individual's prior knowledge impacts the types of activities undertaken to form an opportunity belief (third- and/or first-person opportunity), (3) how and why the nature of an individual's motivation impacts the types of activities undertaken to form an opportunity belief (third- and/or first-person opportunity), (4) how the interrelationship between activities contributes to an opportunity belief (third- and/or first-person opportunity), (5) how and why specific activities influence an individual's prior knowledge and motivation (which in turn can influence subsequent activities), (6) how and why changed knowledge in the evaluation stage impacts knowledge in the attention stage for the identification of subsequent potential third-person opportunities, and (7) how and why the changed motivation of the evaluation stage impacts motivation in the attention stage for the identification of subsequent third-person opportunities. (Shepherd, 2015: 496)

Conclusion

In this chapter, our goal was to offer some advice on crafting a good entrepreneurship paper using primarily our own experiences with missteps, failures, and some successes. We began by outlining 11 simple rules to consider when developing an entrepreneurship paper. Next, we provided a template to organize the content required in each section of an entrepreneurship paper and presented examples of how we have applied this template in previous papers. Finally, we discussed six writing heuristics to help authors enhance their writing quality. We hope these simple rules, template sections, and writing heuristics help scholars as they craft entrepreneurship papers to advance entrepreneurial theorizing.

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A Lean Approach to Entrepreneurial Theorizing

Scholars publish papers to further knowledge and, in doing so, influence subsequent research. However, papers vary in their quality and impact both within and across researchers. A paper's quality is indicated by its statement of contribution (Locke & Golden-Biddle, 1997), the depth and reasoning of its theoretical arguments (Whetten, 1989), the suitability of its research methods (Colquitt & Zapata-Phelan, 2007), and so on. A paper's impact, on the other hand, is typically reflected by different citation measures (Adler & Harzing, 2009; Aguinis et al., 2012, 2014) and by the reputation of the journal in which it is published (Palacios-Huerta & Volij, 2004; Podsakoff et al., 2018). Despite an ongoing debate over which of these metrics should be more or less dominant in evaluating research papers' quality and impact (e.g., Aguinis et al., 2014; Starbuck, 2005; Wright et al., 2020), overall, a considerable literature has discussed criteria for determining the types of papers that advance scholars' careers and the scholarly field.

However, although there are countless exemplars of quality and impactful papers, less has been documented about how to produce such scholarship (Aguinis et al., 2014). Indeed, while the research and writing processes underlying paper development are ostensibly learned

throughout the many years of Ph.D. training and the deliberate practice of writing research papers, many scholars still struggle to generate multiple papers of both high quality and high impact (Connelly, 2020). For instance, the *Academy of Management Journal* put out an important series of editorials discussing how scholars can write individual papers to improve their odds of being published in top journals. Other journals have given similar editorial advice. Similarly, Podsakoff et al. (2018) advised Ph.D. students and junior faculty on how to create and publish high-impact papers (i.e., swing for the fences vis-à-vis play small ball).

Nevertheless, these editorials offer little guidance to scholars on how to develop a portfolio of numerous high-quality, high-impact papers that fulfill journals' publishing criteria. Developing such a portfolio of papers is a difficult task (Connelly, 2020) due to the limited attention scholars can allocate across their varied projects and academic roles (Aguinis & Vaschetto, 2011), the unpredictable and noisy nature of the review process in terms of the outcome and speed of publication decisions (Clark et al., 2016; Peters & Ceci, 1980), the uncertainty of outcomes from data collection and analysis (Hill et al., 2020), and the reliance on coauthors who may differ in the time they have available for a specific project (Ketchen, 2016). Still, taking a portfolio perspective on producing high-quality, high-impact papers is important because scholars' career advancement rarely depends on a single paper; rather, tenure and promotion decisions are usually based on a scholar's overall impact (e.g., as captured by the number of citations or the h-index [Mingers, 2009]).

Thus, in this chapter, we outline an entrepreneurial approach to generating a portfolio of multiple high-quality, high-impact papers. To do so, we take the entrepreneurship principles of lean startup for generating new ventures and adapt them to lean scholarship. By lean scholarship, we mean iterative experimentation, stakeholder engagement, and collective learning in developing a portfolio of papers. Our lean scholarship framework also includes many practical recommendations for researchers hoping to better manage their research processes.

Further, this chapter makes three main theoretical contributions. First, prior work has provided valuable insights into how to develop individual papers of high quality and high impact (e.g., Colquitt & George, 2011; Podsakoff et al., 2018; Shepherd & Wiklund, 2020). We go one step further by presenting an entrepreneurial approach for developing a portfolio of high-quality papers with (potentially) high impact and for managing such a portfolio rather than focusing on improving

a single paper. Second, an important research stream has investigated the antecedents of scholars' research productivity, including their institutional affiliation (Long et al., 2017), the productivity of scholars' dissertation advisors (Williamson & Cable, 2003), and the time they can devote to research (White et al., 2012). These studies have generally emphasized the importance of the context in which a researcher is embedded; however, we identify entrepreneurial mindset as an individual-level factor that may trigger scholars' research productivity within their contexts (especially in resource-constrained [time- and money-constrained] environments). As we discuss, thinking entrepreneurially can aid scholars in generating and managing a portfolio of papers. Finally, despite the lean startup framework being rooted in entrepreneurial practice (Ries, 2011), we propose this framework can be adapted to facilitate entrepreneurship in academia. With our lean scholarship model, we extend the lean startup logic by applying it to theorizing on scholarship and, in particular, generating a portfolio of papers. We present concrete practices so scholars can implement the lean scholarship approach for their own research endeavors.

A Framework for Lean Scholarship

Building on the lean startup framework for practitioners (Ries, 2011; Shepherd & Gruber, 2021), we propose lean scholarship as one possible approach to producing a portfolio of high-quality, high-impact papers. What we present is not a secret elixir but a framework—significant work is still required in the spaces within the framework to achieve the desired outcomes. Importantly, we want to stress that lean scholarship is only one possible approach to generating numerous high-quality, high-impact papers, and as we discuss below, scholars will vary in how valuable they find this approach for their own work. Figure 6.1 illustrates our lean scholarship framework (see Shepherd & Patzelt, 2022). To start, lean scholarship requires an entrepreneurial mindset. With this mindset, a researcher then generates a set of potential research opportunities and then chooses one of those opportunities to pursue further. This pursuit entails developing a minimum viable paper and then considering the validity of its underlying assumptions to determine the plausibility of the paper. If the paper is plausible, the researcher exploits the potential research opportunity and adds it to their portfolio of papers. If the paper is implausible, the researcher ceases and discards the potential research opportunity. In addition, the researcher needs to manage their portfolio

of papers, periodically deciding whether to persist with, pivot from, or terminate each paper. When a paper is terminated, the researcher reallocates the respective resources to other potential research opportunities with more promise. Next, we discuss the relationships of the lean scholarship framework followed by the feedback loops (the dashed arrows in Fig. 6.1).

1: Starting with an Entrepreneurial Mindset to Guide the Scholarship Process

With an entrepreneurial mindset for lean scholarship, a scholar's attention is focused on finding and assessing multiple new potential research opportunities and pursuing only the best of these opportunities to advance the focal scholarly conversation while terminating the least promising opportunities. These potential research opportunities may be local or distant to the scholar. Local opportunities are closely related to the existing scholarly conversation the scholar is engaged in, whereas distant opportunities entail a creative jump from the focal scholarly conversation, perhaps one involving a previously untapped theory in the literature stream in which the scholarly conversation is embedded. More distant research opportunities generally have more potential to make a novel, high-impact contribution compared to local opportunities because they may initiate a completely new scholarly conversation instead of merely adding to an ongoing conversation in a more mature field. For example, Scott (2005: 476) described how he connected distant literatures in recounting his contribution to institutional theory:

> Within organization studies, I see and have attempted to cultivate connections between institutional theory and such diverse areas as strategy, entrepreneurship, health care management, human resources, international management, management history, organizational cognition, organization structure and change, organizations, and the natural environment, and public and nonprofit forms. Beyond the field of organizational studies, I have worked to develop and demonstrate the connections between institutional theory and closely related areas of study, such as law and society (Scott, 1994), policy analysis (Scott, 2002), and social movements. (McAdam and Scott, 2005)

In a similar vein, the missions of top journals call for paper submissions that are "original... [and] theoretically bold" (*Academy of Management Journal*) and center on "the discovery and analysis of new phenomena [and] new theoretical accounts" (*Administrative Science Quarterly*).
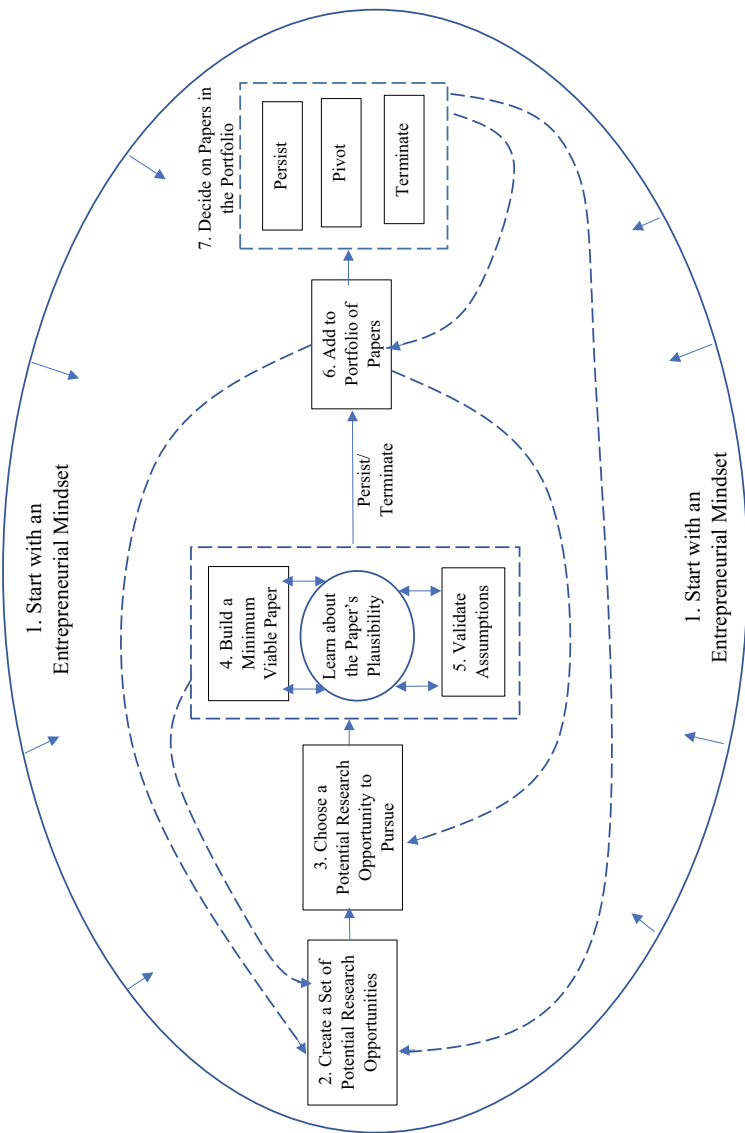
Fig. 6.1 Lean scholarship framework [*Note* From Shepherd and Patzelt (2022)]

However, although an entrepreneurial mindset focuses researchers' attention on finding and assessing multiple new and potentially distant opportunities, researchers likely vary in their ability to develop such a mindset, thus leading to some being less able to take the lean scholarship approach. Particularly, an entrepreneurial mindset for the lean scholarship requires scholars to have cognitive adaptability so they can understand distant domains/literatures and determine how these domains/literatures can inform knowledge and ultimately advance the focal scholarly conversation. Cognitive adaptability is "the ability to effectively and appropriately evolve or adapt decision policies (i.e., to learn) given feedback (inputs) from the environmental context in which cognitive processing is embedded" (Haynie et al., 2012: 238). This ability is associated with an enhanced decision-making in complex, dynamic, and inherently uncertain contexts (Earley & Ang, 2003). Indeed, lean scholarship requires scholars to embrace the distant, uncertain, and complex phenomena underlying potential research opportunities and thus develop cognitive adaptability to understand, combine, and translate this information into potential research opportunities. Accordingly, cognitive adaptability is crucial to the entrepreneurial mindset needed for the lean scholarship approach.

2 and 3: Creating a Set of Potential Research Opportunities and Choosing One to Pursue

When starting a new venture, entrepreneurs tend to perform better when they generate a large set of potential opportunities and then select one to exploit instead of simply pursuing the first potential opportunity they identify (or making a selection from a small set of similar options) (Gruber et al., 2008). Likewise, with lean scholarship, scholars generate a set of potential research opportunities and then select one to exploit for their next project. Although it may seem costly in terms of time to generate a set of potential research opportunities like this, this step in the lean scholarship approach helps researchers rank potential research opportunities. With a large set of opportunities (e.g., five to nine), researchers can be assured that they have been comprehensive and can be comfortable with their final choice. The non-lean approach, on the other hand, involves beginning with one potential research opportunity (or a small set of potential opportunities) and satisficing—namely, selecting a research opportunity that is satisfactory and sufficient. However, satisficing often leaves researchers wondering if they actually chose the "best" potential research opportunity.

Thus, although lean scholarship does not provide specific criteria for choosing a potential research opportunity from a set (but can accommodate such choice criteria), it does provide scholars a process for choosing their next project that is thorough (i.e., includes multiple potential research opportunities) and builds confidence (because it is thorough and includes back-up alternatives from the set) to pursue the next steps of lean scholarship. For example, before beginning to develop the idea for the paper underlying this chapter, Dean Shepherd wrote a list with several potential research opportunities, explored each idea a little, and then selected the best potential research opportunity from the list (while also considering the other paper projects in his portfolio). At the time, Dean's portfolio had some deductive papers on different topics, some inductive papers on entrepreneurship as a response to adversity, and some deductive empirical papers on founders and venture teams. While he had published previous papers on scholarship, the paper underlying this chapter was a chance for him to contribute to helping others contribute through their research. Dean realized this particular opportunity was a risky choice (because it did not constitute a "standard" paper and the publication home was not clear initially), but he also saw it would fill a hole in his portfolio of papers. Specifically, it represented an opportunity for him to think more deeply about his own scholarship and then share what he learned with others. Even if it was not published, writing the paper would have likely helped Dean produce more high-quality, high-impact papers in the future.

4: Building a Minimum Viable Paper

In the lean startup framework for practitioners, entrepreneurs create minimum viable products to learn about and refine (and significantly change if necessary) their potential opportunities (Ries, 2011). A minimum viable product is a type of prototype with enough features to demonstrate to potential customers what the final product would look like and how it would work. Therefore, it serves as a tool for learning: the focal entrepreneur allows potential customers to use the product, collects feedback on the product based on how these customers use it, and then utilizes this feedback to improve and finalize the product (Ries, 2011). In line with this notion, we propose the idea of a *minimum viable paper*. A minimum viable paper is a representation of a potential research opportunity that is sufficient enough (i.e., involves a minimum investment of resources, including time) to enable the researcher to gauge others' reactions to and learn about the plausibility of the underlying opportunity.

The audience for a such paper includes other scholars engaged in the focal conversation as well as potential reviewers from the targeted journal. As such, a minimum viable paper is some type of outline of the potential research opportunity.[1]

In contrast to scholars taking the non-lean approach of receiving tough love on a full draft of a paper before journal submission, the lean scholar develops a minimum viable paper to engage an audience comprising builders rather than critics, optimists rather than pessimists, and authors rather than reviewers. Such an audience accepts the "minimum" nature of this representation of the potential research opportunity and understands its purpose in stimulating discussion and learning to determine how to refine (or otherwise change) what may become a full-blown paper. This constructive process is grounded in curiosity and exploration and is typically fun and instructive for scholars who approach lean scholarship with an entrepreneurial mindset.

A minimum viable paper can come in many forms: a verbal presentation (with or without PowerPoint slides), a written document, a figure, and so forth. The choice of medium is likely not important per se but rather depends on what the focal scholar considers minimum—namely, a minimum viable paper must be sufficient enough for the scholar to garner feedback (from themselves and others) for learning. No matter how few resources are invested in this process, these resources are wasted if a minimum viable paper does not facilitate learning. However, when too many resources are invested into a minimum viable paper (i.e., above the minimum, which many scholars do), two negative implications arise: (1) the focal researcher has used more resources than necessary—a waste—and (2) the researcher has more sunk costs and is thus more reluctant to accept feedback to learn and take the paper in a more promising direction or to terminate the paper when there are signs it is not as appealing as initially thought. Thus, through minimum viable papers, lean scholarship aids scholars in avoiding the natural tendency to escalate commitment to projects they have devoted substantial resources to (consistent with the escalation of commitment bias [see Staw, 1997]). Next, we offer examples of different types of possible minimal viable papers.

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[1] A minimum viable paper is different from a "least publishable" unit (Buddemeier, 1981), which refers to the minimum amount of content (and resources invested) needed in a paper for it to be published.

A figure as a minimum viable paper. One form a minimum viable paper could take is a graphical representation of a potential research opportunity, such as a diagram, picture, N × N table, sketch, or set of scribbled ideas and notes organized in a certain way. For instance, Mintzberg (2005) explained how he uses diagrams to develop early theoretical ideas:

> I use diagrams of all kinds to express the inter-relationships among the concepts I am dealing with. . . . It's the rendering of this on paper that really gets the ideas flowing in my head. . . . My work is loaded with diagrams, seeking to express every which way how the ideas I am trying to make come together. . . . These diagrams really help me a great deal: I can see it all at a glance, even if outside my head. But not always into other heads.

Such graphical representations can be shared with other scholars to initiate discourse, collect feedback, and learn about the plausibility of a potential research opportunity and its underlying theoretical ideas (Smith & Hitt, 2005). Similarly, Holger Patzelt has a large whiteboard on the wall of his office where he draws diagrams, pictures, or sketches of potential research opportunities. He then discusses these graphical representations with his neighboring colleagues to evaluate the opportunities' plausibility and decide whether to pursue them.

A preliminary introduction as a minimum viable paper. Another form a minimum viable paper might take is a rough draft of the potential paper's introduction in terms of what is known about the phenomenon, what is not known, and how the current paper's approach could fill that knowledge gap (Barney, 2018; Shepherd & Wiklund, 2020). A slightly different version of this approach to developing a minimum viable paper could point out a weakly held assumption within the scholarly community, why/when this assumption does not apply, and why this assumption needs to be replaced. Such a minimum viable paper may, for example, motivate feedback from those within the scholarly community that the assumption is not weakly held but is actually strongly held and applies in ways not previously considered. However, feedback from such a minimum viable paper might reveal that the assumption is weakly held and that there are other contexts in which it "breaks down" as an effective means for an explanation. Regardless of whether the feedback is disconfirming or confirming, such a minimum viable paper serves its role of engendering

reactions so the scholar can establish the plausibility of the focal potential research opportunity. For instance, Dean Shepherd developed a rough introduction and basic arguments for the model presented in this chapter to pitch the potential research opportunity to his coauthor Holger. In turn, Holger came back to him with more substantial arguments for and against the model. We then went back and forth as an author team, modifying the model until we felt like we agreed on the nature of the potential research opportunity. We then had to decide whether it was worth taking the next step to develop the paper and refine it for submission to a journal and then further changes to a chapter for this book.

Similarly, Hambrick (2005) described how the idea behind his seminal paper on upper echelons (Hambrick & Mason, 1984) stems back to a seminar paper he had written as an early Ph.D. student but had put aside for a couple of years. After that time, he met Phyllis Mason, with whom he shared and discussed the seminar paper. This collaboration resulted in the two scholars jointly refining the initial paper's ideas and, ultimately, publishing the coauthored paper in the *Academy of Management Review*. Since then, the paper has become one of the most influential papers in management research.

A story as a minimum viable paper. A minimum viable paper can also take the form of a story rooted in a phenomenon that conveys the essence of the potential research opportunity. For example, in the following, Weick (1974: 488–489) offered an example that could have resulted in a potential research opportunity (one that had already been exploited):

> As a simple example, if one watches people ride on escalators, he will observe that there are times when they walk on the escalator in order to speed up their ride. Now the question is, is there any regularity to this pattern of walking? Informal observation suggests that the following relationship holds: the closer the person is to the end of the escalator ride, the greater the likelihood that he will walk the remaining distance. Stated differently, walking is unlikely at the start of an escalator ride and much more likely near the end of the ride. . . . Neal Miller's research on conflict behavior is based partially on the following assumption: "The nearer a subject is to a goal, the stronger is his tendency to approach it" (15, p. 424). Is not this precisely what occurs in the case of people riding an escalator? The closer they are to where they want to get, the stronger is their tendency to approach it. This strength is shown by their adding the behavior of walking to the activity of being transported to the goal,

which is already underway. Suppose, however, that in thinking about the escalator example, you had explained the regularity in a different manner. Then it is conceivable that you might have developed a formulation that is an alternative to Miller's formulation. If so, then testing which view makes more accurate predictions in a new situation would improve the understanding of behavior. The point is that this increment to thinking had a humble origin. It all started with simply looking for regularities in everyday events.

In a similar vein, Shepherd (2003) harnessed his experiences with his father and the failure of their family business as the basis for a minimum viable paper. While it is uncommon to include personal motivation in a final paper, he decided to do so in this case, stating,

> When our family business died, my father exhibited a number of worrying emotions. There were numbness and disbelief that this business he had created twenty odd years ago was no longer "alive." There was some anger toward the economy, competitors, and debtors. A stronger emotion than anger was that of guilt and self-blame: he felt guilty that he had caused the failure of the business, that it could no longer be passed on to my brother, and that, as a result, he had failed not only as a businessperson but also as a father. These feelings caused him distress and anxiety. He felt the situation was hopeless and became withdrawn and, at times, depressed. The point was that he was not in the right mindset to automatically and instantaneously learn from his failure experiences. Rather it would take time; it would take a process. (Shepherd, 2003: 320)

A minimum viable paper as a boundary object. No matter what form it takes, it can be helpful to think of a minimum viable paper as a boundary object—namely, as an artifact that "provides a bridge between individuals by triangulating on something in common by facilitating a flow of information and knowledge (Carlile, 2004) and by reducing the time required for sensemaking" (Grichnik et al., 2016: 14). Thus, to serve as a boundary object, a minimum viable paper must be something that focuses the attention of both the focal scholar and their audience on the same information even though they likely perceive, interpret, and integrate knowledge differently. As a boundary object, a minimum viable paper enables all parties to share their perspectives, which in turn structure and accelerate both the scholar's and the audience's learning. Accordingly, lean scholarship is enhanced when researchers develop minimum

viable papers that are tangible, shareable, and understandable in a way that enables exchange across boundaries (with other scholars in the same field, with scholars from different domains, with practitioners, etc.) for validated learning.

5: Validating Assumptions

Entrepreneurs have to test the assumptions at the core of their startups' business models (Blank, 2013). For instance, such assumptions could be that a particular group of potential customers would buy a product at a certain price, that these customers would find certain product features valuable, that the focal startup needs to obtain a particular amount of money to develop the final version of the product, and so forth. The lean startup framework for practitioners urges entrepreneurs to explicitly formulate and then validate such assumptions, for example, through interviews with potential customers and other venture stakeholders.

In lean scholarship, scholars validate assumptions to provide evidence (including both confirming and disconfirming evidence) that a potential research opportunity is plausible. From a sensemaking perspective, assumptions are more plausible when they better "tap into an ongoing sense of the current climate, are consistent with other data, facilitate ongoing projects, reduce equivocality, provide an aura of accuracy..., and offer a potentially exciting future" (Weick et al., 2005: 415). Therefore, research can be understood as improving plausibility rather than as producing an outcome (e.g., theorizing as a process rather than generating a theory as an outcome [see Weick, 1995]). By validating assumptions, scholars can gain information about the assumptions underlying a potential research opportunity, thereby enabling them to improve that opportunity's plausibility (e.g., refine the opportunity), terminate the opportunity, or pivot from the opportunity (see the final stage of the lean scholarship below). Thus, the purpose of validating assumptions in the lean scholarship framework is not to test the hypotheses of a model (these can be tested later in the process for an empirical paper or in subsequent papers for a theory paper); rather, the purpose is to explore whether the assumptions underlying a potential research opportunity are plausible to both oneself and others. As we discussed above, a minimum viable paper may serve this "reality check" function with scholars in the target audience for the final paper.

In addition, lean scholarship examines the most critical assumptions underlying a potential research opportunity as well as whether and how these assumptions can be validated. For example, for his potential research

opportunity exploring how entrepreneurs experience and process grief when their businesses fail—triggered by the story of his father and the failure of their family business—Dean (Shepherd, 2003) needed to validate critical assumptions before continuing with that potential research opportunity. Specifically, he had to validate the assumptions that (1) people experience a negative emotional reaction from losing something that is not a family member or friend (i.e., that grief from losing a business is plausible) and (2) experiencing a negative emotional reaction can impede learning (i.e., that learning from failure is not automatic nor instantaneous). In his efforts to (in)validate these assumptions, he studied the distant literature on bereavement, finding that scholars have attributed grief to losses associated with divorce, cardiac surgery, and amputation (thus validating Assumption 1). He also studied research on emotions and cognition, which revealed that negative emotions constrain attention and thinking. Such constraints are inconsistent with the conditions needed to learn from experience (thus validating Assumption 2). Moreover, he explored the validity of these assumptions by studying entrepreneurs' stories of their experiences with business failure. After validating these critical assumptions and determining that the potential research opportunity was plausible, he constructed a draft of the paper and eventually developed a new research stream.

Lean scholarship also requires scholars to consider how they can best validate assumptions while only investing the minimum amount of resources. These considerations differ from those associated with testing a model's hypotheses, such as statistical power and representativeness. Rather, scholars need to consider who can help them evaluate the plausibility of the critical assumptions underlying their potential research opportunities. Scholars can often test the validity of their assumptions by simply talking to practitioners about their experiences with the focal topic or by explicitly asking them about these assumptions. For instance, Wiklund reported that when he began studying small businesses, he tested the plausibility of his theoretical assumptions and hypotheses by talking with his mother, who had a small business at that time (Wiklund, 2017). Oldman and Hackman similarly described how consultants helped them develop their "Job Diagnostic Survey," which in turn played an essential role in formulating job characteristics theory (Oldman & Hackman, 2005). Moreover, a distant search may uncover additional experts and evidence.

Overall, lean scholarship employs informants and distant literature to validate assumptions that serve as cornerstones of a potential research opportunity's plausibility. We recognize the difficulty in validating such assumptions by talking to people about their experiences (particularly for researchers who only have deductive research experience using secondary data sources). Nevertheless, doing so can save scholars substantial time and effort later on. For instance, with the lean scholarship approach, a potential research opportunity's flaws will eventually surface, so it is better to find them earlier in the research process than later to ensure fewer resources are invested. As a result, the focal researcher is in a better place to learn and then refine, pivot from, or terminate the opportunity. To test the assumptions underlying the early development of image theory, for instance, Beach and Mitchell (2005) conducted a decision-making experiment with planners from local power plants that required them to judge a series of scenarios at hypothetical sites. While the results of the experiment confirmed the authors' theoretical predictions, afterward, they discovered the following:

> One of the planners remarked that all this rigmarole was very nice, but it really did not reflect how site decisions were made. He claimed that planners simply screened out all sites that violated federal, state, or company guidelines and then selected the cheapest of the surviving sites. His colleagues agreed with him. By relying too much on our theory, we had built a magnificent, but wholly irrelevant decision system. We did not publish. On the other hand, we had learned something. . . . There is more than one way to make decisions. Indeed, after this little epiphany, it took only a little introspection to identify the various decision strategies we used ourselves. We decided to pursue this insight and construct a model that reflected it. (Beach & Mitchell, 2005: 40–41)

Finally, researchers can apply disciplined imagination to validate (or invalidate) assumptions either alone or with an audience. Disciplined imagination refers to constructing and selecting theoretical representations of a specific target subject, with the focal scholar serving as the source of both variation in and selection of these representations (Weick, 1989: 520). As abstract hypothetical scenarios, these thought trials serve as imaginary experiments for testing underlying assumptions and providing feedback to refine a potential research opportunity. For instance, Hamel (1996: 71) employed a thought experiment to test his

assumption that disruptive strategies are ubiquitous across industries. In particular, he described how this assumption applies in the hotel industry:

> Consider the hotel industry's definition of a day, which begins when you check in and ends at noon when you check out. But if you check in at 1 A.M. after a grueling journey, why should you check out at the same time or pay the same amount as a person who arrived at 5 P.M. the previous afternoon? If a rental car company can manage a fleet of cars on a rotating 24-hour basis, why can't a hotel do exactly the same with a fleet of rooms?

Based on this reasoning, Hamel argued that hotels apply a specific disruptive strategy, thereby challenging the ubiquitous nature of disruptive strategies. In a similar vein, Ouchi (1980) used a thought experiment to test the assumption that markets and hierarchical bureaucracies are the superior organizational forms across contexts. Specifically, this thought experiment was set in a hypothetical context characterized by goal incongruence between organizational members and demanding performance assessments, neither of which can be addressed well by markets or hierarchical bureaucracies. This thought experiment led to the question, "What if an organization was like a clan," thus inspiring Ouchi to come up with a third form of organization (i.e., a clan) that is seemingly superior in this context.

We want to emphasize that lean scholarship entails sharing information with others early and often to learn; refining one's potential research opportunity based on the feedback from sharing; and, ultimately, offering a high-quality, high-impact paper to the scholarly community. Interestingly, junior scholars are often hesitant to share information about their potential research opportunities because they worry others will steal them. As Barney (2005: 300) noted,

> I think the most important thing I have learned over the last twenty-five years has had to do with the role of colleagues and friends in the intellectual process. I began my career by assuming that other professors were competitors. It was almost as if I had a "zero-sum" mentality about the publication process—if they publish a paper, I would not be able to publish a paper. This, of course, is nonsense. In fact, your colleagues can be your friends, and they can provide significant support…[and] these colleagues can be the source of new ideas and insights. I think that as I have shifted my perspective from one where I was competing with other professors to

one where I was learning from my colleagues, the quality of my theoretical contributions has improved.

According to the lean scholarship perspective, not sharing one's ideas with others is unproductive for numerous reasons: (1) When a potential research opportunity is not shared, it is unlikely to be refined in a way necessary for publication. (2) Without sharing a potential research opportunity (e.g., as a minimum viable paper), the opportunity is not likely to be as valuable because the focal scholar has fewer chances to learn and improve the opportunity/paper (and also improve as a scholar). (3) Lean scholarship is quick, so scholars who articulate and share their potential research opportunities are already well down the research path. An "idea thief," on the other hand, is late to start the journey down the research path. Finally, (4) fear of this type of theft is perhaps more overblown than realized as most people pursue potential research opportunities that interest them personally. As such, the benefits of sharing ideas with others to (in)validate assumptions trump the potential costs of someone stealing those ideas.

6. Adding to the Portfolio of Papers

In lean scholarship, a scholar generates a portfolio of papers representing the exploitation of potential research opportunities at different stages of development (e.g., in data collection, in writing, under the first review at a journal, under advanced review at a journal, etc.) and in different research streams (e.g., entrepreneurial responses to adversity, venture emergence and growth, entrepreneurial decision-making and cognition). According to a real-options reasoning perspective, the scholar uses these papers to probe into the community of scholars to determine others' reactions to these papers and thus learn about the feasibility of their potential opportunities. Based on this feedback, the scholar then terminates potential research opportunities that do not show promise and reallocates resources to those that do (for entrepreneurs using real-options reasoning, see McGrath, 1999; and for a portfolio of projects at different stages of development, see Bakker & Shepherd, 2017).

Despite the possible efficiency of generating and working on highly related papers (e.g., the same literature, the same method, the same intended audience, and so on), the lean scholarship framework requires scholars to have some heterogeneity across the papers in their portfolios. We are not implying that all potential research opportunities have to be radical and shrouded in uncertainty; rather, we are encouraging every

researcher to have one or two radical research projects in their portfolios. Such heterogeneity decreases the downside of the uncertainty (of radical projects) in a portfolio, whereas the upside is increased because the "radical" potential research opportunities can provide insights to help develop the other papers in the portfolio and to generate additional potential opportunities for the overall choice set. A portfolio of potential research papers is dynamic due to the practices of terminating, pivoting, and adding potential research opportunities, which we describe in the next sections. The dynamic nature of a portfolio also means that while the choice of a potential research opportunity as one's next project is significant, a large amount of resources will not necessarily be invested in this project to ensure it is finished. Rather, minimal resources are invested to learn more about the opportunity's viability, and if needed, the project can be terminated or modified to form a new potential research opportunity.

Thus, lean scholarship entails generating a set of potential research opportunities to select one's next project and manage one's portfolio of potential research papers to probe the marketplace of ideas (Shepherd & Patzelt, 2022). For instance, when a paper is rejected by a journal, the author must consciously decide (most of the time) whether to continue pursuing this paper, terminate it (from the portfolio of papers) and reallocate the respective resources to other papers in the portfolio with more promise, or to pursue a new potential research opportunity (i.e., add another potential opportunity to the portfolio). As we discuss below, terminating a paper is not easy. However, doing so is a part of the research process that provides information about a paper's promise (and about the underlying potential research opportunity) that could not initially be known and thus reveals whether it is better to invest more resources (mostly time and energy) in the paper (while trying to ignore the sunk costs) or reallocating those resources to more promising efforts.

7: Deciding to Preserve, Pivot, or Terminate a Paper in the Portfolio

Have you ever heard a story about a paper being rejected from four journals, but the researcher persisted and eventually published a high-quality, high-impact version of the paper five years later? Not only have we heard this story, but we have lived this experience ourselves and told our own stories of success after extraordinary persistence. Nevertheless, such stories may ultimately do more harm than good because they convey the notion that "if I persist, I will succeed." Scholars often fail to tell the stories about a paper being rejected from nine journals that were only put

out of its misery after 10 years of trying and hundreds of hours of effort (to be candid, we also have some of these experiences, which means we do not always take a lean approach).

Costs of persistence. While the lean scholarship approach recognizes the potential benefits of persisting with a paper, it also acknowledges the costs of such persistence. In particular, persisting with a specific research project has an opportunity cost because the time and energy invested in persisting with the project could have been invested in another potential research opportunity with more promise. Even a researcher who eventually succeeds through persistence does not know what would have happened had that time and energy been invested elsewhere. For example, instead of persisting and publishing that single paper, perhaps the researcher could have used those resources to publish three papers and thus had a greater overall impact on the field. Therefore, in the lean scholarship approach, it is crucial to know when to terminate a paper because researchers likely tend to persist (e.g., through sunk costs and several other biases) or even escalate with a losing course of action (see Staw, 1981).

Terminating a paper. Due to the uncertainty surrounding research, deciding to terminate a paper is not an easy choice (because the scholar does not know if one final push is all that is needed to achieve success). However, "pulling the plug" on one paper seems easier when researchers have other projects to move on to (either in a portfolio of papers or from a set of potential research opportunities). Indeed, scholars have offered a wide range of opinions on whether papers should be terminated at times or whether every paper will eventually find a home (Connelly, 2020; Kellermanns, 2020). However, the steps of the lean scholarship approach help researchers terminate potential research opportunities with low promise and reallocate their resources to those with more promise. For example, with the entrepreneurial mindset toward a portfolio of papers required for lean scholarship, a researcher will terminate more (rather than fewer) papers because doing so earlier in the process (perhaps after initially presenting a minimum viable paper) allows the researcher to reallocate those resources to generate or purse other paper ideas. Moreover, the more scholars can terminate papers with low promise, the better they will become at doing so. As a consequence, the lean scholarship will hopefully result in more papers of both high quality and high impact. For instance, a recent editorial on "radical theorizing" in the

Academy of Management Journal (Nadkarni et al., 2018: 376) proposed the following for developing a high-value portfolio of research projects:

> There is value in taking stock on an annual basis and reflecting on the performance of our portfolio and its composition—dropping underperforming projects and making sure that we dedicate sufficient effort to more radical projects by saying "no" to new projects in the 70% share.

In a similar vein, the portfolio approach in lean scholarship means that researchers are working on multiple ongoing papers. Thus, terminating one paper simply means reallocating resources to a different ongoing project or selecting a new project from one's set of potential research opportunities. This portfolio-of-papers approach aids researchers in managing the termination process, enabling them to recognize the value of a paper while also pushing them to ask, "Does this research project contribute to or detract from the effective management of my portfolio and pipeline of papers?" when deciding whether to persist with it. In other words, lean scholarship cuts out the deadwood. However, even terminating a paper likely facilitates learning that is valuable for researchers' pursuit of other papers in their portfolios, for the generation and selection of their next research projects, and for their overall development as scholars. At worst, terminating a paper helps researchers learn what does not work, but more than likely, sometime in the future, they will end up drawing on some of the lessons they learned from terminating their projects. For instance, at one point, Dean Shepherd worked on a paper on time travel to make sense of the past and think about the future. Although he terminated this project many years back, he recently revisited its remains when he discovered other individuals considering different time frames to make meaning of their work in a qualitative study (Shepherd & Patzelt, 2022).

Pivoting to another potential research opportunity. Based on the notion of pivoting in the entrepreneurial context (Ries, 2011), we define a *pivot* in lean scholarship as a course correction entailing a significant change in the nature of a potential research opportunity. By pivoting, a scholar is acknowledging the limited value (or low probability of value creation) of a potential research opportunity and is switching to what appears to be a better course of action (but which is still shrouded in uncertainty). In turn, the scholar must develop a new minimum viable paper; (in)validate assumptions; and either refine, terminate, or pivot

again. Whether a pivot continues a prior effort or turns to a new one is not as important as actually making a pivot when the chances of success are low and beginning the lean scholarship process anew.

When discussing creative endeavors, Grimes (2018) noted that actors form psychological ownership over their projects, making them more likely to persevere with a project (even when it represents a losing course of action) rather than pivot. The aspects of lean scholarship we discussed earlier can help with the pivoting aspect of lean scholarship. For instance, when a potential research opportunity shows low promise and is detrimental to the overall portfolio, the portfolio approach emphasizes the importance of pivoting away from (or terminating) this opportunity early for the good of the portfolio. However, lean scholarship can also include learning milestones as stage gates such that when these milestones are not met, researchers can focus away from persistence toward a pivot or termination. Alternatively, researchers can set decision points (i.e., based on time regardless of progress) in advance where they must choose to persist with a project or terminate/pivot. These decision points force researchers to consciously decide whether to persist rather than automatically persist due to inertia.

Scholars are likely to have more success with both learning milestones and persist/pivot decision points when they involve trusted colleagues because such colleagues can serve as a "community of inquiry" that improves the information available to inform pivoting decisions (for the role of communities of inquiry in the entrepreneurship context, see, e.g., Shepherd et al., 2020). Without this motivation for pivoting, the scholarship becomes less lean because researchers invest more resources in potential research opportunities with lower promise (so they make fewer investments in more promising papers in their portfolios), researchers' portfolios become less dynamic as new potential research opportunities are overlooked, and researchers learn to ignore invalidating assumptions. From the lean scholarship perspective, a researcher who had to terminate three potential research opportunities and perform four pivots in the course of a year is more heroic than one who claims to have published a paper after seven years of trying.

Feedback Loops of Lean Scholarship

While we have described lean scholarship as a linear process thus far, it often tends to be more iterative and intertwined, as indicated by the

dashed arrows in Fig. 6.1. Specifically, the task of generating a set of potential research opportunities and selecting one to pursue does not happen in a vacuum. Indeed, scholars may directly identify potential research opportunities from their own experiences with learning from a previous paper (i.e., from developing a minimum viable paper and [in]validating underlying assumptions) and with refining papers already in their portfolios. Therefore, when choosing what potential research opportunity to pursue next, a researcher needs to scrutinize each potential research opportunity vis-à-vis the others in their overall set and the papers in their portfolio. That is, the researcher should opt for the potential research opportunity that adds the most value to their overall portfolio. Specifically, as we mentioned, the decision to persist with one paper comes with the opportunity cost of not pursuing an entirely new potential research opportunity or not reallocating resources to other more promising papers in one's portfolio. In contrast, when a researcher terminates a paper, resources are "freed up" for reallocation.

Although we have described the decision to pivot in terms of the alternatives of persisting and terminating, a pivot represents a new potential research opportunity and is thus part of the set of new potential research opportunities from which the focal researcher selects the "best" to pursue next.

What Is Lean Scholarship and What Is It Not

So far in this chapter, we have outlined a framework for lean scholarship. The purpose of this framework is to help researchers create multiple highly impactful papers with fewer resource (mostly time) costs. Our lean scholarship framework is based on the principles of developing an entrepreneurial mindset; generating a set of potential research opportunities from which to select one to pursue (to add to one's portfolio of papers); creating minimum viable papers; validating assumptions; managing a portfolio of papers; and persisting with, pivoting from, or terminating specific papers. To further detail what lean scholarship does and does not involve, we offer a checklist in Table 6.1 and address anticipated concerns and misinterpretations about the lean scholarship framework in Table 6.2.

Table 6.1 Lean scholarship checklist

Entrepreneurial mindset
- I have a mindset focused on research opportunities
- I am comfortable operating with uncertainty about my research projects
- I see paper failure/termination as part of the process
- I am focused on learning to advance a paper and my portfolio of papers

Set of potential research opportunities
- I construct a set of potential research opportunities to determine my newest project
- I rank order potential research opportunities in my set
- I choose the best one (given the context of my portfolio of papers) to pursue

Minimum Viable Paper
- I use minimum viable papers to represent my potential research opportunities
- I sometimes create different minimum viable papers for different audiences
- Minimum viable papers help me focus audiences' attention to obtain better feedback about research opportunities
- I use minimum viable papers to cross boundaries to refine potential research opportunities
- I make sure I do not invest too much into a minimum viable paper

Validating assumptions
- I identify the most critical assumptions underlying the plausibility of my potential research opportunity
- I test the plausibility of critical assumptions using informants and distant literatures
- I focus on (rather than ignore) disconfirming evidence (i.e., that invalidates my assumptions)
- I distinguish between the potential research opportunity's assumptions and the emergent model's propositions
- I use information about the plausibility of the assumptions to refine, pivot, or terminate the research opportunity

Portfolio of Papers
- I have a portfolio of ongoing papers
- My portfolio of papers represents two to four main themes of research
- I make sure that at least some of my papers are high-risk, radical papers
- I use my research to reveal the promise of the underlying research opportunities
- I terminate papers that no longer show high promise
- I think I have about the right number of papers in my portfolio

Persist, Pivot, or Terminate

- I realize that, like most people, my tendency is to persist rather than pivot or terminate
- I have mechanisms in place to ensure my persistence, pivot, or termination decision is not (or minimally)
- Pivots and terminations are part of the research process given the uncertainty of potential research opportunities
- I consider whether to pivot or not in the context of the papers I have in my portfolio and the set of new potential research opportunities that I could pursue—the pivot's opportunity costs

Teams and lean scholarship

- I select research team members who "buy" into the lean scholarship approach
- I work with people who are different from me and who I trust
- I have multiple coauthors on multiple papers
- I am the lead author on about one-third of the papers in my portfolio (half if a junior scholar)
- I do not free ride on team research and do not let members free ride on me
- My research teams have routines for persisting, pivoting, or terminating an opportunity (or coauthoring relationship)

Journals and lean scholarship

- Journals benefit from authors pursuing lean scholarship
- When I receive a rejection decision letter, I think about my options in terms of persevering, pivoting, or terminating
- I try to not let emotions or sunk costs (or other biases) influence my decision about a rejected paper
- Editors' and reviewers' comments sometimes lead me to pivot with a current potential research opportunity
- Regardless of an editor's decision, I use the feedback to learn how to improve the paper and my research process

Table 6.2 Responses to possible objections to lean scholarship

Possible objection	Response
Lean scholarship means not making sufficient investments of time and energy into producing a high-quality research outcome	Lean scholarship is geared for the opposite; by being lean, more effort can be invested in papers that show the greatest promise to be of high quality and high impact. Lean scholarship does not mean skimping on resources; lean scholarship means doing more with the resources one has
If I have resources, I don't need to be lean	Perhaps. However, a researcher's most valuable resource is typically their time. Lean scholarship helps make the most of a researcher's investment of time (and energy and other resources) in terms of focusing on the potential research opportunities with the most promise and updating those assessments and information
Junior scholars can't risk engaging in lean scholarship	Lean scholarship reduces junior scholars' risk. We recognize that, on the one hand, it might be more difficult for junior scholars to set up the mechanisms of lean scholarship (e.g., because they may lack a sufficiently large portfolio of papers), but on the other hand, lean scholarship might be easier for these scholars because they likely learned elements of running lean in their doctoral programs; they are hungry, eager, and curious (at least, we hope they are); and they are a relatively blank slate with few constraints to adopting the lean scholarship approach (rather than having to unlearn a non-lean system)

Possible objection	Response
Lean scholarship doesn't apply to doctoral students who need to focus on one thing—a "done" dissertation	Every researcher needs to adapt lean scholarship to their situation, but the principles still apply to doctoral students. For example, a doctoral student can benefit from creating a set of potential research opportunities to choose a dissertation topic, developing a minimum viable paper to pitch the idea to and stimulate feedback from their dissertation chair, working on validating (or invalidating) key assumptions, and so on. While it is more difficult for doctoral students to have a portfolio of papers, they can start to construct one—every scholar has to start to build a portfolio
Lean scholarship may work for lower-tier journals but not the elite journals	This comment reflects some of the other incorrect claims. Lean scholarship ensures that efforts are focused on the most promising projects—those that have the greatest potential to make an impact and thus be published in the top journals
I don't have the time to create and manage a portfolio of papers	Lean scholarship is based on the notion that researchers' time is the most valuable resource and is therefore focused on making the most of researchers' time to produce high-quality, high-impact papers. The more restricted a researcher's time, the more he or she will benefit from lean scholarship
(1) I like to work on one paper and finish it before I start the next one, (2) I know the research opportunities I pursue are good, (3) I like to work alone, (4) I protect my reputation by never sharing anything incomplete, (5) the only way to be successful is to persevere with a paper no matter what the obstacles, (6) I don't talk about my ideas because I fear people will steal them, and (7) I have a research plan and don't deviate from it	Lean scholarship may not be for these people (unless they are willing to change)

Discussion

As the primary contribution of our work, we propose lean scholarship as a possible approach to help scholars generate a portfolio of multiple high-quality papers with (potentially) high impact. Due to the importance of publishing such papers for scholars' career advancement and rankings (Wright et al., 2020), a prominent research stream has discussed criteria for evaluating the quality of individual papers and has thus provided guidance on how to improve this quality. One drawback of this literature, however, is that it portrays individual research projects as being independent of each other instead of embedded in a portfolio of (potential) projects. Such a portfolio perspective on scholars' research is theoretically essential because promotion decisions and academic success generally hinge on multiple papers rather than one or a few (Adler & Harzing, 2009). Moreover, this perspective acknowledges that some papers in a portfolio may be related to and build off one another. Indeed, a research portfolio's collective properties likely determine scholarly success (Connelly, 2020), but these properties may not be meaningful from a single-project perspective. Therefore, we argue that redirecting attention away from exploring how to generate individual high-quality papers to focusing on generating numerous high-quality, high-impact papers in a portfolio—as proposed by the lean scholarship approach—can considerably advance understanding of what leads to scholarly success.

Moreover, our theorizing on why some scholars are more likely to develop a lean scholarship mindset than others advances our understanding of the antecedents of scholarly success. Previous research on the antecedents of publication output has revealed numerous factors related to this success, including scholars' social capital within the research community (Wright, 2020), their skills in addressing reviewer comments (Boyd, 2020), and their academic writing (Barney, 2018). Based on theorizing on the antecedents of a portfolio of high-quality, high-impact papers from an entrepreneurial practice perspective, we suggest that scholars' cognitive adaptability is a possible factor aiding in the development of such a portfolio. Although scholars vary in their entrepreneurial mindset, those with high cognitive adaptability may prefer and may be more successful in pursuing the lean scholarship approach vis-à-vis an alternative approach to developing a portfolio of papers. Accordingly, future research on the antecedents of scholarly success could investigate

researchers' specific approaches to scholarship, such as developing a portfolio of numerous papers, and how this approach may vary depending on career stage (see McMullen & Shepherd, 2006; Podsakoff et al., 2018).

Finally, with our model of lean scholarship, we extend the application of the lean startup logic to theorizing on scholarship, particularly the development of a portfolio of high-quality, high-impact papers. Shepherd and Gruber (2021) recently suggested that the lean startup framework, which entrepreneurs and entrepreneurship educators use often, could serve as the starting point for generating novel theories about entrepreneurial phenomena, such as opportunity identification, business model development, entrepreneurial learning, communication, sensemaking, etc. In a similar vein, this chapter demonstrates how the lean startup logic can facilitate theorizing about phenomena more generally, and we hope it inspires future research on lean scholarship.

Applying Lean Scholarship

Lean scholarship and research teams. Scholars are beginning to build a strong understanding of the attributes of teams in relation to founding startups (Lazar et al., 2020; Patzelt et al., 2021), undertaking innovative projects (e.g., van Knippenberg, 2017), and taking on other creative efforts (e.g., Emich & Vincent, 2020). However, how many researchers have considered or consulted the literature on teams when picking a coauthor? Admittedly, we have not. Rather, our approach to picking a coauthor is to ask a simple question—"Would I have a drink (beer, coffee, tea, etc.) with this person?"—a criterion that we were unable to locate in the teams literature (but one that could serve as a proxy for many of partner attributes found in the literature). However, beyond these attributes of effective teams, lean scholarship has numerous implications for the nature of research teams. Namely, compared to researchers engaged in less lean scholarship, those who take the lean scholarship approach are likely to have more coauthors on a specific paper, be a member of more research teams, and form more diverse teams.

In particular, when more coauthors are included in each paper, a researcher can have more papers in their portfolio (assuming the coauthors do not free-load). In turn, having more papers in one's portfolio provides more opportunities to learn across papers, to take on more papers that are risky/radical, to diversify across more research themes (e.g., four themes rather than two themes), and to more easily terminate

potential research opportunities with low promise. In addition, being a member of more research teams opens up more opportunities to learn from other scholars, select the best-suited coauthors for a new potential research opportunity among one's set of potential coauthors, and reduce dependence on any one specific coauthor (e.g., if one coauthor is unable to collaborate for a time, the researcher can still pursue and develop other papers in their portfolio with other coauthors). Having a larger number of coauthors on a research team and engaging with more research teams also enable researchers to benefit from a greater diversity of ideas and expertise to develop both their papers and their portfolios. For these aspects of team research to play out, however, scholars need to carefully choose whom they work with and have norms and practices for managing their research teams, including terminating dysfunctional coauthoring relationships.

Furthermore, how teams function in ongoing lean scholarship and how they are initially constructed with lean scholarship in mind are important aspects to consider. For example, a researcher who joins a new team may have to directly introduce lean scholarship norms and practices to other team members and reinforce these norms and practices as potential research opportunities unfold. Further, because lean scholarship includes terminating papers with low promise, this might also mean terminating associated coauthoring relationships. Regardless of a paper's promise, however, lean scholarship requires all coauthors to carry their weight and endorse the lean scholarship approach. If they do not, a lean researcher will likely need to pivot away from such coauthors.

Lean scholarship and journals. An author can use a journal editor's decision on a paper (based on reviewers' recommendations) as a decision trigger, especially if the decision is to reject the paper. Based on the information provided in the decision letter, lean scholarship urges the focal researcher (or research team) to at least reflect on whether to persist, pivot, or terminate (based on their own portfolio of papers and set of potential research opportunities for the next project). While we do advise researchers to reflect and make this decision when they receive a decision letter, we do not necessarily mean they should do so the very same day when emotions could influence the decision. Indeed, a researcher could feel disappointed about an editor's decision and quickly terminate the current potential research opportunity. Instead, the researcher should learn from the review and then either refine or successfully pivot the opportunity to benefit the paper. However, even when the decision

is to terminate a potential research opportunity, we beseech researchers (including ourselves) not to squander the opportunity to learn—namely, to learn from the feedback (from the review) to enhance the lean scholarship process (e.g., "Why didn't we pull the plug on this project earlier?"); to improve other papers in their portfolios; to generate and choose new potential research opportunities; and, ultimately, to keep learning how to become a better scholar (as we all can and should do).

FUTURE RESEARCH ON LEAN SCHOLARSHIP

Portfolio of papers. Due to the importance of a portfolio of papers in the lean scholarship approach, future research should study heterogeneity in scholars' portfolio composition, the reasons they create different kinds of portfolios, and the effects of these various compositions. Furthermore, there is likely a point at which the size of a portfolio begins to constrain the research process and diminish the quality, impact, and quantity of research projects. Accordingly, future research could explore the ideal portfolio size and what moderates the relationship between portfolio size and success (e.g., the optimum portfolio of papers could be larger for researchers with more coauthors). Beyond size, future research can also investigate clusters of papers within portfolios and the "distance" between these clusters. In other words, research can capture the critical aspects of portfolio heterogeneity in the lean scholarship approach and the outcomes in terms of the quality, quantity, and impact of researchers' published papers. At a finer-grained level, future research can explore the mechanisms underlying learning across papers within a portfolio, the decision to terminate potential research opportunities, and a portfolio's dynamism as the focal researcher's career advances.

Opportunity set. Future research can investigate how scholars generate and build a set of potential research opportunities, the characteristics of this set, and the criteria used to rank and choose opportunities. For instance, where do potential research opportunities come from—from observation, current research, distance literature search, etc.? Does the set capture different potential research opportunities or variations on the same theme? When does a researcher decide to add a potential research opportunity to their portfolio of papers that is more distant from the current research stream—for instance, a more radical opportunity? Thus, future research can study the attributes of opportunity sets as well as researchers' learning and publication outcomes.

Triggers of lean scholarship. Given their understanding of the entrepreneurial mindset, perhaps entrepreneurship scholars are more likely to pursue lean scholarship. Moreover, we suspect (and hope future research examines) that the benefits of lean scholarship are amplified in contexts characterized by resource scarcity. That is, we expect the framework proposed in this chapter to be most effective for scholars who have few resources for research, high teaching loads (i.e., less time for research), and other responsibilities (e.g., service or family) that take time and energy away from their research efforts. Overall, there are many opportunities to investigate the personal and contextual antecedents of researchers' decision to take the lean scholarship approach.

Minimum viable paper. In this chapter, we proposed many potential forms that a minimum viable paper could take. Although the "best" form is likely determined by the attributes of the focal scholar, potential research opportunity, and audience, we hope future research studies these important mechanisms for learning and enhancing research outcomes. Indeed, many papers have explored the effectiveness of business plans (e.g., Brinckmann et al., 2008; MacMillan & Narasimha, 1987) and startup pitches (e.g., Davis et al., 2017); however, we have a limited understanding of minimum viable papers as a key step in the timely development of multiple high-impact papers. For those who want to improve as scholars, future research needs to examine the various forms of minimum viable papers; their effectiveness; and moderators that capture the distinct attributes of the focal research, audience, topic, and so forth. Furthermore, we hope future research explores the role of minimum viable papers as boundary objects. For example, what characteristics of a minimum viable paper enhance its tangibility, shareability, and comprehensibility; spark more discussion across boundaries, and direct others' attention toward the most important features of a potential research opportunity? Future research can dig deeper to investigate the boundaries that need be to cross, the audiences on the other side of those boundaries, and the different types of minimum viable papers that may be needed to cross different boundaries to access different audiences.

Validating assumptions. As discussed, one aspect of lean scholarship focuses on collecting evidence to (in)validate the fundamental assumptions underlying a potential research opportunity's plausibility. Such investigations into assumption validity are different from tests of a model's hypotheses. We hope future research studies how scholars decide which assumptions of a potential research opportunity need to be validated, how

they validate/invalidate these assumptions, and how much evidence is needed to ultimately exploit a potential research opportunity. Moreover, how do scholars decide whether to investigate the most critical underlying assumption or a less critical assumption that requires fewer resources to investigate? Namely, we are interested in the strategies scholars use when taking the lean scholarship approach and the consequences of deciding to proceed vs. terminate. Indeed, some optimal combination of criticality and resources needed for testing likely exists.

In addition to learning about the (in)validity of the assumptions underlying a potential research opportunity for the timely development of a paper, researchers taking the lean scholarship approach are also likely to learn across papers. As such, does lean scholarship promote more learning among scholars over time than a non-lean scholarship? Of course, answering such a question requires measuring a learning outcome. Despite the considerable debate over measuring research, in this chapter, we focused on the quality, impact, and number of papers. If lean scholarship indeed promotes these outcomes, knowledge will advance more quickly, and lean scholars will be well-positioned for positive tenure decisions and subsequent promotions. Nevertheless, our claim that lean scholarship is superior in terms of delivering quality, impact, and quantity over other (non-lean and less lean) approaches is speculative. Thus, we hope future research examines the relationship between the scholarship's leanness and various scholarship outcomes.

Pivoting from a potential research opportunity. Although entrepreneurship scholars likely recognize the importance of entrepreneurs, strategists, managers, and others pivoting, we contend that many scholars do not pivot themselves or are reluctant to do so. Future research can further our understanding of pivoting by investigating the following lines of inquiry. First, future research can explore whether and how researchers use ego-protective mechanisms to handle paper rejection and whether such mechanisms also obstruct pivoting from a potential research opportunity with low promise. However, some scholars may become desensitized to negative feedback (from experiencing many rejections over time; the most successful scholars are often those who have amassed the most rejections]) such that they no longer need to employ ego-protective mechanisms and are more willing to pivot when necessary. Thus, we hope future research addresses the following research questions: (1) do scholars use ego-protective mechanisms that can obstruct pivoting, (2) why are some scholars more willing or prepared to

pivot than others, (3) do scholars become more likely to pivot over time, and (4) are scholars with fewer alternatives (a smaller portfolio of papers and fewer potential research opportunities as a next project) less likely to pivot (Shepherd & Patzelt, 2022)? We speculate that researchers who take the lean scholarship approach are more likely to pivot.

Second, Grimes (2018) explained how creators sometimes form psychological ownership over their creative outcomes. While this attachment is likely beneficial in some ways, it also likely delays pivoting. We understand (including from our own personal experience) how psychological ownership can facilitate the creative process of developing a potential research opportunity and exploiting it as a published paper, but how can scholars overcome psychological ownership when it becomes a barrier to pivoting? Can some scholars have their cake (psychological ownership) and eat it too (pivot when necessary)? Maybe psychological ownership can be "transferred" to a new potential research opportunity when a researcher pivots (e.g., the researcher thinking they would have never identified the new potential research opportunity had they not pursued the original opportunity).

Finally, although we speculate that many scholars are slow to pivot (with some being slower than others), we wonder if some scholars pivot too early. Indeed, there seem to be some researchers who initiate many projects but complete very few because they are drawn in by the next "big" thing. These scholars are not taking the lean approach because they are wasting resources. Thus, two critical questions regarding pivots arise (for entrepreneurs, managers, or researchers): when is the right time to stop persisting and pivot, and how can researchers quickly make this decision? We suggested that stage gates and scheduled persist-or-pivot decision points are likely useful in this regard. Future research can explore whether and how these tools are useful in timing a pivot and what other tools are available (or could be created) to aid scholars in deciding the "right" time to pivot.

Lean Scholarship Beyond Research. While this chapter focuses on publications, entrepreneurship scholars do more than research as part of their jobs. Thus, we hope future research extends the lean scholarship logic to other aspects of scholarly work, including teaching, service, administration, and more. For example, we highlight the possibility of lean administration. Is it an oxymoron, or can some scholars make it a reality?

Conclusion

Inspired by the lean startup approach, which is widely recognized and extensively applied in both entrepreneurial practice and education, we present lean scholarship as a possible approach to developing a portfolio of numerous high-quality, high-impact papers. We acknowledge that scholars will likely vary in how useful they find this framework for their research, we also contend that scholars with an entrepreneurial mindset can follow the systematic approach presented herein to generate a set of potential research opportunities; develop minimum viable papers; (in)validate the assumptions underlying potential research projects; and manage a portfolio of papers by periodically deciding whether to persist with, pivot from, or terminate the projects in the portfolio. We also hope future research can empirically demonstrate the usefulness of this approach and identify the conditions under which it is most successful.

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