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Born unfinished: Boundaries of Bricolage Effectiveness

Abstract

In this paper, we present initial results of an inductive, longitudinal case study of four firms that applied bricolage behaviors during resource constraints in firm emergence. Building on these cases, we discuss and extend existing research in bricolage theories by investigating how bricolage enables or hinders progress within firm creation. We explore the factors that places limits on the use of bricolage effectiveness during emergence. Specifically, in this paper, we discuss the impact of commitment and attention on bricolage effectiveness and how these influences may shape attempts to further progress and continue despite the resource constraints entrepreneurs often face in venture creation processes.

Introduction

Creating and developing new firms is often a time consuming and difficult challenge for entrepreneurs (Reynolds & Miller, 1992). Many suffer severe resource constraints (Sheperd et al., 2009), and attempt firm creation despite their lack of skills or experience (Baum & Locke, 2004). In addition to these challenges, they also struggle to cover the multiple roles (Carter et al., 2003) and tasks that exist when launching and building a new firm: from marketing to finance, sales and technology: entrepreneurs often face what is seemingly an uphill battle in firm creation. However, many entrepreneurs seemingly manage to survive and even thrive despite these challenges, often employing resourceful behaviours to remain tenacious within adversity, making do with the seemingly very little resources they have. Being resourceful by making do with existing resources has become an increasingly important approach many firms have used to cope with increased uncertainty: with media espousing its positive impact on firm survival and subsequent progress (Baladon, 2010) as a consequence of the continuing global economic uncertainty (IMF, 2012).

One theory that explicitly links resource responses to constraints and being resourceful is bricolage; defined as using what's on hand, through making do, and recombining resources for new or novel purposes (Baker & Nelson, 2005:333). Prior work in bricolage has more often emphasized the often unexpected positive benefits of using bricolage to overcome difficult and challenging situations (Levi-Strauss, 1967; Weick, 1993; Beunza & Stark, 2003) though others have suggested negative consequences of using bricolage (Ciborra, 1996; Ferneley & Bell 2006) and owing to this, the boundary conditions of bricolage remain unclear. Opportunities exist to further extend current work in bricolage by theorizing on how bricolage may assist or restrict entrepreneurs during the firms' tenuous beginnings and begin to further explore factors that may shape its effectiveness in during firm emergence.

Our intended contribution is twofold: First, through our case analysis we discover additional influences on bricolage effectiveness which effects progress in venture emergence. There is surprisingly limited prior work evaluating the use of bricolage theories in firm development beyond mere acknowledgement of its valuable role in creation processes (e.g. Liao & Gartner, 2006; Edelman & Yli-Renko, 2010) and even less that study bricolage themes in progression in venture creation (Baker, Miner, & Eesley, 2003). Second, we provide distinct links between bricolage in emerging markets (Aldrich & Fiol, 1994; Santos & Eisenhardt, 2009) in established industries. Emerging markets provide unique opportunities and challenges to entrepreneurs owing to a lack of any clear industry structure

or recipes (Spender, 1989), or established market design. The majority of prior work acknowledging the use of bricolage has been limited to studying emerging markets within institutional change in developing countries (e.g. Mair & Marti, 2009; Halme et al., 2012) rather than domestic markets in established countries. We suggest further research opportunities using these results within the discussion.

Theoretical Background

Firm Creation

One important contribution within entrepreneurship theory is research that evaluates firm emergence (Carter et al., 1996; Gartner, 2001). Firm creation process literature suggests that firm creation is not an instantaneous phenomenon, but occurs through a range of actions over time (Katz, 1993). While most recent theory studying venture creation processes has focused on the identification and sequences of gestation activities and its influence on firm outcomes (cf. Davidsson & Gordon, 2011 for a review), initial work in venture creation focused on behaviors within venture creation progression (i.e. “the firm up and running/succeeded”, “still trying” or had “failed” Lichtenstein et al., 2004) and provided more prescriptive suggestions to enable firm success. For example, Carter et al. (1996) suggested businesses who made their firm more tangible were more likely to be up and running than “still trying” firms and likewise results from Duchesneau and Gartner (1990) suggested successful firms were more likely to be more flexible and approached a broad sectors of the market, in comparison to their less successful counterparts.

Much of the continued research in behaviours and venture creation study topics aligned with Katz and Gartner’s (1988) seminal work in the properties of emerging organizations including intentions (Bird, 1992), boundaries (Bhave, 1994) exchange (Hite and Hesterley, 2001) and resources (Chandler and Hanks, 1994). We too, build on this body of research by focusing on resources and resource challenges. Resources play an critical role in the entrepreneurial theories of firm creation (Katz & Gartner, 1988), survival (Aldrich & Ruef 2006) and growth (Penrose, 1959). Most firms however, experience constraints (Shepherd et al., 2009) and this resource scarcity influences the range of resource alternatives available to the entrepreneur, and the subsequent choices that the firm makes in resource combinations (Hanlon & Saunders, 2007). Owing to the firms’ inadequate means, they often experience “relative fragility” (Cooper, Woo & Dunkleburg, 1989:321), where many firms are more susceptible to jolts in the environment, influencing the firm’s early tenuous survival (Pfeffer & Salancik, 1978; Bygrave & Zacharakis, 2007). Bricolage has been suggested as a viable means to creatively remain resilient within resource constraints, and through this resilience, build stronger, less fragile firms.

Bricolage

Bricolage has been studied in a variety of settings but has more recently gained prominence as a theory studying behavioral responses to constraints in entrepreneurship (Garud & Karnoe, 2003; Baker & Nelson, 2005). Through a refusal to enact limitations on known resources and their uses (Phillips & Tracey, 2007), bricoleurs (an individual who engages in bricolage) use existing resources for new purposes (Baker & Nelson, 2005). Bricolage involves iteratively experimenting and tinkering with resources and their recombinations, influencing how firms organize and reorganise resources to adapt to market opportunities and challenges (Weick, 1993).

Prior research provides some tantalizing hints on the importance of bricolage in venture creation. Through a focus on “making do”, which includes a bias for action (Baker & Nelson, 2005; Stark, 1989), prior research suggest entrepreneurs pursue opportunities within venture creation without potentially delaying attempts to pursue the “right” resources for the challenge (Banerjee & Campbell, 2009), reducing time in the venture creation process. Other research that evaluates improvisation and bricolage themes in venture emergence find similar results with entrepreneurs who created firms through “making do” by seeing opportunities from ongoing interaction with past customers from their prior work were up and running within six weeks (Baker, Miner & Eesley, 2003). Six weeks is considered to be very swift through the process: Reynolds (2007) reports that even seven years after the initial commitment only one third of the nascent entrepreneurs actually get their firm up and running. Those who successfully started their company required on average two years. Other bricoleurs scholars, however, argue that owing to the often imperfect process of resource recombination, bricolage attempts are often associated with “second best solutions, maladaptation, imperfection, inefficiency, incompleteness, and *slowness* (italics added)” Lanzara (1999: 347) and ineffective bricolage tinkering may increase a “lack of organizational focus” (Golden & Powell, 2000:337). This literature would suggest that bricolage may in fact create delays in venture creation processes, through this lack of focus and ineffective tinkering attempts in finding the appropriate bricolage solution. Owing to these conflicting arguments, there is an opportunity to explore the conditions that may better explain the benefits and in some cases, the limitations in using bricolage during venture creation processes.

Irrespective of these arguments of bricolage being a help or a hindrance in venture creation, it may be the only a useful way to make do when the only other choices are delaying, downsizing, or quitting attempts to create the firm (Baker & Nelson, 2005). As Lanzara (1999:347) suggests bricolage, maybe “the only thing we can reasonably do when we are engaged in action”. As entrepreneurs are attempting challenging tasks within fragile firms that lack critical resources, bricolage could be considered a viable ‘tool of last resort’.

Methods

Sustainability assessment firms in the building and construction industry was an ideal context to study bricolage within firm development. First, the Federal Government in 2000 introduced mandatory energy performance requirements, whereby any dwelling being sold or leased required an energy efficiency rating. In response to this, a proliferation of new firms entered the market including sustainability assessors. Second, prior to the data collection period, a wave of Government sustainability programs including the Green Loans program (GL) had just been introduced (Garrett, 2010). This sustainability industry was predicted to experience exponential growth in the future.

The sample chosen for this research was drawn from the 85 sustainability firms within CAUSEE project a PSED type longitudinal project studying firm emergence. Following the logic of controlling for variation (Gilbert, 2005) we purposely sample four firms within the sustainability building assessment or heritage to minimize sample heterogeneity (Davidsson, 2008) and to control for variance including institutional influences (e.g. legislation) market forces (e.g., structure of the industry) and resources. Firms were founded by both male and females, all with postgraduate university experience. The case description (illustrated in Table 1) highlights demographic characteristics of the respondents.

In our fieldwork based on inductive grounded theorizing (Glaser & Strauss, 1967) we initially conducted open question face to face interviews with lead entrepreneurs. Data collection occurred between mid-2009 to mid-2011. Supplementary material including six industry scoping interviews with State and Local Government, and Association members were conducted prior to discussions with case respondents, and CAUSEE survey data, onsite visits and secondary documentation secondary data were gathered where available including business plans and other marketing materials. Subsequent interviews evolved to a semi-structured open response survey in response to emerging themes developing from individual case profiles and through cross case analysis matrices (Miles & Huberman, 1994; Yin, 2008), where a replication logic was used to confirm or disconfirm patterns emerging between each case. We conducted a total of 24 interviews with the lead entrepreneurs and this produced approximately 1000 pages of single spaced pages of transcriptions from audio recordings. Throughout this process we iterated between the results and the literature through which specific patterns emerged (Yin, 2008). It is these new patterns we discuss in our results.

Results

Context: Emerging Markets

Sustainability was a new concept within the very traditional building industry which on one hand provided limitless opportunities, yet on the other, heightened risks owing to its extreme ambiguity. As the case respondents suggested

“People don't get it [our service]. ...you know, we have complicated that by saying, “OK, we're interested in sustainability ...” and people are like, “What the hell is that?” GreenpartnersLD

It was considered very new and the customers were not convinced....

“ strategic sustainability advice which means zero to 90% of people, 99% of people. I think that's because it's an emerging and innovative area.” GreentropicsLD ”

As a nascent market, it lacked of a dominant logic to guide actions (Kaplan & Tripsas, 2008; Santos & Eisenhardt 2009) with unclear or missing product definitions (Hargadon & Douglas, 2001) which became problematic to the bricoleurs who sought “close multiplex ties” (Baker & Nelson, 2005) to better design services. The markets had no clear sense of what they wanted or even if the services offered were even necessary

“It's still not a necessary; a product businesses believe is necessary.... It's a luxury item; it's a bit of a curiosity for businesses GreenprogramsCP”

This created further uncertainty for all firms studied and made the progress more tenuous and uncertain within firm emergence.

Bricolage

Our results indicate bricolage was extensively used in response to constraints and opportunities; however, bricolage was most commonly used in developing program proposals in market offerings. It was common for the respondents to break off pieces of previous yet

similar proposals, add relevant idiosyncratic novel information and reconfigure new and old information through iterative resource combinations for new purposes. We find in our cases

“Oh, of course we tend to snap bits and pieces off other proposals. And there’s, of course, a danger in that that we’d leave an old name in or something like that.”
GreenprogramsCP

Service firms, owing to the flexible nature of knowledge more often than not, used bricolage techniques in service delivery. This is similar to prior work evaluating bricolage in open source software in established firms (Feller & Fitzgerald, 2002). There were variations among our cases using bricolage. GreenprocessCP was the most similar to the common idea of a bricoleurs seen in the literature; the errant “tinkerer with diverse resource troves, rule-breaker” (Baker & Nelson, 2005) with a range of behaviors including scavenging in Local Council throw outs, clumping old and new cheap software programs together and making do with the resources on hand. What became apparent within the patterns within our inductive theorizing was the importance of commitment and attention and its impact bricolage effectiveness in firm progression.

Commitment and Attention

We observed distinctive forms of commitment and attention within bricolage behaviors which strongly influenced progression within firm creation. While all entrepreneurs were focused on developing their firms, meeting financial commitments and attempting to make money, we also discovered differences in commitment and attention. This influenced bricolage effectiveness, impacting progress within venture creation. Two of the firms we studied made continued progress, ultimately moving from gestation to inception (Diochon et al., 2003) with sales (GreenprogramsCP and GreenprocessCP), whilst the other two firms in our case work indicated firms that effectively stalled, becoming inactive (Gartner & Carter 2003) or ‘living dead’ firms (Runhka, Feldman & Dean, 2002) that were “once expected to become winners but that stall in later stages of development” (pg 138), neither failing nor achieving continued progress (GreentropicsLD and GreenpartnersLD).

“No, I think we are in hibernation, really. The business is not going to close but I’m no longer actively seeking work. It might come around again in six, twelve months, two, five years, who knows. You know, we’ve agreed to continue the website and the P.O. Box We’re sort of basically resting on our laurels.” GreenpartnersLD.

We designate the Continued Progress and Living Dead firms with CP and LD respectively to make them easier to identify in the discussion. In both of our living dead firms, when comparing them to our continuing progress cases, we find weak commitment and attention.

Weak Commitment and Attention

Both living dead firms experienced challenges and were unfocused in attempts to apply bricolage behaviour. These cases had other important external responsibilities. Tasks often spilled over from one context to the next, with attempts to integrate multiple family and other work commitments with new firm commitments (Jennings & McDougald, 2007). This blurred the boundaries of work and non work time, and the mix proved to be often problematic for allocating time or focus to bricolage tasks in any meaningful way in the emerging firm. As a consequence, GreenpartnersLD found that..

“The [new] business always came last....”

Returning to tasks that had been initiated through bricolage was problematic as they continued to attempt using bricolage in a temporary, distracted manner. The cases endeavored to complete the multitude of tasks through bricolage e.g. develop business plans and conduct marketing, by making do, using their networks to gain access to knowledge including free business plan outlines but ultimately the cases were just too distracted and applied too fleeting a focus any one activity.

“[We set up the] business plan quite early but then for us we didn't see how it working for us so we went on to other things.” GreenpartnersLD

In some instances, when they returned to the prior tasks, the existing niche in the market had shifted, where these half attempts of bricolage “in progress” were no longer suitable or relevant.

“There are tools that I've developed which I'm now not using...There were projects and avenues I was going down which then just got dropped.” GreentropicsLD

This led to more reactionary unfocused market shifts, attempting a broad market approach

“We've probably struggled with in terms of we were trying to cover so much, that we weren't really targeting our approach to anything specifically.” GreenpartnersLD

The broad market approach created additional issues as previously developed solutions were not relevant to new clients, and existing resources combinations did not “fit” the new challenges.

“So changing [market] direction constantly is a really big inefficiency in being able to reuse your own resources [including services]....They're just sitting there gathering dust, and...some of them are really great.” GreentropicsLD

Any expression of interest by any market was deemed an opportunity

“Like, you'd get a bit of interest from somebody and you go, 'Oh, the fact that they'd even ask me about that, or may be interested in my services in that area, therefore there's the potential to develop a product in that area.' But, see, it's very ad hoc.” GreentropicsLD

Both Living Dead firms were prepared to attempt work that didn't fit their selected market niche or their ideas on the firms 'service offerings'. As a consequence, these 'not exactly right' bricolage service offerings were unique, requiring additional time scavenging resources, and further resource recombination attempts. The end solutions generated through bricolage were difficult to repeat or to apply in the targeted desired markets, further limiting firm progression.

“I still get people approaching me outside what I really, really want to do. Even today you know, I'm putting in a bid to do some work that's not exactly my niche. If the

money's right I'll do it.” GreentropicsLD

GreenpartnersLD, in these shifts, attempted to co-create with client's unique service solutions which became problematic in emerging markets as the clients had difficulty recognizing the importance or need of such program.

“The thing is a lot of our work is not something. People don't necessarily recognize that they have an immediate need it's not like saying...I need graphic designer. Ours is harder for people to recognize so one of our clients we've been speaking with for about 8 months before it translated into actually delivery of a product and recognition that it was something that it would suit.” GreenpartnersLD

Focused, More Committed, Attentive Firms

In contrast to the living dead firms, the firms that continued to make progress illustrate focused commitment and attention in using bricolage to progress further in venture creation. When faced with major setbacks like losing a major contract, GreenprogramsCP responded by using bricolage in a focused way, investing time and effort into merging with a similar cheap, small part time firm being run by a friend, increasing the firm's resource portfolio and increasing service offerings. As the firm progressed, GreenprogramsCP then partnered with a new firm sourced from existing relationships that had fallen upon tough times as a result of the failed Government GL program, enabling the case to negotiate favorable contracts, assisting in continued firm progression.

“They're [our partners are] actually leftovers from the GL program. Yeah. So they did a lot of work through that and because that was canned...they have some resource type capacity there that can take on some of our work for us.” GreenprogramsCP

GreenprogramsCP also allocated time and effort to prior bricolage solutions. A decision was made the early in firm creation to use a free open source customer relationship management software. As the firm developed, however, increasingly more time was invested to manipulate and manage this 'free' CRM system which had evolved into a temperamental program complete with clunky, idiosyncratic quirks.

“We actually got a [CRM] product, and [it] was a free, free bit of software. And it, it sort of does the job, but only just. It's always problematic, you know, and it's not very intuitive. It's not fabulous.” GreenprogramsCP

GreenprocessCP also exhibited strong commitment whilst using bricolage in response to challenges and opportunities. Unexpected events that required resources beyond his resource capacity were quickly dealt with by asking family members to help.

“[A new service was] overextending what I could actually do. I had to commit to doing it. I had to rope in a family member to sort of come along and help me with the basic ground research.” GreenprocessCP

Our results reveal successful use of bricolage with an attentive focus enabled both continuing firms to create successful service contracts. Attention within bricolage using improvisation

to both the task and the resource combinations enabled sense making (Weick, 1989) which resulted in minimal resource missteps as the entrepreneurs were tinkering.

“I downloaded a trial [free] versions of two pieces of software and using a batch of the photos that I had previously... to see what it would produce. I had that to play with the [trial software].” GreenprocessCP

Bricolage was sometimes used as an inexpensive “forward looking probe” (Brown & Eisenhardt, 1997) within a planned approach (Baker, 2007), before purchasing cheap items with known limitations. Resources were acquired after bricolage knowledge scavenging. All of this took sustained effort and time to research and tinker with combinations using bricolage behaviours

“I write programs...a lot of the time, thinking about the right program, the right cameras you know, the actual money involved is not huge. I actually go into it quite deeply. I will go to the website of the manufacturer... The particular printer I bought was heavily discounted. It was sold originally as network printer, but in fact, it is not networkable in an easy way. So I was happy to buy at a discount it knowing its limitations.” GreenprocessCP

Market approaches using bricolage in these cases were focused and responsive, rather than the reactionary approaches seen in the living dead cases. GreenprogramsCP deliberately tick-tacked within an established niche and through the supply chain, enabling the firm to use previous relevant information developed and extending this information to for new offerings.

“So what we tend to use is, is the people we've dealt with before ...[we] move from them to someone close to them. So we would work up through a supply chain. By theoretically impressing one part [of an industry] you would then be able to move into the other areas.” GreenprogramsCP

Referrals from existing customers enabled the continuing cases to further strengthen their networks which then provided access to additional resources and potential new niches in the market.

“I’m getting a lot more referrals... now I’ve done two or three jobs in association with these group of people.....and then there’s some completely new people being referred to me.” GreenprocessCP

As a consequence of this market attentiveness, both firms gained access to idiosyncratic asymmetric knowledge of new opportunities and information on discarded, undervalued resources or knowledge not widely available including access to legislation before it was released, which enabled further progression within firm creation.

“It’s the [council name] project I was involved in...it was very interesting to have an inside lead on the effect of this legislation.” GreenprocessCP

Discussion

The following results indicate significant clear variations among our cases using bricolage in firm creation in the emerging sustainability market. Distinct patterns of differences exist among firms in their forms of commitment and attention which enables us to provide an explanation for the variations in progress in firm creation. We find a lack of commitment in allocating time and a lack of attention whilst engaging in bricolage to both firm and market undermines its effectiveness in firm creation. Specifically, our work indicates an adhoc, haphazard approach to building and developing the firm through bricolage coupled with indiscriminate unfocused attempts of market approaches within emerging markets led to less successful outcomes, with firms getting temporally delayed and eventually becoming part of the “living dead”.

Commitment, Attention, and Bricolage

Commitment has a well established literature within management science, prominently in human resources. Some initial work in evaluating commitment has occurred in venture creation with Reynolds and Miller (1992) suggesting personal commitment as one of four key activities in venture creation measured as strong commitment “if entrepreneur has not retained their “primary job or economic activity”, and would not be “running another firm” (pg 402). Bhawe (1994) indicated the decision to commit to the new venture could be evaluated by the entrepreneur seeking and investing in outside resources. While this work has begun to explore notions of commitment in venture creation it did not evaluate the use of existing resources or resources accessed ‘cheaply or for free’ (Baker & Nelson, 2005) and did not consider commitment beyond if the entrepreneur was running another firm or not (Reynolds & Miller, 1992). Limited work exists in bricolage and commitment (with the research typically focusing on commitment within a collective and/or relationship commitment (Innes & Bohes, 1999) and we did not find any research specifically evaluating entrepreneurial bricolage and commitment theories.

Similarly, whilst attention is well established with organizational science literatures (Ocasio, 2011) we did not find any research studying bricolage behaviors and attention. As a consequence we went back to prior bricolage literature, which provides some evidence of bricolage requiring less attention and enabling firm progression within venture creation. For example, based on prior research, bricolage was suggested to occur as an outcome of “incremental steps” (Fuglsang, 2012:25) and through “gradual breakthroughs” Blakemore (2006:9). This suggests bricolage would allow entrepreneurs some scope in being able to shelve bricolage tasks and pick them up again when needed, requiring less attention. This may also enable firms some flexibility and ‘breathing room’ to learn about resource availability and the environment (Brown & Duguid, 1991) and then instigate bricolage when they are ready.

Our findings suggest, however, that the contrary is the case. Our results indicate that a committed, attentive approach is necessary while using bricolage behaviors in venture emergence and shelving bricolage tasks is problematic when attempting to recommence bricolage activities. Further, using a more focused approach appears to be important in three elements within bricolage: First, in resource sourcing and scavenging within bricolage, a more focused, committed approach within the market may assist entrepreneurs to be in a better position to take advantage of idiosyncratic knowledge provided by existing customers of undervalued resources, and this may generate further firm progression. Knowledge of unexpected cheap or free resource troves (the new partnership with a failed GL program and access to new legislation) were found through existing networks and this influenced

progression in our CP cases. Second, in studying bricolage, resource recombinations and improvisation (Baker, Miner & Eesley, 2003), we find effective bricolage combinations using improvisation, requires focused attention to the task to generate a sophisticated understanding of the potential and limitations of resources and the choices that could be deployed in response to new problems and opportunities. Doing this in an adhoc way did not produce the best outcomes for the living dead cases studied. We also find in our instances of planned bricolage (Baker, 2007) a more focused approach assisted in further progression within venture creation processes. Lastly, the use of bricolage often instigates “just good enough” outcomes which demand further time and effort. Less commitment or focus to these prior bricolage outcomes will potentially instigate failure, wasting all prior time and effort spent on creating the outcome and wasting valuable resources (Ali & Bailur, 2007), which most entrepreneurs can ill afford to do.

In summary, our results indicated that a focused attentive approach towards the business and market enabled better access resource troves, more sophisticated resource understandings and subsequent combinations, and enabled the firm to continue using prior bricolage outcomes. This enabled further progression with two of our cases. Our results also contribute to ongoing debates on “if an abandoned start-up process can be considered as a failure” (Davidsson, 2006, p. 26) and if it is appropriate to collapse “currently inactive” firms into failed categories (Lichtenstein et al., 2004) as case results indicate both firms that achieved the living dead status intended to return to the firm. More recent work by Davidsson (2011) is beginning to further explore these notions of categories of “success” in firm creation.

Limitations

Several limitations exist in this research. First, this work remains exploratory in nature with a focus on theory building. Additional work is required to analyse its relevance in other market contexts. Second, while attempts for theoretical saturation is the objective of case research “when possible” (Eisenhardt, 1989:333), we used a sole informant or partners in these cases. Additional interviews with different informants including initial staff may provide a more comprehensive picture of the venture creation in development. There is potential future research in gathering this research as all businesses continue to exist, the two firms continuing to remaining in statis. To reduce issues with hindsight bias (Davidsson, 2008), we would employ use recent methods of tool adaptation using the from ‘life-history-calendar’ in order to uncover start-up process (Caspi et al., 1996; Stuetzer et al., 2011) bricolage responses.

Future Research

Several opportunities exist for future research and these include additional contributions to both more recent developments in behavioural and continuance commitment studying environments and opportunities (Tang, 2008) by applying bricolage as a specific behavioural response to challenges in more uncertain environments. We concur with prior research that suggests that it’s not only the environment but behaviours and resource decisions that are the “overriding factor in molding and constraining the organization's behavior during subsequent stages of its life cycle.” (Penning, 1980: 254). Future research could be developed studying a clearer link with attentional engagement: the process of intentional, sustained allocation of cognitive resources to guide problem solving, and decision making (Ocasio, 2011). Prior literature in this theory has only focused on linear processes (Ocasio & Joseph, 2008), however, we believe it may also play a role in shaping iterative non linear processes like

bricolage (Garud & Karnoe, 2003). Lastly, bricolage is considered within a suite of resourcefulness theories (Powell, 2011) and these initial results may have strong synergies and applicability to bootstrapping (Winborg & Landstrom 2001) and improvisation (Baker, Miner & Eesley 2003).

Conclusion

This work provides the basis for a number of initial theoretical contributions. First, our study extends existing empirical work on bricolage by illustrating the important role both attention and commitments have on bricolage effectiveness in progress within firm emergence. This is contrary to notions of bricolage being an appropriate tool of “last resort” when faced with constraints in firm creation. For entrepreneurs who are distracted owing to other obligations, or see bricolage as a viable means to progress while they “learn the ropes”, our results, indicate that they should consider carefully when to use bricolage during firm emergence. In particular, entrepreneurs should critically evaluate the extent of time constraints they face, and the amount of effort they can sustain applying bricolage approaches as it appears attempts at bricolage whilst being less committed and focused and ‘doing bricolage when I can’ limits firm progression. Our second contribution highlights the challenges that the entrepreneurs face in emerging markets. We find that efforts in collaboration with customers (Shah & Tripsas, 2007) within bricolage coupled with an adhoc broad market approach proved to be overwhelmingly difficult for the living dead cases, creating delays as entrepreneurs tried to further develop the client relationship and establish client need. These results are contrary to Duchesneau and Gartner’s (1990) work in market behaviours. A broad market flexible approach may be more relevant in established markets with clear product definitions and when the venture has a sufficient resource set to satisfy client needs. Entrepreneurs using bricolage would be well advised to limit idiosyncratic co-creation attempts in emerging environments until such time as market preferences became more clear and client’s needs were better articulated. For practice, these results highlight a deeper understanding of the effectiveness of bricolage may assist entrepreneurs in making decisions about the when and how they use bricolage in attempts overcome challenges during the often difficult stages of firm creation and development. It may assist stakeholders and other firm advisors on to how to better approach and advise entrepreneurs on the use of bricolage. We plan to continue this work by further elaborating on these distinct patterns by empirically test our findings in the CAUSEE longitudinal dataset.

Table 1 Case Descriptions

Case ID	GreentropicsLD	GreenpartnersLD	GreenprocessCP	GreenprogramsCP
Year Created	2004	2006	2004	2007
Gender	F	F	M	M
Age	30’s	30’s	60’s	40’s
Education	Graduate Certificate in Cleaner Production	PhD (Organizational Psychology)	Masters (Conservation)	Masters (Environment and Planning)
Location	Regional	Capital City	Capital City	Capital City
Founding team	Single entrepreneur	Partnership	Single entrepreneur	Partnership that dissolved within 12 months

Founding Context	Created firm in response to her husband losing full time work	Created firm to do work they enjoyed doing	Created firm in response to son's health issues	Created firm in response to prior employer failing
Initial Funding	Self funded	Self funded	Self funded	Self funded
Staff (During)	3	2	1	20
Staff End	0	0	2	37*
Market Offerings	Many to one (dissimilar)	Market to market to market (dissimilar)	Selective market	Within a niche
Outcome	Living Dead	Living Dead	Continued Progress	Continued Progress

*Does not take into account paid subcontractors used in contracts.

a The names used here are pseudonyms.

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