



# Learning From Levi-Strauss' Legacy: Art, Craft, Engineering, Bricolage, and Brokerage in Entrepreneurship

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**Given the increasing attention to traditionally less “rational” entrepreneurial behaviors, such as bricolage, we used grounded theory techniques to study 23 diverse entrepreneurs. From this, we developed a five-category typology of entrepreneurial behavior that includes art, craft, engineering, bricolage, and brokerage. Themes such as self-perceived identity, organization of space, integration of materials, sense of personal limits, and responsiveness to changing market conditions were observed along categorical lines. We discuss the significance of the typology and each category’s associations with venture longevity and financial performance for practitioners and for the study of entrepreneurship.**

## Introduction

One of the most important shifts in management theory of the twentieth century was the questioning of managerial rationality. Starting with Herbert Simon (1955) and spreading to a diverse group of scholars from Mintzberg and Waters (1985) to March and Simon (1993), theories of administrative behavior have increasingly focused on deviations from, if not alternatives to, models of classic rationality in which decision makers catalogue the universe of possible solutions and then select the optimum. A somewhat analogous process has found its way into the thinking on entrepreneurship through debates around how entrepreneurs develop cognitions, set goals, engage in behaviors designed to create or identify opportunities, and secure resources to exploit those opportunities (Alvarez & Barney, 2007; Baker & Nelson, 2005; Baron, 1998; Kuratko, Hornsby, & Naffziger, 1997; Sarasvathy, 2004; Wiklund, Davidsson, & Delmar, 2003; Wood & McKinley, 2010). An

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important stimulus for these debates has been perceptions that entrepreneurs are motivated by a host of factors seemingly unrelated to profit maximization and thus not well explained by traditional economic models.

Consider, for example, the case of entrepreneurial success. Researchers traditionally define success in terms of maximizing economic returns. The implication then becomes that entrepreneurs' goals are to find the most productive use of resources (Penrose, 1959), select opportunities that are likely to generate significant economic rents (Shane, 2003), and grow their firms to achieve superior competitive position (Porter, 1980). However, researchers have shown that there are many entrepreneurs whose goals and behaviors do not fit these predictions. Wiklund et al. (2003), for example, showed that noneconomic factors are important determinants of attitudes toward business growth, and Sarasvathy (2004) pointed out that entrepreneurs are far from homogenous, and thus, the motivation and goals driving venture creation and persistence include a host of noneconomic considerations. This type of thinking suggests that the definition of success in entrepreneurship is more diverse than previously thought and this is important because how the entrepreneur defines success is likely to influence entrepreneurial behavior.

Indeed, researchers have recently catalogued entrepreneurial behaviors that do not appear to be driven purely by economics. One of the most salient examples of this is emergence of research documenting bricolage as a unique form of entrepreneurial behavior (Baker & Nelson, 2005). Bricolage is defined as "making do with the resources at hand" and has served as an explanation for a variety of innovative entrepreneurial behaviors that do not reflect conventional rationalistic thinking (Baker & Nelson; Levi-Strauss, 1962). Entrepreneurs engaging in bricolage reject the face value of traditional definitions of resource acquisition in favor of radical experimentation. They appear to engage in the social construction of resources and opportunities in ways that do not fit well with the traditional rational perspective on entrepreneurial behavior (Baker & Nelson; Wood & McKinley, 2010). This is significant for the field of entrepreneurship because researchers have generally viewed entrepreneurship through a rational lens, overlooking important kinds of entrepreneurial behaviors, and how those behaviors may be related to entrepreneurial outcomes.

Similarly, insights from entrepreneurial cognition research (e.g., Mitchell et al., 2007) have also raised the question of rationality among entrepreneurs. This area of investigation has shown that entrepreneurs do not always make traditionally rational judgments and decisions. Rather, they engage in a variety of cognitive processes designed to shorten information collection and evaluation and aid in quick decision making under conditions of uncertainty. Researchers have found that in some situations, entrepreneurs' use of such heuristics can have a great deal of utility even though cognitive processes do not strictly follow a rational or linear approach (Baron, 1998; Busenitz & Barney, 1997).

When viewed holistically, it would appear that remaining true to entrepreneurship's economic roots (e.g., Kirzner, 1979; Schumpeter, 1934) has come at the price of missing a clear picture of entrepreneurship's less rational forms. Scholarship has not fully considered the range of entrepreneurs' behaviors or definitions of success and perhaps, most importantly, the relationship between the two. Using the language of Locke and Golden-Biddle (1997), a continued emphasis on rational economic models of entrepreneurship has left us with both an "incompleteness" and an "inadequacy" problem that has yet to be addressed. In this study, we have taken heed of the incompleteness of research regarding entrepreneurial behaviors by developing a five-category typology that includes a fuller range of entrepreneurial behaviors—from highly "rational" to seemingly less so. We have also gone beyond existent typologies of entrepreneurial behavior, which are inadequate since they do not offer predictions of entrepreneurial success by entrepreneurial type.

Our cataloguing of entrepreneurial behaviors was based on data gathered from an inductive field study of 23 diverse entrepreneurs over the course of 9 months. We chose a grounded theory approach because existing work has been limited by the rationality lens, and grounded theory allows for the development of new perspectives less constrained by existing formal thought (Glaser, 1978; Glaser & Strauss, 1967). Since grounded theory involves development of sensitizing concepts before entering the field, we found the work of Levi-Strauss (1962) to be especially illuminating as his cataloging of general human interaction has impelled the identification of previously overlooked entrepreneurial behaviors such as bricolage (Baker & Nelson, 2005). Using his insights as a launching point for our fieldwork resulted in the identification of five distinct categories of entrepreneurial behavior. Key themes emerged from the data relating to how each category of entrepreneurs perceives themselves, organizes their work spaces, integrates materials, imposes limitations on their behaviors, and responds to market conditions. These themes became the essential differentiating characteristics in the development of the new typology. In addition to the typology, our field study also revealed heterogeneity among entrepreneurs' views on success, which was closely related to the five behavioral categories of our typology. An important implication from our investigation is that each of the five categories of entrepreneurial behavior appears to be closely related to identifiable differences in venture longevity and financial performance. Thus, different types of entrepreneurial behaviors are likely to lead to very different outcomes.

The introduction of a new typology and the identification of relationships between the different types of entrepreneurial behaviors and venture performance is an important contribution on a number of levels. According to Dubin (1969, p. 9), the major goals of generating theory in the social sciences are to increase our understanding of human behavior and to make predictions based on such behavior. One of the limitations of existing typologies of entrepreneurial behavior is that they are incomplete insofar as they neglect less "rational" forms of behavior, thus falling short of Dubin's first goal. With regard to Dubin's second goal, existent typologies are inadequate in that they do not make predictions for various outcomes, especially entrepreneurial success. Our typology and specification of category–performance relationships allow us to move beyond the goal of description and into the realm of prediction. The relationships we specify open the door as to how "less rational" forms of entrepreneurial behavior are likely to be related to desires for financial success and ultimately, venture performance. In that way, our study brings to the forefront the importance of understanding that discussions about "entrepreneurial success" in terms of relative firm performance may only make sense within the boundaries of *categories* of entrepreneurs—where similar types of entrepreneurs share a common definition of success.

### **Learning From Levi-Strauss' Legacy**

A number of scholars have argued that understanding entrepreneurship involves more than analysis of economic transactions between presumably rational actors, thereby recognizing that entrepreneurship is socially situated among a broad and interconnected web of relationships (Granovetter, 1985, 1992; Greve & Salaff, 2003; Sarasvathy, 2001). As such, the importance of social networks (Davidsson & Honig, 2003), trust (Welter & Smallbone, 2006), and family relationships (Aldrich & Cliff, 2003) to the entrepreneurial process has been well-established. Thus, although entrepreneurship remains an economic activity, it is embedded in a social context that both constrains and facilitates the actions and behaviors of entrepreneurs (Giddens, 1984; Wood & McKinley, 2010).

Because entrepreneurship is a social, as well as an economic, endeavor, the study of it is enriched by crossing multiple disciplines in the social sciences. In doing so, we notice that an influential anthropologist, Claude Levi-Strauss (1962), identified a number of ways in which people across disparate cultures interact with their environments and that these interactions might be relevant to the field of entrepreneurship. For Levi-Strauss, such ways of general human interaction, or behaviors, include bricolage, art, craft, and engineering. Perhaps most importantly for the field of entrepreneurship, each of these behaviors varies in their degree of rationality and will be elaborated upon later.

Levi-Strauss' (1962) work was the starting point for Baker and Nelson's (2005) influential article on bricolage that clarified and catalogued the phenomenon. To date, however, Levi-Strauss's other three modes of action have been largely omitted in favor of bricolage as the dominant alternate form of behavior within the context of entrepreneurship (e.g., Baker & Nelson; Garud & Karnoe, 2003). Given this omission, we felt it was likely that a consideration of the complete range of Levi-Strauss' modalities within the context of entrepreneurship could offer insights. Later, we provide a brief overview of each of the four modes of action documented by Levi-Strauss and discussed in related scholarship (e.g., Barley & Orr, 1997; Weick, 1993).

First, Levi-Strauss (1962, p. 17) noted that a bricoleur is capable of carrying out a variety of tasks; however, "he does not subordinate each of them to the availability of raw materials and tools conceived and procured for the purpose of the project." Rather, the bricoleur will "make do with 'whatever is at hand'; that is to say with a set of tools and materials which is always finite and is also heterogeneous because what it contains bears no relation to the current project, or indeed to any particular project." This "set of tools" and materials are what Baker and Nelson (2005) referred to as the bricoleur's "trove," and these troves are valuable to bricoleurs because it is from these resources that solutions to problems are devised. Based on their interpretation of Levi-Strauss, Weick (1993), and dozens of other researchers, Baker and Nelson identified three key aspects of bricolage: making do, which involves the bricoleur disregarding socially constructed limitations placed on common practices, standards, and definitions of inputs; combining and recombining resources to solve problems; and using resources at hand, "which may be physical artifacts, skills, or ideas that are accumulated" because they may "come in handy" (p. 336).

Although omitted in the entrepreneurship literature, Levi-Strauss (1962) wrote more about art, the second modality, than he did about bricolage. Levi-Strauss makes the point that artists construct objects with an aesthetic purpose and to represent an "object of knowledge" (p. 22). For example, Levi-Strauss would interpret the Mona Lisa as an "object of knowledge" by pointing out that the painting is a scaled-down version of a human being, and creating a scaled-down version requires knowledge of the parts of the human being. Thus, an object created by an artist primarily has an aesthetic purpose—it seeks to generate a nonrational emotional reaction (Langer, 1957; Mills, 1957; Weitz, 1956).

The third modality is craft, which Levi-Strauss (1962) described simply by contrasting it with bricolage as follows, "the 'bricoleur' is still someone who works with his hands and uses devious (unaccepted) means compared to those of a craftsman" (pp. 16–17). According to Weinrich (2001), craft also involves the combination of aesthetics and utility. Examples include the great architectural works built in Europe during the Middle Ages (Kieser, 1989) as well as everyday products used throughout human history such as chairs, glassware, weapons, and clothing, which effectively combined utility and aesthetics. The contemporary understanding of craft referring to individuals, or small groups of individuals, using their hands and/or simple tools to manufacture useful goods (Barley &

Orr, 1997) is consistent with Levi-Strauss's suggestion that the processes craftsmen follow are usually long-standing, understood, and widely accepted.

Levi-Strauss (1962, p. 19) described the last modality, engineering, as "questioning the universe" and an engineer as one who "is always trying to make his way out of and go beyond the constraints imposed by a particular state of civilization." Despite the many subtypes of engineering (e.g., electrical, chemical, process), their essential features seem to be that they use science and creativity to study physical objects and processes so as to better understand their properties and behaviors (Bucciarelli & Kuhn, 1997). Whalley and Barley (1997, p. 19) also described engineering as using science to build models to understand the properties of physical objects, which is strikingly similar to Levi-Strauss' description.

Levi-Strauss's (1962) legacy for the field of entrepreneurship may be best understood in the context of, and contrasted with, existing typologies of entrepreneurial behaviors. The most seminal of these is Smith (1967), who distinguished between the "craftsman-entrepreneur" and the "opportunistic-entrepreneur." The former had a blue-collar background, valued performing good work, and was not particularly concerned with venture growth. Alternatively, opportunistic entrepreneurs came from a middle-class background, had a university education, and often dreamed of starting a business when they were young. Filley and Aldag (1978) extended Smith's work by developing three categories of entrepreneurial organizations, which they called craft, promotion, and administrative. Cooper, Ramachandran, and Schoorman (1997) studied individual entrepreneurs and similar to Smith, found two categories, which they named "craftsmen" and "administrative." All three of these studies highlight the tension between the love of exercising one's craft and the mobilization and management of resources to generate rents.

While these typologies are insightful and have increased our understanding of entrepreneurial behavior, they do not include recent advances that identify less rational types of entrepreneurial behaviors (e.g., Baker, Miner, & Eesley, 2003; Carland, Carland, & Stewart, 1996), and bricolage is a case in point. Bricolage occurs when entrepreneurs use resources at hand, regardless of their original purpose, to solve a problem without concern for convention or aesthetics (Baker & Nelson, 2005). Thus, bricolage is a far cry from Smith's (or Filley and Aldag's or Cooper et al.'s) craftsman, but neither does it match any of their residual categories of administration, promotion, or opportunism. Simply put, less rational forms of behavior such as bricolage and art do not fit well into existing typologies.

Armed with contemporary thinking on bricolage, art, craft, and engineering, we sought to identify the relevance of these categories among active entrepreneurs. We used our field data to develop a formal typology of entrepreneurial behavior that is oriented toward, but not constrained by, these formal ideas.

## **Methodology**

### **Research Design—Grounded Theory**

We chose a grounded theory study (Glaser & Strauss, 1967) as an appropriate methodology because it allowed us to take note of existent typologies and their limitations, to acknowledge recent developments in the field such as the rationality debate and bricolage, to remain in close contact with empirical phenomena, and perhaps most importantly, to remain "theoretically flexible," which allows for the detection of novel ideas useful for building new theory (Eisenhardt, 1989; Glaser & Strauss).

The general design of grounded theory involves understanding prior research on the phenomenon under investigation and relevant sensitizing concepts (Blumer, 1954; Bowen,



2006; Glaser & Strauss, 1967; Padgett, 2004), making empirical observations in the field, iteratively moving between data generation and data analysis, and abstracting themes that emerge from the data with the ultimate goal of organizing and communicating the data through categories, typologies, or ultimately, new theory (Eisenhardt, 1989). There are many ways to approach a grounded theory study (e.g., action research); however, the case study approach is one of the more commonly used and widely understood (Eisenhardt; Yin, 1984). Benbasat, Goldstein, and Mead (1987) argued that case studies are appropriate when the phenomenon of interest cannot be studied outside its natural setting and when the phenomenon is not well explained by established theory. Because entrepreneurial behavior must be observed in its natural setting, and because the forms of less rational modes are not well explained by established theory, we deemed the case approach to grounded theory appropriate. Thus, we rely on Eisenhardt's approach of using multiple cases as a way of observing entrepreneurial behavior and collecting and recording data that corresponds to those behaviors. This type of methodology has been valuable in increasing the field's understanding of many types of phenomena such as how entrepreneurs identify and deploy valuable resources during new venture creation (Lichtenstein & Brush, 2001), how the entrepreneurial process is influenced by founders' previous work experiences (Baucus & Human, 1994), and the effects of trust when entrepreneurial firms are being acquired (Graebner, 2009).

## Sample Selection

In order to capture a fuller range of entrepreneurial behaviors, from highly rational to constructivist, we defined an entrepreneur as one who engages in a process to seek out and/or create opportunities for the purposes of starting and maintaining a business (Stevenson & Jarillo, 1990). To guide our research team in selecting specifically which entrepreneurs (cases) to choose, we followed Glaser and Strauss's (1967) grounded theory method of theoretical sampling (also known as purposeful sampling) to best illustrate the phenomenon under investigation. Since we relied on Levi-Strauss's (1962) work to identify the sensitizing concepts of bricolage, art, craft, and engineering, we sought entrepreneurs who had the greatest potential to serve as exemplars of each behavior (Eisenhardt & Graebner, 2007) while, at the same time, illustrating a contrast between behaviors across the cases (Yin, 1984). For example, within the context of entrepreneurship, those entrepreneurs behaving in a manner consistent with "engineering" would presumably be "more rational," while those entrepreneurs behaving as bricoleurs or artists would presumably be "less rational" (Baker & Nelson, 2005). Thus, we selected cases based on their potential to exemplify our sensitizing concepts while simultaneously having the potential to illustrate a variety of behaviors (Yin) across our sample. It is worth noting that operationalizing this approach to case selection is based on the idea that the researcher has developed a working model of sensitizing concepts that can be used to frame the phenomenon of interest in a way that provides insight on case selection. Our use of Levi-Strauss' work provided us with the requisite working model of sensitizing concepts.

Our original plan was to select four entrepreneurs that we anticipated would best reflect the type of behaviors consistent with each of the four sensitizing concepts. However, as the iterative process of fieldwork and data analysis unfolded, we discovered that some entrepreneurs did not fit into our initial categories, which is to be expected and indeed welcomed in inductive research (Eisenhardt, 1989; Yin, 1984). We did not omit existing cases but instead continued our search for cases that exemplified the sensitizing concepts. This explains the difference in size between the final categories. Because unanticipated behaviors were also observed, we found it appropriate to further add cases

that exemplified emerging concepts. This process resulted in the selection of 23 cases in total. We did not develop any type of measurement instrument based on the sensitizing categories nor did we share our *a priori* sensitizing concepts with our informants.

To guide us in the initial identification of potential cases, we followed the recommendation of Benbasat et al. (1987, p. 373), who asserted that scans of newspapers, directories, and “talking with friends, colleagues, or acquaintances are good ways to identify potential research locations.” The practical and financial challenges associated with site visits required us to restrict our search geographically to the central Midwestern United States.<sup>1</sup> As such, we relied on local business expert opinion for indicators suggesting revelatory patterns of behavior among entrepreneurs that were consistent with our sensitizing concepts. We also evaluated local business guides and directories from entrepreneurship and economic development offices. Finally, a few of the participants were contacted via snowballing (Eisenhardt, 1988; Farmer, Yao, and Kung-Mcintyre, 2011), where potential participants recommended subsequent participants. We initially contacted 31 active entrepreneurs. Eight out of 31 declined to participate; three stated that they were “too busy” (with travel, working on laboratory projects, or with running a factory), three simply avoided initial meetings and/or refused to return phone calls, one came down with an illness, and one was uncomfortable at the thought of having his venture observed by an outsider. Of those entrepreneurs who declined to participate, no patterns relating to their gender, industry, or perceived financial success were noted.

The decision to cease adding cases to our sample was based on achieving theoretical saturation (Eisenhardt, 1989; Glaser & Strauss, 1967). This approach involves using the constant comparison technique (Denzin & Lincoln, 2000) by continually identifying concepts that emerged from our data and comparing them to other cases and other concepts. By iteratively moving between data collection and data analysis, we uncovered and confirmed the presence of themes and patterns in the data. We achieved theoretical saturation, or the limits of information gleaned from our data, when the same types of patterns and concepts emerged in our new cases (Denzin & Lincoln; Glaser & Strauss; Lincoln & Guba, 1985), thus ceasing our search for additional entrepreneurs. The final sample was composed of 23 entrepreneurs who operated 27 different ventures that served nine distinct industries. An overview the entrepreneurs and their ventures are provided in Table 1.<sup>2</sup>

## Data Collection

Many of the established guides on qualitative and case research methods suggest that validity is enhanced when multiple data sources are used (e.g., Eisenhardt, 1989; Glaser & Strauss, 1967; Yin, 1984). We collected and triangulated our data through open-ended interviews, field observations, and document analysis where available (Eisenhardt; Feldman, 1981; Patton, 1990). The semi-structured open-ended interviews were conducted with the founding entrepreneurs and/or current owners if the founders were no longer associated with the venture. Questions included in the interviews elicited information to establish the nature and history of the venture, its customers, how the entrepreneur delivers value, and tools and processes used. A complete list of questions used for each

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1. One of the entrepreneurs in our study, Dan, cofounded a venture based in Silicon Valley. Our interviews with him took place in the Midwest when he returned to supervise his second venture.

2. Of the 23 cases, 17 involved solo entrepreneurs and 6 involved some sort of partnership. By the time of our interviews and field observations, the partners were no longer involved with management to any substantial degree. Thus, in the sample of firms we studied, the influence of one individual was preponderant.

Table 1

Entrepreneurs, Ventures, and Data Collection

Entrepreneur	Business lines	Year venture(s) founded	Employees	Interviews	Audio- recorded interviews	Persons interviewed	Site visits	Typed single- spaced pages of primary data	Single-spaced pages “within- case analysis”	Approximate hours of fieldwork
Patrick (1)	Maker of rocking chairs, benches, cutting boards	1977	1	2	0	1	2	16	5.5	5.2
Dan (2)	(1): technical consulting (2): virtual art gallery	(1): 1994 (2): 2003	(1): 500 (2): 4	4	1	2	1	30	6	3.4
Richard (3)	jewelry designer	1971	1	2	1	1	2	19	5	3.3
Charles (4)	Selling sandwiches from street carts, birthday cakes, coal and oil rights, dance club, rental property, tax liens, winery	1962 earliest, 2004 most recent	From 1 to 15 employees	3	2	3	2	58	7	3.9
Mike (5)	Ecologically sustainable construction	2003	4	2	0	1	4	8	5	3.4
Michelle (6)	(1): art gallery (2): cabin rentals	(1): 1999 (2): 2007	(1): 2 (2): 1	3	1	3	5	34	7	4.3
Ryan (7)	Bar that hosts original live musicians	2007	7	2	1	2	5	34	6.5	7.7
Tim (8)	Restaurant and winery	1996	17	4	1	3	4	37	5.5	5.0
John (9)	International art store, rents small studios to musicians, starting a general store	1999	2	4	1	2	6	52	9	6.0
Fred (10)	(1): flatbed trailer manufacturer (2): computerized coupon system	(1): 1960 (2): 2007	(1): 250+ (2): 4	8	1	8	5	43	6	4.9
Nathan (11)	Used car lot, rents duplexes	1988	1	2	1	1	3	39	5.5	4.8
Bob (12)	Motorcycle repair shop	1980	4	12	1	5	7	37	7	11.2
Steve (13)	Financial advisor	2005	3	1	1	1	1	37	6	1.4
Hank (14)	Scrap metal dealer	1972	15	4	0	3	4	5.4	5.5	3.0
Mitch (15)	Truss manufacturer	1988	33	1	1	1	1	50	7	3.0
Gary (16)	Iron worker (fence, handrails)	1984	3	3	1	2	3	55	7	5.8
Tom (17)	Ice cream maker, computer-based medical records, music publishing, ethanol production technology	Earliest 1987, most recent 2007	(1): 200 All others: 3–6	5	1	5	3	29	5.5	7.5
Seth (18)	River scientist	1990	4	4	1	2	3	35	5.5	6.7
Chip (19)	Roofer	2000	3	2	0	1	2	5	5	1.5
Drew (20)	Mobile home rentals	1989	3	2	1	1	3	53	7.5	4.3
Norm (21)	Auto repair shop	1995	3	9	0	3	7	13	5.5	6.3
Chris (22)	Electrician	1991	2	3	1	1	3	43	8.5	4.8
Mark (23)	Window and door manufacturer	1985	150	1	1	1	1	40	6.5	4.0
Total:				83	19	53	77	781	144.5	111.2
Median:		1995	3	3	1	2	3	37	6	5



initial interview is contained in the Appendix. All of the entrepreneurs in our study were interviewed at least once, but audio recordings were conducted for initial interviews with 18 of the 23 entrepreneurs. For the other five entrepreneurs, permission was either not granted or it was infeasible to audio-record, and thus, we took detailed handwritten notes during our interviews. In addition, we took detailed notes regarding our observations during site visits and we analyzed relevant documentation including websites, promotional literature, and newspaper articles.

Across the 23 cases, we conducted a total of 83 interviews, spoke with 53 different people (23 entrepreneurs and 30 employees), and made 77 separate visits to the field. The median time spent with each entrepreneur was three visits and 5 hours of fieldwork, generating approximately 37 single-spaced pages of textual data per case. Overall, the time spent in the field was 111 hours spanning 9 months.

The 23 cases varied in their depth and complexity with regard to the entrepreneurs' methods of resource acquisition, production, and/or value-creation. The more complex cases required greater amounts of fieldwork (see Table 1). At a minimum, each of the 23 cases contained at least one face-to-face interview with the entrepreneur and a walk-through of at least one of their ventures. Some cases yielded less information than others. This is to be expected in a multi-case research design, and it is considered appropriate to include such cases in the study. Eisenhardt (1989) recommended 4 to 10 robust cases when attempting to develop new theory. Thirteen of the cases in this study contained three or more interviews, two or more site visits, 13 to 55 single-spaced pages of textual data, and 3.0 to 11.2 hours in the field. The five cases where all of the interview data were taken by handwritten notes instead of audio-recordings were spread across multiple categories, were composed of about 4 hours of fieldwork per case, and generated about 11 single-spaced pages of primary data per case. Thus, the cases were sufficiently consistent and robust to be retained in our study.

In addition to the interviews, field observations were recorded in a notebook during and after each interview and site visit. We kept a log of the date, time arrived, and time departed for every field visit. Observations that were recorded included impressions about the workplaces, facilities, use of space, tools, processes, activities of employees, output/final product/service, and general impression of the entrepreneurs' behaviors. In total, we collected over 780 typed, single-spaced pages of primary data. All collected data were maintained in separate folders organized by each case and kept in a locked drawer, with only the research team having access. Each entrepreneur agreed to participate in the study despite knowing that we were unable to guarantee anonymity due to the unique nature of his or her venture(s). Nevertheless, we assigned aliases to each entrepreneur to enhance confidentiality.

## **Data Analysis and Coding**

Similar to other qualitative studies (Graebner, 2004; Margolis & Molinsky, 2008; Michel, 2007), we applied Miles and Huberman's (1994) grounded theory techniques for analyzing the field data. This process involves iteratively moving between data collection and analysis with a focus on identifying and labeling broad concepts and themes that most frequently appear in the interview transcripts, field notes, and secondary sources. While there are several approaches to this process, we chose the devil's advocate approach used by Sutton and Callahan (1987) and discussed by Eisenhardt (1989).

In the devil's advocate approach, one or more members of the research team is kept out of the field and the data categorization process and is then used to question and challenge the logic of the initial codings, concepts, and categories. While iteratively

moving between data collection and analysis, one member of the research team manually coded the data based on the following: several *a priori* codes, which were informed by our interview questions and sensitizing concepts; and unexpected emergent concepts and themes by highlighting key words, phrases, and/or whole paragraphs from the interview transcripts, field notes, and secondary data (Glaser & Strauss, 1967; Miles & Huberman, 1994).

A second member of the research team acting as the devil's advocate then challenged and questioned the concepts, themes, and patterns identified by the first researcher. From these discussions, refined constructs, themes, and patterns developed and were compared with the original data so as to determine whether they "fit" as described by Glaser and Strauss (1967). This process continued throughout the data collection and analysis until a consensus was reached across the entire research team.

As data were gathered, two types of analyses proceeded: within-case analysis, which involved identifying and extracting key concepts, both *a priori* and emergent, contained in a single case through coding and writing up case summaries; and cross-case analysis, which involved analyzing and comparing concepts across multiple cases (Eisenhardt, 1989; Patton, 1990). The 23 case summaries accounted for an additional 144 single-spaced pages and they too were formally coded (Miles & Huberman, 1994) by the first researcher and analyzed by the entire research team. The purpose of performing both within-case analyses and the cross-case analysis was to more fully investigate the relevance, accuracy, and importance of emergent themes and patterns (Graebner, 2004; Margolis & Molinsky, 2008; Michel, 2007; Miles & Huberman).

The cross-case analyses were performed using a series of matrices of which the first was a conceptually clustered matrix described by Miles and Huberman (1994). This matrix vertically listed the cases and horizontally listed concepts that resulted from the devil's advocate process. These analyses facilitated the research team in analyzing the voluminous data and detecting themes across the 23 cases. In addition, we developed a number of thematic conceptual matrices (Miles & Huberman), which involved detecting themes and patterns, and these too were compared with the original data for accuracy (Glaser & Strauss, 1967). This process ultimately led to the identification of five primary themes, which we labeled *identity*, *organization of space*, *integration of materials*, *sense of limits*, and *responsiveness to market conditions* (see Table 2).

Since the development of a typology relies on identifying differences between cases, we used the themes developed earlier to identify patterns of behavior that occurred across cases. We judged whether a pattern existed among the themes if at least two or three cases shared similar traits of a theme (Miles & Huberman, 1994).<sup>3</sup> For example, the theme of "integration of materials" was identified among all 23 entrepreneurs; however, there were important differences in how this theme manifested itself across the cases. Three of the entrepreneurs made a substantial conscious effort to integrate aesthetics into their materials and processes while having little regard for the utility of their final product, and these entrepreneurs were eventually categorized as "artists." Four other entrepreneurs placed no emphasis on integration of any kind—the complete absence of integration of materials struck us an interesting pattern. These four entrepreneurs were primarily concerned with quickly turning over inventory with very little integration of other materials and were eventually categorized as "brokers." Table 2 illustrates both the major themes that

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3. Although there were only two entrepreneurs who shared behavioral patterns ultimately categorized as "bricolage," their degree of similarity to each other, and their differences from the other 21 entrepreneurs, was striking. Thus, it would have been inappropriate to "force" (Glaser, 1992) their pattern of behaviors into one of the other four categories.

Table 2

Emergent Themes and Categories of Entrepreneurial Behavior

Theme	Art	Craft	Engineering	Bricolage	Brokerage
Identity	Prioritizes “staying true to yourself;” strives to fulfill own artistic vision and not just doing “things that sell”	Commitment to long-standing practices and workmanship, not fixated on making money	Pursuit of efficiency is ultimate goal, strong need for control	Appreciates customers but not necessarily workmanship, reputation is based on fixing problems regardless of solutions’ ultimate reliability	Making money (usually quickly) is self’s primary purpose
Organization of space	Spaces exposed to customers are pristine, spaces used for work are often chaotic	Tools and resources are organized and taken care of but little attention to efficient flow of processes	Everything has a proper place, workplaces are organized, neat, clean, and safe	Workplaces are in disarray and untidy, troves visibly present for easy access	Use of space is designed to easily access market information and/or to impress customers and business partners
Integration of materials	Large emphasis on aesthetic and functional integration of materials	Integration is subconscious, presumably worked out by field’s traditions	Integration is only a concern if it contributes to efficiency	Integration has no role, solution “working” is all that matters	Little role for integration <i>per se</i> , speed, advantage, and connections are key
Sense of limits	Limited only by own imagination	Limited by sense of aesthetics and norms of community/trade	Limited by clear and unambiguous standards and codes	Limits imposed by troves not by social conventions	Not limited by much, “anything for a buck”
Responsiveness to market conditions	Little: purpose of vision is for oneself vs. for a “market”	Little: purpose is to one’s trade	High: need to stay up on latest technology to adequately respond to the market	Medium: responsive to market, but market is local and often personally accessed	Very high: can only make money if ahead of the market

emerged from the data and how they varied among different categories of the entrepreneurs in our sample. Given the consistency of the behavior observed across the cases, our research team was able to clearly categorize all 23 entrepreneurs into one of the five categories. We noted that as in the case of other research studying entrepreneurial behavior (i.e., Baker & Nelson, 2005), entrepreneurs occasionally engage in different kinds of behaviors (e.g., cross-category). In our study however, these behaviors were infrequent and trumped by their dominant behavior. The entrepreneurs we studied consistently followed patterns, fit themes, and reflected a dominant category, to which we now turn our attention.

## **Emergence of Categories**

Five major themes and five distinct categories emerged from the data (see Table 2). These themes were related to the following: (1) the entrepreneurs' self-perceived identity, which then significantly affected important behaviors such as (2) how they organized their venture and its workspaces, (3) how they integrated materials and resources into their processes, (4) the social and personal limits they imposed on their behaviors, and finally, (5) their degree of responsiveness toward changing market conditions. We also noticed varying patterns of venture longevity and financial performance among the categories. These are discussed in the section titled, "Patterns of Entrepreneurial Success."

As we engaged in this process, we began to see that the emergent themes paralleled formal thought on art, craft, bricolage, and engineering in many ways (Glaser, 1992). This led to the adoption of our Levi-Strauss (1962)-inspired sensitizing concepts as formal categories within our emerging typology of entrepreneurial behavior. However, four out of the 23 entrepreneurs displayed patterns of behaviors significantly different from the four initial categories but similar to each other, which suggested the existence of a fifth category unrelated to our sensitizing concepts. Based on these four entrepreneurs' patterns of behavior, we labeled this fifth emergent category of entrepreneurial behavior "brokerage" and further explain under "The Category of Brokerage" section.

### **The Category of Art**

The first category of entrepreneurial behavior that emerged from our data was art. The entrepreneurs engaged primarily in art (3 out of 23) possessed a strong personal identity, and frequently articulated a vision that went beyond making a living or getting wealthy. This identity, which invariably involved creating something unique, was also impossible to separate from their venture's purpose. Take Richard, for example, who uses precision and skill to hand-make attractive jewelry from dinosaur bones and he commented that:

You got to be true to yourself and what you are doing and not just do things that sell.

Similarly, Ryan, the creator of a nightclub that features original up-and-coming musicians, stated:

I've been in music all my life with bands and then went into the retail end of it selling guitars and all that . . . I was becoming disenchanted with the music business because it had turned into bean counters and people with no passion for what it was that we were doing.

It's a burden at times that you don't make as much as you'd like to [running the nightclub]. But it's certainly not a motivator to do anything that I don't want to do.

Michelle, a painter, expressed her vision as follows:

The gallery was this vision I had . . . I thought I would just love to have a gallery full of art that was just packed full of art, and it was all local . . .

This desire to “stay true to one's self” has an associated implication for the ventures such that an artist's vision dominates their responsiveness toward changing markets. All three artist entrepreneurs indicated that their venture's purpose was about fulfilling their personal vision, and they took few, if any, steps to modify their venture's output to accommodate market preferences. Although Richard proactively sought out a secondary distribution channel in Los Angeles to carry his work, he made no effort to use the channel as a source of market data to orient his creative process. He simply withdrew certain pieces if they did not sell and would periodically send newly created jewelry. Regarding the pieces that did not sell in Los Angeles:

I can easily sell them when they get back here. It is easier for an artist to sell their own work because they can tell the story and explain what it is.

The artists told such stories to customers in their galleries or other places of business, which were pristine. The spaces exposed to customers were orderly, clean, and aesthetically pleasing. Richard's gallery was organized so customers could easily survey his jewelry and other artwork. However, the back half of his gallery was closed to the public and was composed of a chaotic array of tools and materials with little organization and no aesthetics. Likewise, Michelle's two ventures, her gallery and her rental cabins decorated with her and her contacts' art, were aesthetically pleasing and well-organized with no observable clutter. This attention to detail also existed in Ryan's venture as he took pride in organizing his space and shaping his customers' experience.

I can't create the atmosphere without having total control over what gets played in here . . . I pick the bands . . . I play the music in here. I pick the CDs that are in the collection that you can choose from and all that . . . when you come in there, there is already a preconceived idea and feeling about what's going on in there.

Creating an aesthetically pleasing atmosphere or object required not only a well-organized space for customers to experience but also a careful integration of materials. Ryan's statement earlier illustrates the need to integrate both materials and sounds to create his desired environment. Richard explained the importance of integration as follows:

Jewelry can be an art . . . Art had been a matter of composition, to know how to unite all the parts that make up a piece of the painting or a piece of sculpture—how things articulate together and how things work together.

This type of vision implementation appeared to be closely related to artists' identity of fulfilling their unique vision and is reflected in the theme of a sense of limits. The limits artist entrepreneurs placed on themselves and their ventures were primarily related to their vision and, of course, to their access to financial resources. Because the artists did not concern themselves much with growth and profitability, their ventures ultimately reflected only limits to their imagination. As we will see with the other four types of entrepreneurs, these themes, and especially a sense of limits, varied noticeably across each category.

## The Category of Craft

The entrepreneurs categorized as craftsmen (5 out of 23) had some of the most strongly verbalized statements of identity. Similar to most of the craftsmen entrepreneurs, Gary, the founder of a decorative ironwork business, closely tied his identity to workmanship and quality:

I've tried to put the trade practices I've learned over the years into each and every job, and so do the boys. There's not one of us that will turn out a piece of sh\*\* on purpose.

With a lot of other people, it's all about the money. They'll make any kind of crap you want, and some crap that you don't want, as long as they get paid because that's where the bottom line is.

The whole difference between being a craftsman and being just another slack-worker out there is that your trade comes first. Your work is always impeccable.

Gary's comments reflect his faithful adherence toward long-standing processes, which are not to be compromised for either efficiency or for profit maximization.

Another self-described craftsman, Tim, grew up in Scandinavia, completed a 5-year brick mason apprenticeship, and worked as a full mason before coming to the United States to start a winery. Despite his venture not making a lot of money, Tim enjoys his work and its associated reputation.

I'm a craftsman . . . what we're doing is a way to live. There's so much work for a little money. But it's kind of fun, go to meetings with people who do the same what you're doing and it's kind of a little glamorous to be a winemaker too. . . . My goal is to make a special wine, not be the biggest winemaker.

Similar to Gary, Tim's identity is closely tied to the *way* he runs his venture, which is with an eye toward quality and tradition versus an emphasis on profits and growth. The products and services craftsmen entrepreneurs provide to their customers combine elements of utility and aesthetics. In addition to producing attractive products, craftsmen carefully ordered and maintained their tools and production spaces. Although their tools were frequently old, they were well-maintained. While their workspaces sometimes became cluttered and messy during their respective production processes, these spaces were quickly picked up, tools and materials cleaned and put away, and the spaces returned to order. This level of care toward production areas was not observed among the artists or among the bricoleurs as will be later discussed. Hence, craftsmen entrepreneurs' respect for long-standing trade practices seems to have also extended toward respect for space, tools, and other resources.

Their integration of materials was less obvious than the artists. What the craftsmen did integrate was utility with aesthetics. The clearest examples include Gary making stately ornamental ironwork, Tim making a traditional wine and serving it in his beautiful Swedish restaurant, and Patrick making heirloom rocking chairs. The craftsmen entrepreneurs may not have had a continuously creative vision as did the artists, but they reliably married the aesthetic with the functional.

Closely coupled with their identity of staying faithful to traditional practices, the craftsmen entrepreneurs' sense of limits was much more apparent than the artists. The craftsmen took pride in limiting their behaviors to accepted processes, and deviation was often seen as an offense. Patrick took this sense of limits to the extreme by using only the steam captured from a fire in a handmade steam chamber to soften the wood he used in the production of heirloom rocking chairs. His goal was to stay as true as possible to the



processes used by American pioneers. This adherence to long-standing practices reinforced the craftsmen's strong sense of identity, and instilled a sense of respect for their spaces and resources. However, it also limited their production processes and responsiveness to changing market conditions. Just as the artists were unwilling to compromise their *vision* for market tastes, the craftsmen were unwilling to compromise their *practices*. Patrick, for example, found a robust market for his product 20 years ago but he was not willing to change his product line or processes as the economy weakened:

I started out selling them [heirloom rocking chairs] for \$1,300. Then I raised them to \$2,500 and they still sold well. People would sit down in my chairs and really like them. I did pretty good in the 1990s and early into the oh ohs [referring to the early 2000s].

## The Category of Engineering

The next category that emerged from our data was engineering, and we found this type of entrepreneurial behavior to be rather common in our sample (9 out of 23). We found that the entrepreneurs who were eventually categorized as engineers took a great deal of pride in improving their production and marketing processes. Often, it seemed that their goal was to maximize efficiency across all functional areas not only because it made their ventures more profitable but also because maximizing efficiency was an inherently valuable endeavor.

Mitch, the owner of a truss manufacturing firm, spoke fondly of his upbringing on a family farm where he learned the importance of efficient operations:

Some of the things that I incorporate out here in lean manufacturing came from my farm days. . . . When you're on a farm, as an example, picking up hay or you're baling hay on a farm, there's a bale of hay that comes out of the baler on the ground, and it's gotta go in the barn loft, and you can pick it up. How many times do you have to touch that bale of hay to get it there? The fewer times you touch it, the less labor you have to expend and the more energy you have left.

For two decades, Mitch has relentless pursued efficiency throughout all facets of his venture:

We've reevaluated everything we can do, every penny we can take out, every labor saving we can do.

I've known it for a long time; that we are not as efficient as we were out there. And we cannot just keep raising prices. We got to start taking money out and looking at the way we were doing the process. We've definitely picked all the low hanging fruit; now let's go get the rest of it.

One of the wealthiest entrepreneurs in our study, Dan, proudly identified himself as someone who built a great business based on lessons learned from working for others:

All of the companies that I worked for failed, and so I started learning. First, what I learned was that none of the managers cared about me or any of the other employees. They had no people skills and were all programmers. Second, all the companies failed because they were poorly managed. So I caught the religion of management.

Dan's comments reflect a dedication to improving the firm for its own sake rather than for strictly financial considerations.

Tom, the inventor of a super frozen ice cream, was a university-trained microbiologist and described his company and its manufacturing process as having evolved from experimenting with liquid nitrogen in his backyard to building a multimillion-dollar state-of-the-art manufacturing facility. After depleting his savings and “maxing out” his credit cards, Tom designed and then hired a machine shop to fabricate his venture’s first professional production machine. One year later,

[W]e had a production facility and a continuous process. You could keep bumping the product in, it would go to the bottom as frozen beads, and you would auger it out and leave the nitrogen behind. I think that machine did like 25 gallons an hour, and then we just kept growing that machine, making it bigger and bigger.

As the company became more successful Tom rented a 2,000-square-foot building and increased production to as much as 4,000 gallons a day. Currently, the plant contains a freezer kept at 50 below zero Fahrenheit and can hold 275,000 gallons of product. Similar to many of the other engineer entrepreneurs, Tom’s goal was not necessarily to get rich but to see what could be done. Additionally, Tom repeatedly and actively sought out market data to refine his product toward customer tastes.

Of all of the entrepreneurs in this study, the engineers’ spaces, tools, and materials were the best organized. Immaculate and orderly workspaces were observed at Seth’s geomorphology consulting firm, Fred’s tractor-trailer manufacturing plant, Tom’s novelty ice cream factory, as well as every other engineer entrepreneur’s venture in the study. This observation can be explained by their relentless pursuit for perfection, which would be impeded by cluttered workspaces. The highly organized workspaces were also associated with their concern for integration of materials, which was based solely on how and when certain materials would integrate into production processes. This integration was consistently based on criteria of efficiency rather than any concern for aesthetics.

The engineers seemed to be the most limited by rules, regulations, and other social conventions. Paradoxically, they were some of the most innovative entrepreneurs in our study, and their behaviors were consistent with Levi-Strauss’s observation that they “constantly questioned the universe”; however, the engineers were also the most likely to do things “by the book,” follow governmental regulations, abide by local codes, and adhere to widely accepted social norms. We could refine Levi-Strauss’s comment and say that, “engineers constantly questioned the universe as long as it was legal and not embarrassing or distasteful.” While the craftsmen limited many of their behaviors to traditional trade practices, the engineers limited many of their behaviors to what was efficient, legal, logical, and rational. In sum, these entrepreneurs perceive themselves as inventors, innovators, and perfectionists. They spent a great deal of effort organizing their ventures to develop efficient processes to generate reliable, useful products and services while staying attuned to changing market preferences.

## **The Category of Bricolage**

As a dominant pattern of behavior, bricolage was the least frequently observed among our participants (2 out of 23), and although previous research has noted the resourcefulness of bricoleurs, especially in austere environments (Baker & Nelson, 2005; Harper, 1987), our results were unique in identifying the connection between their behaviors and their self-perceived identity. If the artists’ identity is tied to their unique vision, the craftsmen to their practices, engineers to their pursuit for efficiency, then bricoleurs’ identity is tied to “making it work,” which usually meant by any means or timeframe necessary.

One such example was Bob, the owner of a motorcycle repair shop, whose mechanics could not quickly find a solution to a customer's problem:

We had this motorcycle we could not fix, a pain in the ass. It came in for a tune-up and the job should've been done in a couple of days. It turns into two or three weeks and [the customer is] getting pissed . . . It turns out it was the ignition coil . . . [I called the customer and said] "Hey, we finally got the bike [fixed]. This is something we've never seen before. It's not that common and I'm really sorry it took so long." [The customer] said, "How much for my motorcycle?" It was like \$160 and now he's like all pissed off. "You took so long. Why could you not find the problem?" I said, "We've never seen this problem before." And I said, "If we would've normally charged by the hour, this would be \$300 to \$500."

Although Bob and his mechanics were unable to satisfy his customer's expectation on this occasion, Bob was determined to (eventually) solve his customer's problem even at his own expense. This ability to solve complex problems was a source of much pride; however, unbeknownst to Bob, the delay in the customer's repair was as much a result of Bob's processes and organization as it was due to the complexity of the problem. Not only did Bob tolerate unconventional work hours and habits by his mechanics, but their tools were often broken or misplaced and the organization of the shop made it difficult to quickly find parts and tools alike. Bob took pride in using his and his employees' resourcefulness in solving complex problems, but he never questioned the efficiency and optimization of his venture's processes and organization, which is precisely what engineers would have done.

Another bricoleur entrepreneur in our study, Norm, owned an automotive repair business and frequently solved customers' problem in a somewhat different, yet resourceful, manner. There were no fewer than one dozen vehicles parked on Norm's lot to which he referred as "death row." These vehicles were a valuable source of used parts; however, half of his day was typically spent scavenging through junkyards looking for parts from rare or discontinued car models. Similar to Bob's, Norm's venture was unorganized, cluttered, and often made use of previously discarded resources and/or used resources in ways in which they were not originally intended. His shop contained extensive shelving and workbenches and floor space were buried under piles of old parts, tools, and other resources that came in handy from time to time.

For bricoleurs, integration of resources was never for aesthetic, traditional, or even efficiency purposes but rather for strictly finding a workable solution. Thus, their sense of limits was nearly nonexistent. Their behaviors were not constrained by legal, social, or aesthetic considerations. Codes relating to the environment, safety, occupational health, and taxation were followed at the bricoleurs' leisure. By Bob's own admission, his workforce at times was composed entirely of "former felons," and although Bob disapproved of drug paraphernalia being left on work counters, he himself would drink alcohol with his employees while working on customers' motorcycles (Bob did forbid the use of pyrotechnics and fireworks at his shop after his crew burned the place down in the 1980s; it was not insured). The behaviors observed at Norm's venture were equally permissive. In addition to ignoring the social conventions of an alcohol-free workplace, Norm's selection of employees was usually based on who was available, regardless of their nonstandard attitudes toward working a full day, following regulations, or even workmanship. Legal and social conventions were observed to the extent that they did not interfere with "making it work."

Despite the disorganization and lack of concern for convention, bricoleur entrepreneurs had a keen sense of both their market niche and what their customers would permit.

On one occasion, Norm chastised an employee for using duct tape to repair a customer's window. Regardless of, or in spite of, their organizational processes, both Bob and Norm were seen not only as problem solvers but also fair with their customers. These perceptions served as the primary resource used to market their businesses, which was almost always by word of mouth. The bricoleurs were aware that their businesses depended on this reputation, but only a niche market tolerated their unusual practices. Thus, they were responsive to a market, but the market was local and usually composed of loosely connected social networks.

## The Category of Brokerage

As mentioned earlier, it was through an iterative process of data collection and data analysis that the fifth category of brokerage emerged. The entrepreneurs' dominant behaviors in this category (4 out of 23) appeared to be distinct and did not fit with our *a priori*-sensitizing concepts. Their exhibited behaviors were similar to each other, yet at the same time, distinct from the other entrepreneurs. After observing these patterns, we determined that these entrepreneurs' identity was closely tied to finding opportunities to make a profitable, and quick, transaction that involved earning economic rents by reselling undervalued goods. Charles exemplified this group when he commented that "money was the *only* reason to be in business" and that he "would do anything for a buck." We labeled this type of behavior and its correlate category "brokerage."

Because our category of brokerage was an emergent and unanticipated form of entrepreneurial behavior, we consulted the extant entrepreneurship literature for evidence of behavior consistent with this category and found that some researchers have discussed behavior consistent with what we observed in the field. Burt (1992, 1997), for example, specifically documented the existence of a special type of economic actor who fills "structural holes." This has led to structural hole theory, which holds that in imperfect markets, people may not have access to complete, sufficient, or accurate data about prices. Holes that exist in the structure of markets are filled by "brokers" who use their knowledge of markets and social networks to bridge these holes (Burt). Entrepreneurs filling structural holes have been observed among biotechnology startups (Walker, Kogut, & Shan, 1997), angel investor networks (Steier & Greenwood, 2000), and throughout New Zealand (Cruickshank & Rolland, 2006), yet to our knowledge, this category of entrepreneurs has not been included in previous entrepreneurial typologies.

To better clarify what brokerage behavior looks similar to in the field, consider the cases of Charles (investor), John (international art store), Nathan (used auto sales), and Hank (scrap metal dealer), whose dominant patterns of activity closely reflected those described in the structural holes literature. The essence of their ventures involves bringing two disconnected parties together versus transforming materials or delivering some other value-added services (Burt, 1992, 1997). While each of these four entrepreneurs emphasized the importance of "buying low and selling high" as central to their business, our scrutiny of how they located sources that would permit them to "buy low" and then clients to whom they could "sell high" revealed that in each case they acted as bridges between diverse parties. We noted also that this bridging, or brokerage, function tended to involve short, spot market-type transactions rather than more intimate client relationships. Quotations from the four entrepreneurs speaking to the primacy of buying low and selling high are provided later:

[The first time] I went to a tax sale I bought a beater house. Oh, it was terrible. Like \$800 in taxes and I went, "Oh, God, this is why you don't get involved in this

business. . . . What the hell am I going to do with it?" So I put a sign on it. I wanted \$5,500. I said, "I'll just put 55 [hundred], then I'll lower it." Before I could get home, it was already sold for cash. (Charles)

It's pretty much the easiest thing in the world. You buy things and you sell them for more than you buy them for. (John)

You make your money when you buy, not when you sell . . . if you buy them right, you can turn around and sell and make money. If you don't know what you're doing, it's going to cost you until you get to know what you're doing. (Nathan)

I started buying and selling some stuff by myself in my father-in-law's garage, and was making more money at that than at construction so I decided to start my own business . . . [pointing to a pile of metal]. This here is about \$100,000 in aluminum, 18 months ago it would have been about \$300,000. I'm just going to hold onto it for a while. . . . Prices will go back up. (Hank)

What is common across these cases, but distinct from the others, is that each of these entrepreneurs is focused on quick transactions rather than on integrating materials. For us, the only integration taking place was the combining of market knowledge and social connections in order to broker goods and services. In this category, there was very little production of goods, and the service being provided was filling a structural hole such that they brought together two disconnected parties. One of Charles' earliest ventures involved bringing a simple food service to students at his alma mater:

No one's trying to take advantage of the student market. They're here. Let's make a lot of money from them. And they were a captive market, and I could show up, and if I found something they liked, we could change on a dime.

The broker entrepreneurs' organization of space also stood out from the other categories. The brokers' spaces were organized for one of three purposes: to quickly access market data, to display or transport their brokered materials, and/or to impress customers, thus enhancing their image as central connectors in social networks. Centrally placed on each entrepreneurs' desk was a computer and phone, and the most important application on their computer was a program to access relevant market data: metal prices for Hank, interest and foreclosure rates for Charles, auto prices for Nathan, and airfare websites for John to take advantage of opportune times to revisit foreign markets. Because of this focus on market information, the broker entrepreneurs' sense of limits was constrained primarily by what they believed they could profitably resell.

As a category, the broker entrepreneurs were by far the most responsive to changing market conditions since their entire business depended on staying ahead of, or at least current with, market trends. The way they organized their spaces, the integration of information with social contacts, their identities as bargain hunters, and their relentless pursuit of arbitrage greatly influenced their ability to respond to changing customer tastes and economic conditions. Effectively filling structural holes for a "buck" by its very nature involves understanding market dynamics, being able to "change on a dime," understanding customers' preferences, and knowing when to sell and when to hold. These patterns of behavior were consistent across the cases discussed earlier and were quite different from the patterns of behaviors observed by the other entrepreneurs in our study.



## Patterns of Entrepreneurial Success

One objective of developing a new typology is to increase our understanding of entrepreneurial behaviors. As our fieldwork unfolded, we noticed that different entrepreneurs often had quite dissimilar views on what success means. Moreover, these differences manifested themselves in a relationship between the type of behavior most commonly exhibited by the entrepreneur and the longevity and financial performance of their ventures. After establishing the five-category typology, we formally analyzed the 23 cases for potential relationships between the types of behavior each entrepreneur most commonly exhibited, their views on success, and how their venture(s) actually appeared to be performing based on two factors—longevity and financial performance.

In the context of entrepreneurship, “success” can be defined many ways; however, the study of entrepreneurship is strongly rooted in economic theory and the rational choice model (e.g., Knight, 1921; Schumpeter, 1934). As a result, entrepreneurial success is often defined as achieving higher than average financial performance. Thus, it has been traditionally assumed that entrepreneurs seek to maximize entrepreneurial rents (e.g., Penrose, 1959). More recently, there has been a move away from the economic return perspective as some have suggested that because of the high failure rate of new ventures, simply surviving for an extended period of time can be considered a measure of success (Hannan & Freeman, 1984; King, 2002; Kuratko et al., 1997; Praag, 2003). Because of the lack of a clear definition of entrepreneurial success, we decided to consider observations of both financial performance and venture longevity across the 23 cases. By including these two factors, we hoped to capture the effect of the entrepreneurs’ behaviors, whether it was to maximize rents or to stay in business as long as possible in order to “do what they want to do.”

Since only one of the ventures created by the 23 entrepreneurs in this study went on to become a public company, verified financial reports were unavailable for analysis. Therefore, questions relating to both financial performance and longevity of the venture were either asked directly or probed indirectly since many entrepreneurs are often reluctant to provide actual performance data from their ventures. However, in some circumstances, the entrepreneurs were candid about their financial performance, even when it was quite poor.

Qualitative analyses of the ventures’ financial performance was based on the entrepreneurs’ own statements and/or our observations of the condition of their workplaces and equipment. This analysis is summarized in Table 3 and provides a ranking by financial performance. The third column contains our qualitative summary of each entrepreneur’s primary venture’s financial performance and the fourth column contains our conversion of the qualitative data into a quantitative assessment based on a 7-point scale, where 1 = not at all financially successful, 2 = not very successful, 3 = a small amount, 4 = somewhat successful, 5 = mostly successful, 6 = very successful, and 7 = extremely successful. This scale is based solely on our own judgment and was not shared with the entrepreneurs.

In addition, we constructed a table comparing the venture’s financial performance against the entrepreneurs’ behavioral category (see Figure 1). When financial performance is grouped by category, one can more easily see that the entrepreneurial behaviors most associated with the higher levels of venture financial performance are engineering and brokerage, while those entrepreneurs with the poorest financial performance include representation from the three other categories.

The theme of “responsiveness to market conditions” appears to have a direct relationship on all tiers of financial performance and all categories of entrepreneurial



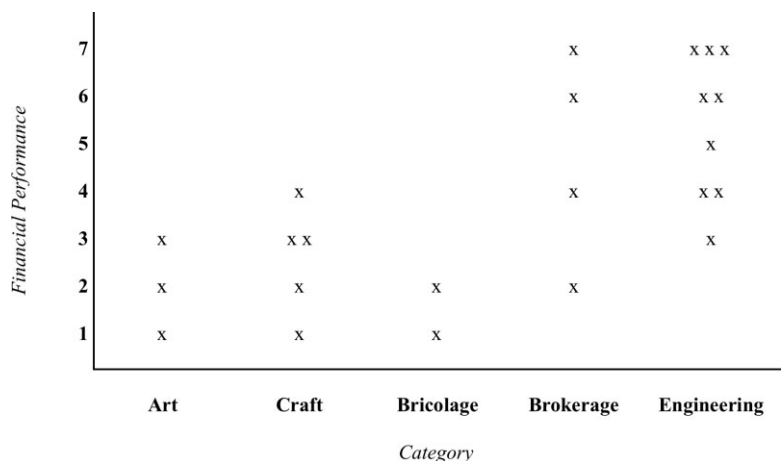
Table 3

## Financial Performance, Longevity, Size, and Market Responsiveness

Entrepreneur	Category	Financial performance (qualitative)	Financial performance (quantitative)	Longevity of prime venture (years)	Size (number of employees in prime venture)	Responsiveness to market conditions
Dan (2)	Engineering	Personally made over \$100 million	7	5	500	3
Tom (17)	Engineering	Hugely financially successful, \$46 million revenue	7	22	200	3
Charles (4)	Brokerage	Multimillionaire	7	38	6	3
Fred (10)	Engineering	Hugely financially successful	7	39	250	3
Hank (14)	Brokerage	Venture worth \$3.5 million, no debt	6	27	15	3
Mark (23)	Engineering	Venture worth about \$4 million, no debt	6	23	150	3
Mitch (15)	Engineering	Venture worth about \$1–2 million, no debt	6	20	33	3
Drew (20)	Engineering	Venture worth ~\$1 to \$1.5 million, still has debt	5	20	3	3
Steve (13)	Engineering	Seems to be doing well	4	4	3	3
Chris (22)	Engineering	Pays himself a “good salary”	4	18	2	2
Tim (8)	Craft	Barely breaking even on good sales	4	12	17	3
Nathan (11)	Brokerage	Has made a “comfortable living”	4	11	1	3
Ryan (7)	Art	Doing very well for a small venture	3	2	7	1
Mike (5)	Craft	Able to make a modest living	3	6	4	1
Seth (18)	Engineering	Losing money only since 2008 after several years of growth	3	18	4	1
Gary (16)	Craft	Making a working class living	3	25	3	2
Bob (12)	Bricolage	Barely getting by on small sales	2	29	4	2
John (9)	Brokerage	Barely breaking even on small sales	2	10	2	3
Richard (3)	Art	Very little	2	45	1	1
Chip (19)	Craft	Barely getting by on small sales	2	9	3	1
Michelle (6)	Art	Small revenue, barely breaking even	1	10	2	1
Patrick (1)	Craft	Nearly broke	1	32	1	1
Norm (21)	Bricolage	Nearly broke	1	14	3	2

Figure 1

Categories and Patterns of Venture Financial Performance



(Each “x” Represents a Distinct Venture; a Value of 1 Is Lowest Financial Performance and 7 Is Highest)

behavior. Seven of the nine engineers and all four of the brokers were highly responsive to changing trends in their respective markets in that they continually made changes in their ventures’ operations to better respond to those changes. Mitch and Mark both recently implemented lean manufacturing programs to lower their costs, Tom’s venture continually adds newer flavors and targets different demographics, and in the mid-1990s, Dan quickly formed his venture to take advantage of an opportunity in the computer industry. By contrast, Patrick, Richard, and Norm are good examples of craftsmen, artists, and bricoleurs who have made few, if any, changes to respond to changing trends.

In an attempt to further quantify the responsiveness–performance relationship, we assigned a numeric value of “3” to our qualitative assessment of “yes, does respond to changes in the market,” “2” to “somewhat,” and “1” to “no, does not respond to changes” for each of the entrepreneurs. This allowed for the calculation of a correlation between the 7-point scale of financial performance and the 3-point scale of marketplace responsiveness possible (see the last column in Table 3). Not surprisingly, there was a positive relationship between financial performance and responsiveness to market conditions ( $r = .735$ ,  $p < .001$ ). Viewing these results in conjunction with Figure 1 clearly reveals that the more responsive entrepreneurs achieve greater financial performance than the less responsive entrepreneurs. For an entrepreneur whose primary goal is to generate attractive financial returns, it certainly seems more “rational” to be responsive to changing market conditions. However, clearly not all entrepreneurs do.

The size of ventures in terms of number of employees is also an important factor in explaining their financial performance. This is logical given that firm size is often used as a control variable when predicting the financial performance of entrepreneurial ventures (i.e., Baum, Locke, & Smith, 2001), and our qualitative results are consistent with empirical findings. However, the new typology suggests a further explanation as to why this may be the case. From our data, the correlation between the number of employees in a venture and its financial performance is positive ( $r = .606$ ,  $p > .002$ ), and the five largest ventures were operated by entrepreneurs in the engineering category. It is also interesting

to note that the brokers do not have very large ventures, but two out of four of them have been successful in achieving high levels of financial performance. So it would seem that engineering behaviors are needed to grow large ventures, but both engineering and brokerage behaviors are capable of creating highly profitable ventures.

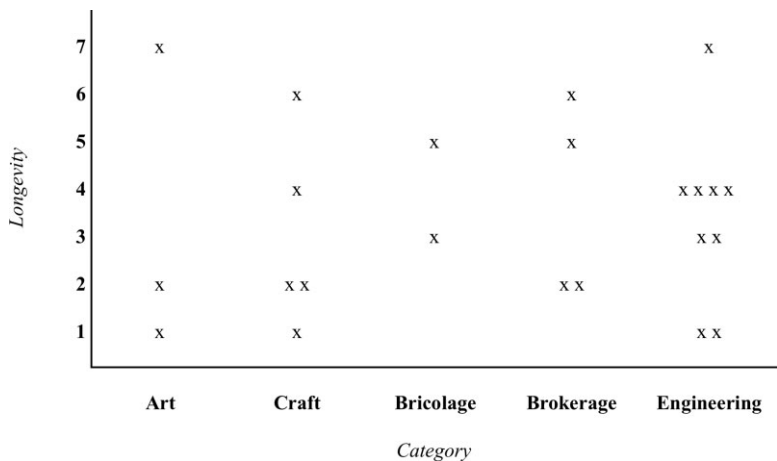
Put differently, we could say that “*rational*” *entrepreneurial behaviors* are needed to grow large ventures and/or highly profitable ventures, whereas *constructivist or “less rational” behaviors* inhibit growth and financial performance. Some likely reasons include scanning and responding to changing marketplace demands, the ability to hire and organize employees who add value to the venture, the ability to efficiently generate high-volume or high-dollar value goods and services, and the willingness (or reluctance) to adopt certain social and economic conventions. These patterns suggest the following theoretical propositions:

**Proposition 1:** Entrepreneurs engaging in behaviors reflective of the engineering category will achieve higher levels of venture financial performance than those entrepreneurs engaging in behaviors reflective of the art, craft, and bricolage categories.

**Proposition 2:** Entrepreneurs engaging in behaviors reflective of the brokerage category will achieve higher levels of venture financial performance than those entrepreneurs engaging in behaviors reflective of the art, craft, and bricolage categories.

When considering longevity as a measure of entrepreneurial success, it seems reasonable to expect a relationship between the level of financial performance and the ventures’ longevity since firms that do not generate adequate profitability would be weeded out (Hannan & Freeman, 1984; Stinchcombe, 1965). However, our data indicated no significant correlation between the longevity of the entrepreneurs’ ventures and their financial performance ( $r = .193, p > .379$ ). Instead, ventures with very poor financial performance can last as long as, or even longer than, ventures that are highly profitable. Figure 2 identifies the patterns of longevity and reveals that the different categories of

Figure 2  
Categories and Patterns of Venture Longevity



(Each “x” Represents a Distinct Venture; a Value of 1 Is Shortest Longevity and 7 Is Greatest)

entrepreneurs are spread out across a spectrum of venture longevity. Richard, Patrick, and Bob are operating three of the longest running ventures yet are simultaneously among the bottom seven entrepreneurs with regard to financial performance.<sup>4</sup>

It is also striking that despite having achieved very little financial performance, the bricoleurs' ventures show a remarkable ability to survive for very long periods of time. When we consider that they mostly operate in resource-constrained environments (Baker & Nelson, 2005) and primarily serve customers who themselves are resource-constrained (Harper, 1987), it becomes intriguing to theorize why this is the case. Bricoleurs have adapted to circumstances without optimal resources, which is why they are so adept at recombining resources already in their possession. This then raises the question of whether bricolage behavior is the reason why they are unable or even unwilling to grow their ventures and achieve high levels of financial performance, or whether their ability to make do explains their entrepreneurial longevity. Since the behavior of bricoleurs is also part of their identity, we conclude that the order of causality begins first with an entrepreneur's identity, which then influences their behavior. The possibility of identity preceding behavior has also been suggested by other researchers such as Falck, Heblich, and Luedmann (2010) and Shepherd and Haynie (2009). We further conclude that an entrepreneurs' type of behavior then influences their ventures' financial performance. Bricoleurs seem to care relatively little about financial performance in the first place, and their worldview seems to preclude them from seeking outside financing. A lack of debt and their innate ability to make do in any economic climate, austere or munificent, appears to contribute to their ability to survive for very long periods of time.

The artist category is associated with the lowest venture longevity, but it has the largest range extending from the newest, Ryan's 2-year old bar, to the most mature, Richard's jewelry venture, which has been in business for 45 years. What may contribute to the artists', as well as to the craftsmens' and bricoleurs', venture longevity is that their identity is not tied to the growth, operational, or financial performance of their ventures. The artists' identity is related to "staying true to their vision," the craftsmens' is "staying true to their trade," and the bricoleurs' is to solve problems by any means necessary. These then promote entrepreneurial behaviors that are quite different than the brokers or engineers. Since the artists, craftsmen, and bricoleurs are committed to their identities, they are willing to engage in their respective entrepreneurial behaviors regardless of whether the market accepts them and regardless of whether they make much money at it.

We note that many of the entrepreneurs who will survive will be those who have never achieved much financial success in the first place. By not having achieved high levels of financial performance, many of the entrepreneurs in this study, specifically the artists, craftsmen, and bricoleurs, were either unable or unwilling to borrow money to open additional offices, add additional product lines, and/or upgrade their equipment. Paradoxically, their avoidance of debt and equity financing has provided them with an enhanced level of flexibility, buffered their ventures from economic downturns, and thus contributed to their ventures' longevity.

While the previous analysis cannot precisely state which, if any, category of entrepreneurs will achieve the greatest venture longevity; it does suggest two related propositions that are equivalent to null hypotheses.

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4. Despite the obvious limitations of conducting an analysis of variance on a theoretically derived sample of 23 entrepreneurs spread among five categories of unequal sizes; we ran the analysis so as to generate an idea of the size of the association observed. It produced the same results as our qualitative analysis—that there was no observed pattern between the categories and longevity ( $F = .091$ ,  $p > .98$ ,  $\eta^2 = .02$ ).

**Proposition 3:** An entrepreneur's category of entrepreneurial behavior is unrelated to their venture's longevity.

**Proposition 4:** The longevity of an entrepreneurial venture is not directly related to its level of financial performance.

## Discussion

The primary purpose of our study was to provide a more complete view of entrepreneurial behaviors and their associations with entrepreneurial success. To that end, the work of Levi-Strauss (1962) provided the sensitizing concepts to investigate whether a broader range of behaviors than previously identified in existing typologies (Lee, Miller, Hancock, & Rowan, 2000; Smith, 1967; Woo, Cooper, & Dunkelberg, 1991) might be observed in the field. Our exploratory study found evidence to support a more complete typology that incorporates previously overlooked entrepreneurial behaviors, such as bricolage and brokerage. In addition, our observations led to a series of propositions that identify some potentially impactful relationships between specific types of entrepreneurial behavior, differences in how entrepreneurs view success, and how these behaviors and views ultimately impact venture performance. We believe that our identification and specification of these relationships provides new insights, understanding, and a platform for future research.

The study of entrepreneurial bricolage and its rejection of classical rationality was one of the inspirations for this study. Most scholarship on bricolage has tended to view it in isolation (Baker et al., 2003; Baker & Nelson, 2005; Garud & Karnoe, 2003) and has overlooked how this activity can trump, dominate, or be substituted for other entrepreneurial behaviors. Similar to theorizing by De Carolis and Saporito (2006), our empirical observations suggest that entrepreneurs have choices, albeit constrained by a number of personal, social, and cultural factors, which often drive the types of behaviors in which they are willing and able to engage. Our unique contribution is that entrepreneurs may engage in bricolage, but they can alternatively adopt more scientific methods, tools, and processes or they could follow the customs of the craftsman, create a unique vision such as the artists, or fill structural holes via brokerage type behaviors.

While our study does not directly address why certain types of behaviors are selected, our interviews and observations suggest that an entrepreneur's behavior is largely inseparable from, and heavily influenced by, their self-perceived identity. This is generally consistent with prior scholarship that suggests that after an entrepreneur's identity is formed, they demonstrate a proclivity toward certain entrepreneurial behaviors (Falck et al., 2010; Hoang & Gimeno, 2010; Shepherd & Haynie, 2009). Our research extends this view by suggesting that success itself is defined differently by each category of entrepreneurs. The brokers seemed to be the most fixated on making money. The artists seemed to be the least interested in financial performance as they were content to eke out a living making their unique creations. The craftsmen were more interested in external validation than the artists, which may reflect their primary goal to stay true to their traditional trade practices rather than to any individual vision. Finally, the bricoleurs were content to avoid the spotlight and operate at the margins even though it meant a lack of financial success. In simple terms, we could say the engineers wanted to get *better*, the brokers to get *richer*, the artists to get *noticed*, the craftsmen to get *respected*, and the bricoleurs to get *by*. Each of these goals ultimately relates back to the theme of self-perceived identity.

There is a relationship between some of the types of ventures formed and the categories, such as an artist entrepreneur starting an art gallery. This is not unexpected, but neither does it determine which of the four categories characterizes the venture. For example, any of the ventures started by the craftsmen entrepreneurs could have morphed into engineering-oriented ventures had the craftsmen abandoned aesthetics and adopted mass production processes. Also, one of the ventures based on selling art was in fact started by an entrepreneur who was eventually categorized as a broker. Therefore, it is not the nature of the venture initially chosen that determines whether art, craft, engineering, brokerage, or bricolage will be used but rather entrepreneurs' self-perceived identity guides their behaviors, which then ultimately shapes their ventures.

## **Implications for Practice**

While the primary contribution of our research is to entrepreneurship theory, our research does provide some notable insights for entrepreneurs. First, our data show that entrepreneurs engage in a wide range of behaviors, and those behaviors were related to important differences in venture performance. For example, the use of brokerage-type behaviors has received limited attention in the literature, but clearly, broker entrepreneurs enjoyed some of the best financial success. The lesson then becomes that the behavior should match the goal. If achieving a high level of financial success is the goal, then engaging in art or bricolage-type behaviors is less likely to result in such a goal than if engineering or brokerage behaviors are used. By contrast, if the goal is survival, especially in times of economic turbulence, it appears that behaviors such as bricolage may be the most appropriate because the "making do" mindset allows one to survive tremendous resource constraints.

Second, our research suggests that entrepreneurs should closely evaluate how they define success and whether or not the behaviors they most commonly engage in are likely to result in the financial or nonfinancial rewards they hope to achieve. Different kinds of entrepreneurs have different goals and motivations, and thus, their performance will be different. Our study suggests that from the entrepreneur's perspective, those differences are both intentional and desirable. As such, entrepreneurs and potential stakeholders should guard against forcing or being forced into adopting outsiders' (e.g., bankers', investors', family members') mental models of entrepreneurial success because it is unlikely that those visions will be realized.

## **Limitations**

Similar to all research, ours suffers from a number of limitations, many of which are inherent to qualitative research methods (Eisenhardt, 1989). Principal among these is the degree to which our findings are generalizable across a range of entrepreneurs and entrepreneurial ventures. Our study was limited to 23 entrepreneurs primarily located in the Midwestern part of the United States. However, entrepreneurs and their ventures varied by industry, size, date of founding, and by the educational and demographic backgrounds of the founders. Our sample also exhibited a wide variation across longevity and financial performance. Because of this diversity we feel that within the limits of qualitative methods, our findings are likely to generalize quite well.

Another potential limitation of the study is associated with the data collection techniques. In some cases, audio recordings of interviews were refused or deemed impractical by the researchers. Although detailed notes were taken when audio-recording was either



refused or impractical, audio-recordings and their subsequent transcriptions captured valuable details and insight that may otherwise have been overlooked. Each entrepreneur whose interview was not audio-recorded was visited on multiple occasions so some of the information that may have been missed in the initial interview was hopefully captured in subsequent visits. While we cannot be entirely sure that data were not missed or lost, we feel reasonably confident that our data collection procedures were robust.

It is common to use multiple coders of the primary data so that an indicator of interrater reliability can be calculated and thus assume that the threat of idiosyncratic perceptions has been reduced (Benbasat et al., 1987). However, given the grounded theory nature of our research, we utilized a less common, but equally valid, approach to analyze our data—the resident devil’s advocate approach outlined by Sutton and Callahan (1987) and Eisenhardt (1989). The exploratory nature of our study suggested that the devil’s advocate approach would provide a disputatious view of the discovered concepts while providing a more flexible and multifaceted analysis of the data. Similar to multiple coders, the technique we used reduces the probability of capturing idiosyncratic perceptions and aids in assuring an accurate representation of the data.

Our attempts to quantify some of our qualitative data (e.g., firm performance) are associated with at least two notable limitations. First, our assessments of the entrepreneurs’ financial performance were based on a combination of their own statements and our subjective judgment based on the quality of their facilities, equipment, and other resources. An ideal measure would analyze data obtained from externally validated annual reports or verified financial documents. Second, converting our qualitative assessment to quantitative scales is subjective and risks losing the richness of the data. However, this was performed as a theory development exercise and not as a theory testing analysis. As such, these conversions were used as an aid in the evaluation of potential firm outcomes and were not done within the context of developing our typology.

Finally, the effect of entrepreneurial behaviors on important venture outcomes, such as financial performance and longevity, are likely to be moderated by the venture’s growth and number of engaged stakeholders. Specifically, an entrepreneur’s behavior and identity are likely to exert less of an influence on a venture as it grows and takes on more managers, investors, and employees (McEvily & Zaheer, 1999). Therefore, our five-category typology and associations with entrepreneurial success may be more appropriately applied to small- and medium-sized ventures where the relationship between the entrepreneur and the venture are so close that if the “entrepreneur sneezes—the organization catches a cold” (Chapman, 2000, p. 97).

## **Future Research**

The grounded theory nature of this study generated far more questions than we could address in a single study. First, this study raises important questions about the relationship between entrepreneurial identities and entrepreneurial behaviors. Similar to other researchers (i.e., Shepherd & Haynie, 2009), we conclude that entrepreneurial behaviors are shaped in part by their self-perceived identity. If this is indeed the case, then measuring entrepreneurs’ self-perceived identities, versus skills, personality, and even behaviors, may provide the most direct way of improving predictions of entrepreneurial success whether it is defined as financial performance, venture longevity, or something else. For this to be done, researchers could use the insights from this study as a way to devise an instrument that measures self-perceived identity. After validating such an instrument, it could be used in a large, quantitative study in order to measure the relationship between self-perceived identity and venture outcomes, which could provide a better, and

more direct way of predicting which entrepreneurs will be successful, however it is defined.

Second, and perhaps more importantly, the typology presented here provides a framework for quantitative studies that can more fully explore the relationships between the five categories of entrepreneurial behavior and other outcome variables of which financial performance, growth, and longevity are only a few. Other important potential outcomes include the type of chosen exit strategies, the degree to which different types of entrepreneurs successfully form alliances, and the effects of different mixtures of behaviors on leadership teams. Thus, the typology should be tested among a large, randomly drawn sample of entrepreneurs from a larger geographic area. Based on the interview questions contained in the Appendix and/or the themes in Table 2, a survey instrument and series of Likert scales could be devised to quantify entrepreneurs' responses. Such an instrument could be used in a large-scale study to validate the typology, permit the inference of the frequency of each category, and subject our propositions to empirical test. The importance of identifying and validating relationships between specific types of entrepreneurial behavior and venture outcome variables cannot be understated. For example, the recent research on bricolage suggests that making do may be a viable strategy for resource-constrained entrepreneurs. However, our observations indicate that over the long term, a continued reliance on bricolage may lead to increasing venture longevity but is unlikely to lead to the development of a highly profitable firm. It is precisely these types of relationships that must be well understood if we are to credibly speak to entrepreneurs and students of entrepreneurship regarding the value of engaging in specific types of entrepreneurial behaviors.

Last, this study raises questions regarding the degree to which entrepreneurs engage in behaviors other than in their dominant category and whether some categories and behaviors can or cannot be mixed. For example, is it possible for an engineer to engage in art? If so, at what point do they stop becoming an engineer and become an artist or can the two behaviors be combined into a new category? Also, is it possible for a bricoleur to "learn" to become an engineer or are they "stuck" being a bricoleur forever? Whereas quantitative-oriented studies could address questions raised in the paragraphs earlier, to answer questions related to the potential interplay between behaviors, case studies of particularly unique entrepreneurs should be designed to shed insight into these questions.

## Appendix

Interview questions:

- 1 Tell me about your background. What did you do prior to starting this venture?
- 2 Tell me about your venture.
- 3 How do you organize your business?
- 4 Who are your customers?
- 5 What makes your venture unique?
- 6 Why do customers buy from or hire you?
- 7 How do you acquire the resources or inputs you use in your products/services?
- 8 Who do you involve when working on projects for customers?
- 9 What skills or certifications do you require when working on projects for customers?
- 10 What are the ways, activities, and processes, you use to deliver value?
- 11 What are the major standards or regulations to which you adhere when working on projects?

- 12 What are the tools you use?
- 13 How long have you been in business?
- 14 What is your venture goal?
- 15 What does success look like for your venture?

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