

2008

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Repository Citation

McKenzie, Brian M. and sud, mukesh, "A Hermeneutical Approach to Understanding Entrepreneurial Failure" (2008). *Business Faculty Publications*. 85.

<https://digitalcommons.fairfield.edu/business-facultypubs/85>

Published Citation

McKenzie, Brian M., & Sud, Mukesh, (2008). "A Hermeneutical Approach to Understanding Entrepreneurial Failure." *Academy of Entrepreneurship Journal*, 14(2), 123-148

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A HERMENEUTICAL APPROACH TO UNDERSTANDING ENTREPRENEURIAL FAILURE

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ABSTRACT

This paper reports an investigation of entrepreneurial failure using hermeneutic analysis of five entrepreneurship narratives. The data used in this study was collected between 2002 and 2005. The research focuses on entrepreneurial orientation and defines entrepreneurs as individuals who can “see what is not there.” The researchers adopted “a deviation from the entrepreneurs’ desired expectations” as their working definition of entrepreneurial failure. The paper progresses through four levels of interpretation in the development of theoretical understanding of personal and organizational learning from failure.

The researchers found that individuals and organizations can learn from failure and thus improve chances of ultimate success. However, sometimes individuals and organizations do not learn from entrepreneurial failure and other times there are no lessons to be learned from entrepreneurial failure. The authors created a model of entrepreneurial failure based on an ecological perspective.

The study adds to the growing body of research into entrepreneurial failure. It introduces researchers to the importance of seeing entrepreneurial failure within the context of endogenous and exogenous forces. The study provides a mechanism for practitioners to determine whether or not there is learning available from particular instances of entrepreneurial failure.

INTRODUCTION

Entrepreneurship literature has tended to view failure negatively and focus on failure avoidance (Aley, 1993; Buccino & McKinley, 1997; Gatewood et al., 1995; McGrath, 1999; Shepherd et al., 2000; Simon et al., 2000; Sitkin, 1992). However, scholars such as McGrath (1999) have proposed that the focus of academic inquiry should be redirected from a preoccupation with achieving success and avoiding failure to a more integrated view of how success and failure are related.

Previous studies have used quantitative investigation in an attempt to shed light on the failure rate of new ventures (Aley, 1993; Bates, 1995; Blunden, 1987; Duncan, 1994; Headd, 2003; Lussier & Pfeifer, 2000; Watson & Everett, 1996) and have looked into the characteristics of failed ventures (Bates, 1995; Buccino & McKinley, 1997; Gatewood et al., 1995; Gimeno et al., 1997). These

quantitative studies have generally been unsuccessful in building a consensus of how many firms fail and why new ventures fail. Bygrave (1989) has criticized entrepreneurship researchers for being guilty of “physics envy”, which he defines as the inappropriate imitation of the theoretical and empirical methods of advanced rational scientific paradigms. Wortman (1986) noted the primary methodologies of US entrepreneurship research are mail questionnaires and directed interviews. These methodologies may not be best suited to entrepreneurship research, since entrepreneurship consists of idiosyncratic phenomena connected by non-linear relationships often with reciprocal causality (Stevenson & Harmeling, 1990). Low and MacMillan (1988) indicated the need for more contextual and process oriented research in the field of entrepreneurship. Boje (1991) has described storytelling in organizations as “...the preferred sense-making currency of human relationships.” Research that seeks to interpret stories allows phenomena to be viewed through the subject’s eyes (emic point of view), rather than from the more limited viewpoint of an outsider (etic point of view) (Hansen & Kahnweiler, 1993). The research reported in this paper utilizes qualitative investigation, particularly the analysis of the stories that entrepreneurs tell about their failures, to come to an understanding of entrepreneurial failure.

The authors of this paper use a hermeneutical approach to come to an understanding of the nature of entrepreneurial failure and the impact that failure has on the entrepreneurs connected with the new venture. Hermeneutics is a post-modern approach to understanding which develops depth of meaning through iterative attempts to interpret text or other objects. In this case, the objects being interpreted are interviews with self-identified entrepreneurs.

The paper proceeds as follows: The first level of interpretation is the development of a theoretical understanding of personal and organizational learning from failure through review of the academic literature. The second level of interpretation is the development of a model based on evidence collected in an interview with Dr. Anji Reddy. The third level of interpretation is the application of this model to four interviews with self-identified entrepreneurs: Ron Morgan, Dan Newell, Tim Vasko and Cathy Walker. This interpretation causes the authors to reflect on the model developed earlier and to make adjustments to include the new understanding from these interviews. The fourth level of interpretation is a discussion of the usefulness of this model and its contribution to academic literature.

LITERATURE REVIEW

Before investigating the ways in which entrepreneurs make sense of failure, it is necessary to clarify the dimensions of entrepreneurship that are under study. The early focus of the entrepreneurship literature revolved around three broad themes: (1) what happens when entrepreneurs act, (2) why they act, and (3) how they act (Stevenson & Jarillo, 1990). Miller’s (1983) work was pioneering in that it shifted the earlier focus from the critical actor to the process of entrepreneurship. He concluded that engaging in product market innovations, undertaking

somewhat risky ventures and being innovative were critical to entrepreneurship. Building on this work, Lumpkin and Dess (1996) distinguished between entrepreneurship and entrepreneurial orientation. They defined entrepreneurship as new entry which could be accompanied by entering new or established markets with new products or services. Entrepreneurial orientation, on the other hand, helped in characterizing and distinguishing the key entrepreneurial process (i.e. it described how new entry is undertaken). Entrepreneurial orientation has been viewed in the entrepreneurship literature as a multidimensional construct. There is a general consensus among researchers that the dimensions of innovation, pro-activeness, risk taking, competitive aggression and autonomy effectively define the entrepreneurial orientation (Lumpkin & Dess, 1996, 2001; Covin & Slevin, 1989). Embedded in the concept of entrepreneurial orientation is the ability of the entrepreneur to envision enterprise which does not yet exist. Carland, Carland and Stewart (1996) describe this ability as intuition and claim that entrepreneurs with strong intuition are able to translate vision into innovative action. This paper uses the lens of entrepreneurial orientation in its search for understanding of entrepreneurial failure.

Mirvis and Berg (1977) presented what many scholars accept as society's approach to failure when they observed, "In our culture failure is anathema. We rarely hear about it, we never dwell on it and most of us do our best never to admit it." Cannon and Edmondson (2005) have suggested that people have an instinctive propensity to deny, distort, ignore or disassociate ourselves from their own failures; a tendency that appears to have deep psychological roots. This has resulted in a tendency of most researchers to view failure negatively and instead shift the focus of their study to failure avoidance. While it is obvious that not all entrepreneurial efforts will be successful, Timmons (1989) observed: "Businesses fail but entrepreneurs do not. Failure is often the fire that tempers the steel of an entrepreneurs learning. In order to succeed one has to first experience failure."

Pioneering work in the field of learning through failure was undertaken by Sitkin (1992). He argued that failure is an essential prerequisite for effective organizational learning and adaptation and proposed a "strategy of small losses" wherein the incidence of small failures could prove beneficial to organizations as it could improve their resilience. McGrath (1999) proposed a redirection in the theoretical focus from a preoccupation with achieving success and avoiding failure to a more integrated view of how the two phenomena are related. Her work focused on the failure of projects within a firm and used real option reasoning to conclude that by seeking success and avoiding failure firms not only introduce errors that inhibit learning and interpretation processes but also make failure more likely or expensive than necessary.

These studies raise the question of whether entrepreneurial failure is unequivocally bad or is it possible that failure may actually help entrepreneurs learn and improve their chances of ultimate success. Cyert and March (1963) proposed the notion that individuals in organizations learn and that this learning occurs mainly from encountering problems rather than by experiencing success. Researchers from the transformation perspective have observed that ignoring failure can limit our

understanding of the theory and understanding of organizational change (Thorne, 2000). Failure is a fact of life from which most individuals cannot escape. When investigated under the lens of entrepreneurship research, the study of failure offers an opportunity for researchers to try and gain an understanding of what failure means to entrepreneurs, how entrepreneurs deal with failure and perhaps derive models of what causes entrepreneurial failure.

While some scholars have recognized the benefits of learning from failure (Sitkin, 1992; Nonaka & Takeuchi, 1995); others have used the psychology literature on grief and emotions to explain how entrepreneurs cope with failure (Shepherd, 2003). Although Sheppard (2003) proposed that failure could be an important source of learning for entrepreneurs, he also associated failure with bankruptcy and concluded that the loss of a business from failure could interfere with the ability to learn from the events surrounding that loss. Cannon and Edmondson (2005) observed that learning from failure is more common in exhortation than in practice and our understanding of the conditions under which it occurs is limited. Other scholars have commented that evidence and actual outcomes of failure is sparse (Bruderi, Preisendorfer & Ziegler, 1992; Cannon & Edmondson, 2005).

The popular press seems to have developed a more holistic view of the nature of entrepreneurial failure. Peters and Waterman (1982) suggested that one of the keys to achieving and sustaining high performance is a willingness to take risks and the ability to admit to failure and learn from it. Peters and Waterman (1987: 259) quoted Soichiro Honda, founder of Honda Motors, saying: "To me success can only be achieved through repeated failure and introspection. In fact, success represents the one percent of your work, which results only from the 99 percent that is called failure." Similarly, Inc Magazine (1989) reported the example of the CEO of a company treating failure as an opportunity to ensure that others in the organization did not make the same mistake: "The CEO pulled a \$450 mistake out of the company's dumpster, mounted it on a plaque and named it the no-nuts award. This was followed by a presentation ceremony to highlight the error." There is popular press folklore about Tom Watson Jr of IBM who summoned a young executive responsible for a bad decision that had cost the company several million dollars. Fully expecting to be dismissed the executive said: "I suppose after the set of mistakes you will be wanting to fire me." Watson is said to have replied: "Not at all young man, we have just spent a couple of million dollars educating you."

The definition of failure is a crucial starting point for this paper. The popular press view of failure is that it occurs when the business becomes insolvent and ceases operations, resulting in the venture's assets being liquidated to pay creditors and the entrepreneur often facing personal bankruptcy. Entrepreneurship researches have generally used more specific criterion to define failure. The bankruptcy criterion for failure states that failure occurs when the firm is legally bankrupt and ceases operations with a resulting loss to creditors (Perry, 2001). The discontinuance of ownership criterion for failure implies a change in ownership and management or closure of the business (Baum & Mezias, 1992; Mitchell, 1994). The earning criterion for failure states that a

venture is deemed to be a failure if the venture is not earning a rate of return on invested capital that is significantly more than prevailing rates on similar investments (Altman, 1968; Cochran, 1981). The loss-cutting criterion for failure defines a failed firm as one that is disposed of at a loss to avoid further losses (Ulmer & Nelson, 1947).

The authors of this paper have adopted a much wider view by defining failure as simply a deviation from the entrepreneurs' desired expectations. Although bankruptcy and personal trauma did occur in some of the cases investigated; this extreme view of failure often does not permit investigation of the nature of entrepreneurial failure since entrepreneurs often display reluctance to discuss these events and may even choose to move into an entirely different career as a result of their failure. The broad conceptualization of failure adopted in this paper enables a starting point for understanding how entrepreneurs confront and make sense of their failure.

Closely interwoven with the definition of failure used in this study is understanding the vision of the entrepreneur. Vision is an imagined future for an organization or mental image having organizationally shared values that leaders articulate to inspire performance, direct action or create organizational change (Bennis & Nanus; House, 1977; House & Shamir, 1993; Kanter, 1997). Some researchers have suggested that vision remains a hypothetical construct (Stone, 1978) and has not been defined in a generally agreed manner (Larwood, Falbe, Kriger & Miesing, 1995). Carland, Carland and Stewart (1996) observed that the principle characteristic of an entrepreneur is the ability to "see what is not there". They suggested that it is vision which guides the act of volition and that this entrepreneurial vision extends to untapped market opportunities and new approaches to competition.

Researchers have long recognized that entrepreneurial vision does not just confine the entrepreneur to improving the set of possibilities but enables the enactment of new possibilities and often even new realities (Bird & Bush, 2003). Vision is the initial condition for entrepreneurship. Even before entrepreneurs attempt to create a new venture and organize the resources required to enter a new market to take advantages of opportunities they have a vision of an imagined future. This is a transcendental ideal or a mental image which intuitively provides a critical long term view (Bhide, 2000) which is analogous to a road map of the future.

This study proposes that the identification of a strong entrepreneurial vision is central to understanding how an entrepreneur comes to make sense of his or her entrepreneurial failure. Entrepreneurial vision is central to the ability of the entrepreneur to learn from failure. When confronted with failure it is the entrepreneur's vision that reinforces the entrepreneur's commitment to a successful outcome. The initial entrepreneurial vision helps the entrepreneur to devise an initial strategy which he or she hopes will lead to a favorable outcome. This linkage between the initial condition and the original strategy is critical because, when confronted with failure, the entrepreneur, firm in his vision of "seeing what is not there" (Carland et al., 1996), revises his or her strategy in hopes of a more favorable outcome. The authors propose that this mechanism is similar to Mintzberg's (1987) concept of deliberate and emergent strategies. This view has

supported in the literature by Isenberg's (1987) definition of "strategic opportunism" as the ability to remain focused on long term objectives while staying flexible enough to solve day to day problems and recognizing new opportunities.

In summary, this paper reports an investigation of entrepreneurship through the broad lens of entrepreneurial orientation. Past research suggests that, for entrepreneurially-oriented individuals or organizations, failure is not unequivocally bad. Rather, these individuals and organizations learn from their failure and thus improve on their chances of ultimate success. The lens of entrepreneurial orientation suggests that a holistic view be taken when looking at entrepreneurial failure. Thus, the definition of entrepreneurial failure use in this study is: "a deviation from the entrepreneurs' desired expectations." Embedded in this definition is the concept that a strong entrepreneurial vision is central to the determination of how an entrepreneur will make sense of his or her entrepreneurial failure.

METHODOLOGY

This paper develops understanding of the phenomenon of entrepreneurial failure through hermeneutic analysis of entrepreneurial narrative. Scholes (1981) defined narrative as "the symbolic presentation of a sequence of events connected by subject matter and related by time." Ricoeur (1984) defined narrative as "the discourse of a narrator recounting the discourse of the characters". Both definitions imply that narrative is an attempt by the narrator to create meaning of past actions. In his book, *Narratives of Enterprise: Crafting Entrepreneurial Self-identity in a Small Firm*, Down (2006) linked narrative to the milieu of the small firm thus, defining entrepreneurial narrative. Other researchers, such Hytti (2003), McKenzie (2002), Smith (2006) and Sud (2005) have utilized entrepreneurial narrative in their doctoral dissertations.

Hermeneutics is an interpretive method of deriving understanding from narrative. The methodology originated as a way of adapting classical legal or theological texts to contemporary situations (Gadamer, 1975) and was dubbed "hermeneutics" after the Greek word "hermêneuô", meaning to interpret or to translate. Dilthey, a member of the Frankfurt school of philosophy, sought an epistemological foundation for the objectification of humanistic inquiry (Thompson, 1981) and adopted the technique of hermeneutics (Rickman, 1976). Husserl (1958) attempted to explain the changing nature of the appearance of the objective world through the metaphor of the cycle of spheres of understanding and reason. Ricoeur has been credited with moving interpretation away from the purely semantic argument of hermeneutics towards a more general theory of understanding (Thompson, 1981). Ricoeur and Thompson (1981) expanded the hermeneutic cycle to include critical consciousness, explaining that critical consciousness is movement or dialectic between explanation and understanding. Explanation concerns the ability to represent meaning in text or discourse (Ricoeur & Thompson, 1981). Understanding concerns the grasp of the intention or meaning of a text or discourse and thus the appropriation of meaning (Rabinow & Sullivan, 1979).

Depth of understanding or the movement from naive interpretation to critical interpretation (Ricoeur & Thompson, 1981) provides a mechanism for understanding.

This paper utilizes four iterations of the hermeneutic cycle. The first iteration is the previously developed theoretical understanding of entrepreneurial failure through review of the academic literature. The second iteration of hermeneutic interpretation is the development of a model based on evidence collected in an interview with Dr. Anji Reddy, an entrepreneur who developed Dr. Reddy's Laboratories, Limited into a multi-million dollar pharmaceutical company. The third iteration of hermeneutic interpretation is the application of this model to four interviews of self-identified entrepreneurs: Ron Morgan, Dan Newell, Tim Vasko and Cathy Walker. This interpretation causes the authors to reflect on the model developed earlier and to make adjustments to reflect new understanding from these interviews. The fourth level of interpretation is a discussion of the usefulness of this model and its contribution to academic literature. There is implied, a fifth iteration of the hermeneutic cycle in the readers' interpretation of this paper.

DATA COLLECTION AND ANALYSIS

Overview

The data used in this study was collected between 2002 and 2005 as a by-product of other research. When the authors of this study compared interviews of self-identified entrepreneurs collected independently, they noticed that particular interviews revealed a similar propensity towards the discussion of entrepreneurial failure. This observation led the authors to attempt the detailed analysis contained in this paper.

The narratives of this study were recorded using current best practices (McKenzie 2005). Oral evidence is referred to as an "actuality" (Ridington, 2001). The actuality documents the lived-in experience of the data collection, and requires little, if any added detail to transmit the verisimilitude of the text. It is important to recognize that the actuality represents the discourse between its two authors: the interviewer and the person being interviewed and that the actuality is defined by a particular moment in time (Portelli, 1998). Whether or not the oral narrative documented in this study is factual is a moot point. What is important for this study is the "thick description" (Geertz, 1973) of the memoirist's understanding of their entrepreneurial experience: their contemporary consciousness (Lummis, 1987). In this light, the factors of lapsed time and modified perceptions increase the memoirist's understanding of the phenomenon he or she has participated in and thus add to the thickness of the description (Hoopes, 1979).

Interview of Dr. Anji Reddy

In-depth interviews of Dr. Reddy and his associates were conducted between 2004 and 2005 in Hyderabad, India. Dr. Reddy's Laboratories, Limited (DRL) was founded in 1984 and has developed into a venture with nearly a billion dollars in sales. DRL operates in two markets: the manufacturing and formulation of pharmaceuticals and the marketing and distribution of pharmaceuticals.

Reddy's vision of manufacturing bulk drugs experienced repeated failures. Despite this Reddy remained committed to his vision and recollected: "We went through hell, many sleepless nights implementing the process with batch after batch failing. But I said we will do it on our own by conceptualizing a new process. Once the process was stabilized, it was the purest product in the world." Reddy adopted a similar approach when entering the formulations market. Having written out the mission of his life: "to bring new molecules into the country at a price that the common man could afford", Reddy quickly realized that the high prices of his drugs created the necessity of achieving economies of scale in manufacturing. He achieved the creation of economies of scale by selling the bulk drug he manufactured to his competitors who in turn helped expand the market and quickly brought prices down.

Reddy's experience in formulations began when DRL entered the Brazil market. This market was similar to India, but Reddy was not able to find the right partner and so DRL was forced to exit the Brazilian market. In 1999, with the experience of his previous failure fresh in his mind, Reddy once again entered the Brazilian market but this time on his own. He recalled: "The lesson we learnt was that you cannot partner unless there is a value proposition coming from the partner." In his second foray into the Brazilian market, Reddy applied lessons from his successful entry into the Russian market.

Reddy stunned the pharmaceutical world with his success in developing new chemical entities when his molecule (DRF 2593) was licensed to Novo Nordisk of Denmark. This success was followed, a year later, when he licensed his second discovery, (DRF 2725). However, in 2002 Novo Nordisk announced that it had suspended Phase III clinical trials because their compound had led to tumors in rodents. Reddy recalled: "I got the call at around 12 o'clock and was miserable for the rest of the day. If it had been successful, from the third or fourth year onwards we would have seen revenues of \$150 million every year for the next 15 years. That would have been enough for me take another compound all the way through Phase III trials! And thereafter one or two compounds every year! It was a tremendous setback."

Reddy recovered quickly from this setback and took pains to emphasize to his team the importance of being able to accept failure and learn from it. His head of research and development observed: "The next morning, Dr Reddy called a meeting of all the research scientists and addressed them. He told them they would need to take such reverses in their stride. He also confirmed them

that he remained strongly committed to his vision of discovery research. He asked them look at this setback as a challenge and highlighted the importance of building a strong pipeline.”

In 2003, Novo Nordisk decided to discontinue trails on the compound which used the other of Reddy’s molecules. Reddy, in his report to share holders, commented: “We have critically examined the company’s research and development portfolio and are giving up work on a large number of molecules across sundry segments in favor of a more intense, focused approach towards developing the most scientifically promising best in class molecules in key therapeutic areas.” In response to the changed revenue expectations, Reddy decided to cut back on research projects which, although promising, did not fit into their overall objectives. A therapeutic area focus committee, chaired by the chief scientific officer, was set up to reduce the number of projects. The committee decided that research in identified priority areas, which had a comparatively short turn around, would receive 70% all available funding. The head of research and development recalled: “So, post that failure, we decided to focus on some therapeutic areas and get into a more robust project management mode. We also commercially evaluated our pipeline in terms of market size, probability of success, what differentiated it from other molecules etc. so that we know where we stand in terms of the entire portfolio. This helped us put a structure in place.” The company also realized that it could get much better value for its new chemical entity assets by moving the development cycle to the proof of concept stage. Despite having \$200 million in the bank, the company was keen to unlock value and avoid getting into an escalation of commitment trap. Reddy said: “I am prepared to share my entire portfolio to a partner and even mentally I am prepared to give everything that comes out of my shop over the next five years provided he is prepared to fund every cent of it.”

Soon this decision was made, DRL entered into a \$56 million dollar agreement with a venture fund for the development and filings of documents pertaining to the period 2004-2005 and 2005-2006. In September of 2005, DRL, along with venture capital companies, provided funding of \$52.5 million dollars to create an integrated drug development company to advance the clinical development of the company’s new chemical entity assets. The new entity’s mission was to take molecules to Phase II trials after which they would seek to out-license, co-develop or jointly commercialize opportunities. Significantly, the new entity, Perlecan Pharma Private Limited (PPPL), also has the first right of refusal on the future pipeline of DRL at fair market price value.

Analysis of Dr. Reddy Interview

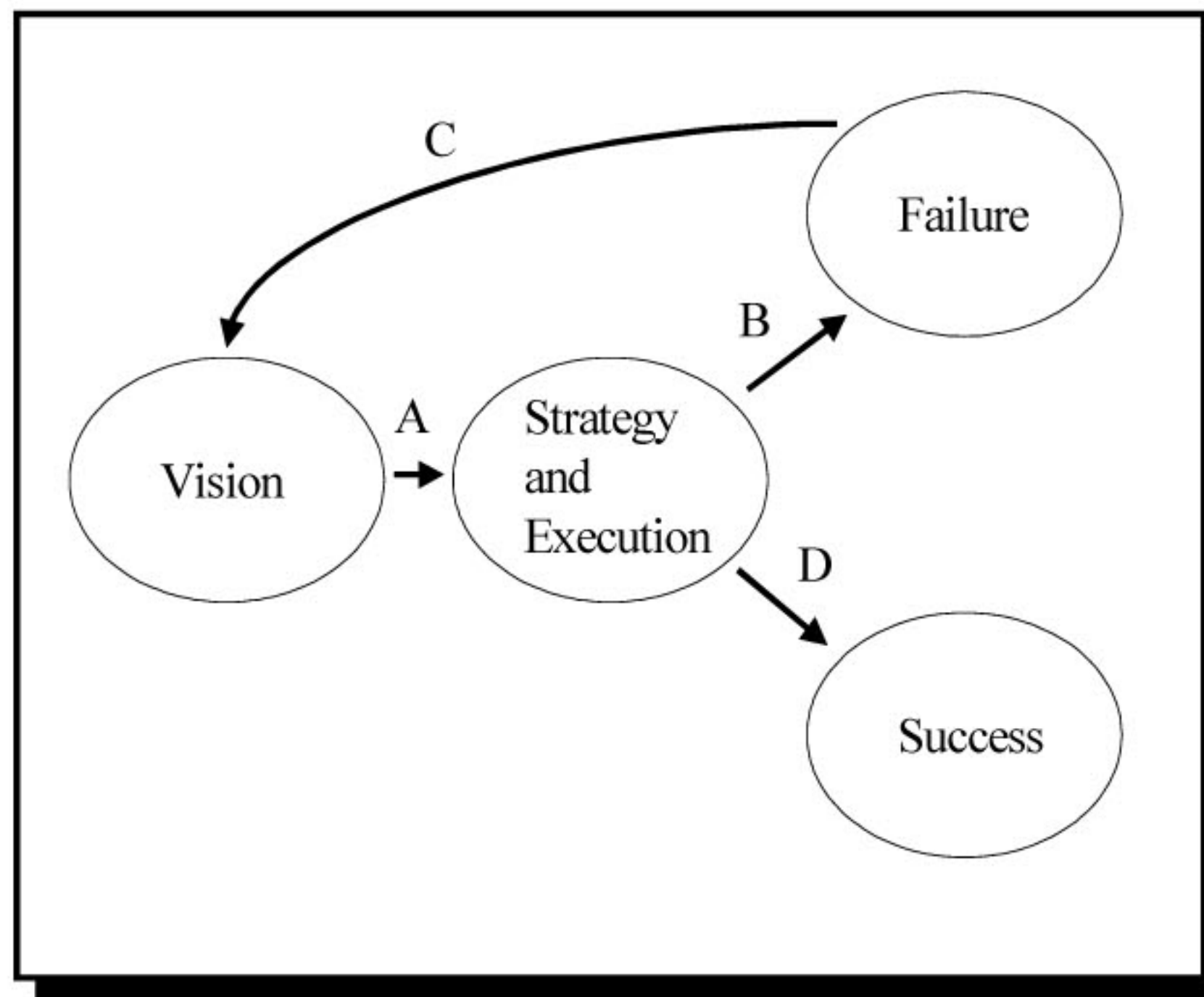
Table 1 summarizes the failures encountered by Reddy as recorded in the interviews. It can be seen that Reddy consistently learned from his failures and ultimately built a vision and strategy which was successful.

Table 1: Failures Encountered by Dr Anji Reddy				
Initial vision	What went wrong	Learning	Revised strategy	Final outcome
Become the first domestic manufacturer of bulk drugs like methyl dopa, ibuprofen	Unable to initially achieve the quality standards needed	Process very technique dependent; stabilization of batch extremely important	Try a completely different route by conceptualization a new process	Developed the more elegant nitril process for methyl dopa resulting in US FDA approval a product that was 'the purest in the world'
Provide medicines to the common man at the price he could afford	Entered the formulations market but could not make an impact as Dr. Reddy's drugs prices were much to high	Important to achieve economies of scale	Expand market by selling raw material (bulk drug) to competitors while competing with them in formulations	Menalapril which was retailing at \$1.20 a tablet was now available at Rs 1 per tablet
Discover new drugs by developing NCE's (new chemical entities)	Novo Nordisk In July 2002 returns DRF 2725 which had reached phase 3 clinical trials and in 03 decides to discontinue development on DRF 4158	Important to de risk the business	Enters into \$56m agreement with ICICI Venture Funds for commercialization of ANDA's	Acquired Trigenesis
Enter US generics space by forming a joint venture with Schein Pharmaceutical Inc.	Schein, discontinues legal strategy after acquisition by Watson Pharamaceuticals Inc. in 2001	Understanding of how to negotiate the regulatory framework; necessity to have a basket of products and launch early	Dr Reddy files patent challenges under Para 4 of the US FDA	Successfully challenged Eli Lilly's patent for fluoxetine (Prozac) to get 180 day exclusivity
Enter the South American market through a joint venture in Brazil	Joint venture broke up in 2001 as both partners had differing outlooks for developing the market	Important to have a long term strategy in place and develop brands in a specific segment	Re entered Brazilian market on his own this time with a portfolio of 5 products in oncology segment	Market developing at a healthy pace

The data from Table 1 is distilled into a model of entrepreneurial failure shown in Figure 1. Reddy's entrepreneurial mindset and vision were responsible for the initial entrepreneurial strategy

that he adopted to fulfill this vision (shown as “A” in the model). This strategy, in five specific instances, resulted in failure (shown as “B” in the model). Despite this failure, Reddy, unwaveringly maintained the strength of his vision and used learning from failure to revise his vision and strategies (shown as “C” in the model). This revised execution strategy ultimately resulted in a successful outcome (shown as “D” in the model).

Figure 1: Preliminary Model of Entrepreneurial Failure



The model of entrepreneurial failure created from the interviews of Dr. Reddy suggest a recursive pattern of learning similar to that proposed by McGrath (1999). The model supports the theoretical position of Hackett and Dilts (2004), positing that business incubators are agents which rationally stage investments in order to increase the rate of venture success. The model also supports the Strategic Technology Assessment Review (STAR) process developed by McGrath and MacMillan (2000) to rationally determine the likelihood of success on new technology ventures. However, the model has an underlying logic of highly rational behavior on the part of the entrepreneurs. Some researchers have questioned the rationality of entrepreneurs. Velamuri (2002) has suggested that entrepreneurship is “the exercise of individual freedom with a view to creating value.” McKenzie (2002) has suggested that: “Entrepreneurship describes the economic activity undertaken by social individuals in their pursuit of self-identity.” The authors of this paper were not certain that the rationality of the model of entrepreneurial failure created from the interviews of Dr.

Reddy would hold over a broader sample. Therefore, the model was tested by comparing it to the entrepreneurial failures described in the narratives of the self-identified entrepreneurs: Ron Morgan, Dan Newell, Tim Vasko and Cathy Walker.

Interviews with Ron Morgan, Dan Newell, Tim Vasko and Cathy Walker

These interviews were a part of a large fieldwork dataset. Approximately 22 hours of interviews with 25 self-identified entrepreneurs were recorded in 2002. The entrepreneurs who agreed to be a part of this study were from a wide variety of industries: clothing, communications, consulting, health care, hospitality, manufacturing, retail, software development, trading and yachting. The interviews of Ron Morgan, Dan Newell, Tim Vasko and Cathy Walker were selected from this dataset because they contained detailed examples of entrepreneurial failure.

Ron Morgan worked as a lawyer and as a judge in Centralia, Washington until the death of his infant daughter. He describes her death with these words: "... in '78, my first-born got sick at nine months and with a herpes virus and at thirteen months she died and I just didn't want to do it any more."

Morgan and his wife moved to Bellingham, Washington where Morgan assisted in marketing a tape deck cleaner. He built the marketing of this one product into the company's electronics division grossing over \$13 million a year. Morgan joined a group of employees who left the firm to form their own company, Homex. Homex marketed a texture gun for applying textured plaster. After two years, Morgan sold his shares in Homex and looked around for another product he could develop. He described what happened next: "So I call up my brother-in-law and I go, 'What's that crazy brother of yours doing?' He sends me two things. He sends me one is a thing that you can hook in to an amplifier and so you can personalize 'cause his kid plays the guitar and it's too loud. And so he can get the effect. It's actually a good idea and it's a product now. But I didn't want to go in the electronics business. The other one was this funny little idea ...if you think of a wooden frame...a wooden picture frame...A machine that would simultaneously cut out each side of that 'H' on the back of the wooden picture frame and then...I did bring a little show and tell, you put it together with one of three sizes of this little part. Called the Thumbnail®. Actually the genius of the thing is the name: 'The Thumbnail®.' It's now a trademark and it's generic in the industry."

Morgan developed the machinery to cut the mortises in the picture frames and developed the Thumbnail® into an industry standard. Morgan then leased the business to Neilson and Bainbridge Inc., one of the largest manufacturers of picture frames in the world. Morgan continued to collect royalties on the Thumbnail® for the next fifteen years.

Unfortunately Morgan's next ventures were not successful. Morgan attempted to market a plastic liner, called the Cargo Jacket, to owners of sports utility vehicles. The effort was unsuccessful and Morgan was forced to sell his million-dollar house on Lake Whatcom. He got a job as the Director of Properties at Port of Bellingham for four years and then re-wrote his bar

exams. A friend suggested that Morgan try doing mediation as a profession. He got approved as a mediator in 1999 and has developed a successful practice, CKM Mediation. Morgan is enthusiastic about his new venture, claiming it is the most fulfilling work he has found: "Whereas in the past, I've always been the marketing guy, I've never created anything. I created this thing. Totally. And it's evolved into something I'm driving. And it can go where I want it to go." Morgan ended the interview by referring to his past in this way: "I've broken my addiction" meaning he had ended his compulsion to develop and promote new products when he discovered the rewards of his new career as a mediator.

Dan Newell was the son of an Air Force Colonel. As a child, he had traveled extensively. Newell took an engineering degree at Stanford University, then interviewed at Microsoft. He described the environment he found at Microsoft at this time: "When I talked to people at other companies, you know I'd say, 'How do you like working there?' And they'd say, 'Yeh, this is a very good company and I enjoy working here.' And when I talked to people at Microsoft, they just said, 'ITS GREAT!'" Newell's intention when he joined Microsoft was to work for a few years, save up his money and then start a business of his own. He began in the C Compiler group, and then moved into the CD ROM division as one of its early members. This group brought out the multimedia encyclopedia, Encarta, the interactive movie guide, Cinemania and the reference software, Microsoft Bookshelf. Newell said that he got sidetracked from his intention as the stock became more valuable over time. He tracked the growth of Microsoft in this way: "I had a little chart outside my window that plotted the course of Microsoft. And you know the next year was like \$70 million a year in revenue coming from \$30 to \$35 million. And Oreo cookies were \$90 million. And we were on our way to Bumblebee Tuna, which was about \$230 million. And, it kind of put Microsoft in perspective." The CD ROM division got re-organized and Newell found himself working under a supervisor that he did not respect. He decided to leave Microsoft, describing his financial situation as "...you know...30 years old...\$2 million it's not too bad". Newell remodeled a 1906 house, traveled extensively and took a number of courses. However, he describes his activities as "discrete events" because each only involved a limited commitment of time.

In 1992, Newell's brother, who was still working at Microsoft, suggested that Newell come back and join the Broadcast PC initiative. Newell was the lead architect of the group chartered to place a PC in every living room. However, a conflict with a senior VP and a divorce led Newell to leave Microsoft for a second time.

Newell decided he would start a software company of his own. He described his vision this way: "I'd wanted to start a software company. And what would it be? I felt like I'd gotten to the point where I didn't just want to do anything. I'm not going to work for, you know, Arthur Anderson and the consulting group setting up back end services for tracking parts running through some, you know, auto plant. I was interested in, I felt capable of, I had some experience in trying to go take product development in directions that people had not gone before. And, you know, operating where there isn't a road map. And I wanted to do something and I also wanted to, if I could, re-

create the kind of work environment initially at Microsoft.” Newell made a list of business ideas, and explored several of them. In particular, he became interested in film and video, and worked on a number of productions. He found, however, a serious objection to developing a business in the film industry. Newell set out his objection this way: “One of the things that I found is that in the straight film and video, I didn't like the people.” Newell developed a company he called XD, which is film editor shorthand for cross dissolve. Within this company, he explored new ideas around which narrative could be explored in what Newell saw as the new media of interactive computing. A friend from Microsoft joined him and the business concept changed to what Newell described as wearable computing. Newell defined wearable computing as: “Right now, when you want to use computing, you go to it. You sit down at a desk, or you pull out a laptop and you sort of kick it off, and you're drawn into that world. You've left the world; you're now dealing with your computer. Wearable computing is more the idea of, ‘How can computing facilitate whatever you are doing right now?’”

Newell felt that this business opportunity satisfied his criteria for undertaking an important mission.

In 1996, Newell and his friend re-named the company “Tangis”. Newell re-married during this time and set the goal of being able to free himself of the routine of the business. He hired a President for the company, but could not keep himself out of the day-to-day management of the company. Newell also realized that the company had conflicting long term and short-term missions. The long-term mission of the company was to develop a fundamentally new way of harnessing computing power. However, in the short-term the company had to replenish its financial reserves. Unfortunately, Newell tried to raise equity capital in 2000, just as the venture capital market markets were pulling away from technology investments. Newell reduced staffing to cut down on the rate at which Tangis was burning through capital. The general slow-down resulting from the September 11th 2001 bombing of the World Trade Center forced Newell to put all of his staff on half furlong. On March 10, 2002, a couple of projects that Tangis was counting on for cash flow were delayed. Nine days before the interview of Newell, he had laid-off all the rest of his staff. Newell told me he was currently in the process of winding down the organization. He choked with emotion as he said, “I’m an entrepreneur. It didn’t necessarily translate into another Microsoft, obviously.” Newell figured at this point, he had lost between US\$6 million and US\$7 million of his own money on the venture.

Tim Vasko began his entrepreneurial career when he started a renovation company at the age of 19. He developed a custom t-shirt marketing company, Spoteze, in his third year of university and developed an investment banking company, Vasko Investment Products, after graduation. Vasko did a lot of wheeling and dealing in oil drilling and real estate partnerships. However, his big win occurred during the US Savings and Loans crisis of the late 1980s. Vasko described how his VIP Global Capital made a great deal of money while unwinding real estate investment partnerships: “I just told people that we're going to need your help to save your real estate....to save your real estate investment. The real estate wasn't all that important to the people who invested. Most of

them were doctors, lawyers, high-income individuals. It wasn't the money they had invested they were concerned about. It was this thing called phantom income. When real estate got foreclosed, they would get all of these tax write-offs as if they had sold the property. And what is called the negative capital account would accumulate up and be distributed to them with no cash. According to the IRS tax status they would have to pay tax on it. So they were all trying to protect their tax benefits. So my deal was you keep your tax benefits and I'll keep the real estate. And that's how I'll get paid. And so we put all the money back into real estate and saved the tax benefits until the capital accounts had expired on them. And ultimately I ended up with a portfolio of real estate and that's really how I made my money.”

Vasko used the equity of this real estate base and his financial acumen to build a conglomerate of operating companies under the umbrella name Powerline. However, Vasko lost the company in 1996. His voice choked with emotion as he said: “It took me 15 years to build a company up to \$30 million or \$25 million or whatever it was and four days for it to crumble. And...uh...I moved to start again, and decided I would go into business again and I moved to Portland Oregon and did a consulting business and so forth; came up with this concept called Convergent Media Network, and I thought this was where the internet was going to go and this is what's going to happen there; but I really didn't have any energy to do anything to be honest...and in...This may be more than you want to know about my personal life. On Thanksgiving in November my wife told me that she wanted me to leave and I found myself out without a family; without a business and the only thing that happened was that Christmas I got my kids and they have lived with me ever since.”

Cathie Walker is an entrepreneur who had been named “Queen of the Internet” by the New York Times [Napoli, 1998 #1828]. Walker created one of the early portals on the Internet in 1995. She named the site Centre for the Easily Amused and attracted an on-line audience of 500,000 page-views per day. She started this venture while working as an employee of the University of Victoria. Walker described the instant hit she created: “I submitted it to Lycos, Yahoo and Netscape, and Netscape, which was now in version 1. And Netscape picked it up and Netscape featured it on their what's cool page. And it blew up Islandnet's server. So the site is two weeks old, and it's getting so much traffic that it brings everybody on Islandnet to a halt. And they had to put in a timer, five minutes on and five minutes off. They didn't know what to do because their servers couldn't handle it. And I can't remember how much traffic it was getting, but it was nothing compared to what it was getting a while ago.”

Walker managed the site part-time on a borrowed computer while she continued as an employee of the University of Victoria. In 1997, she sold her company to a New York firm, Uproar. She described the sale this way: “I didn't sell it to them for a million dollars. I just wanted to change my life. What did I sell it to them for? US \$50,000. Which, at that time was amazing...but ,again, changing my life. I would have sold it to them for ten dollars, just get me out of this secretarial job.” As an employee of Uproar, Walker built a team of programmers and developed Centre for the Easily

Amused site into a very popular Internet community. Uproar was sold to Vivendi Universal. Vivendi decided to shut down the site in May of 2001. The loss of her Internet community forced Walker to start another company: Silly Girl. She is currently building the new venture, motivated by her passion for the community she has built.

Analysis of Interviews of Ron Morgan, Dan Newell, Tim Vasko and Cathy Walker

Table 2 summarizes the failures encountered by Ron Morgan, Dan Newell, Tim Vasko and Cathy Walker as recorded in the interviews. It can be seen that Morgan, Newell, Vasko and Walker did not consistently learn from their failures and ultimately suffered entrepreneurial failure.

The data from Table 2 is distilled into a model of entrepreneurial failure shown in Figure 2. The recursive linear model shown in Figure 1 did not appear to hold up when tested against the experiences of Morgan, Newell, Vasko and Walker. Reddy's ability to maintain the strength of his vision learn from failure were not always replicated by Morgan, Newell, Vasko and Walker. While Reddy's decision making appeared to be highly rational (as befits a scientist), a multitude of extraneous factors such as divorce, raising of families and personal tragedies seem to effect the decision making of Morgan, Newell, Vasko and Walker.

The recursive linear model shown in Figure 1 could not explain the inability of Morgan, Newell, Vasko and Walker to learn from some failures and not from others. Therefore, the authors of this paper had to re-think the underlying premise of their model. An alternative to a recursive linear approach is a holistic approach. For example, Adolphson, (2004) used a holistic perspective to build a new framework of economic thinking, one based on thinking of the ecology of economics.

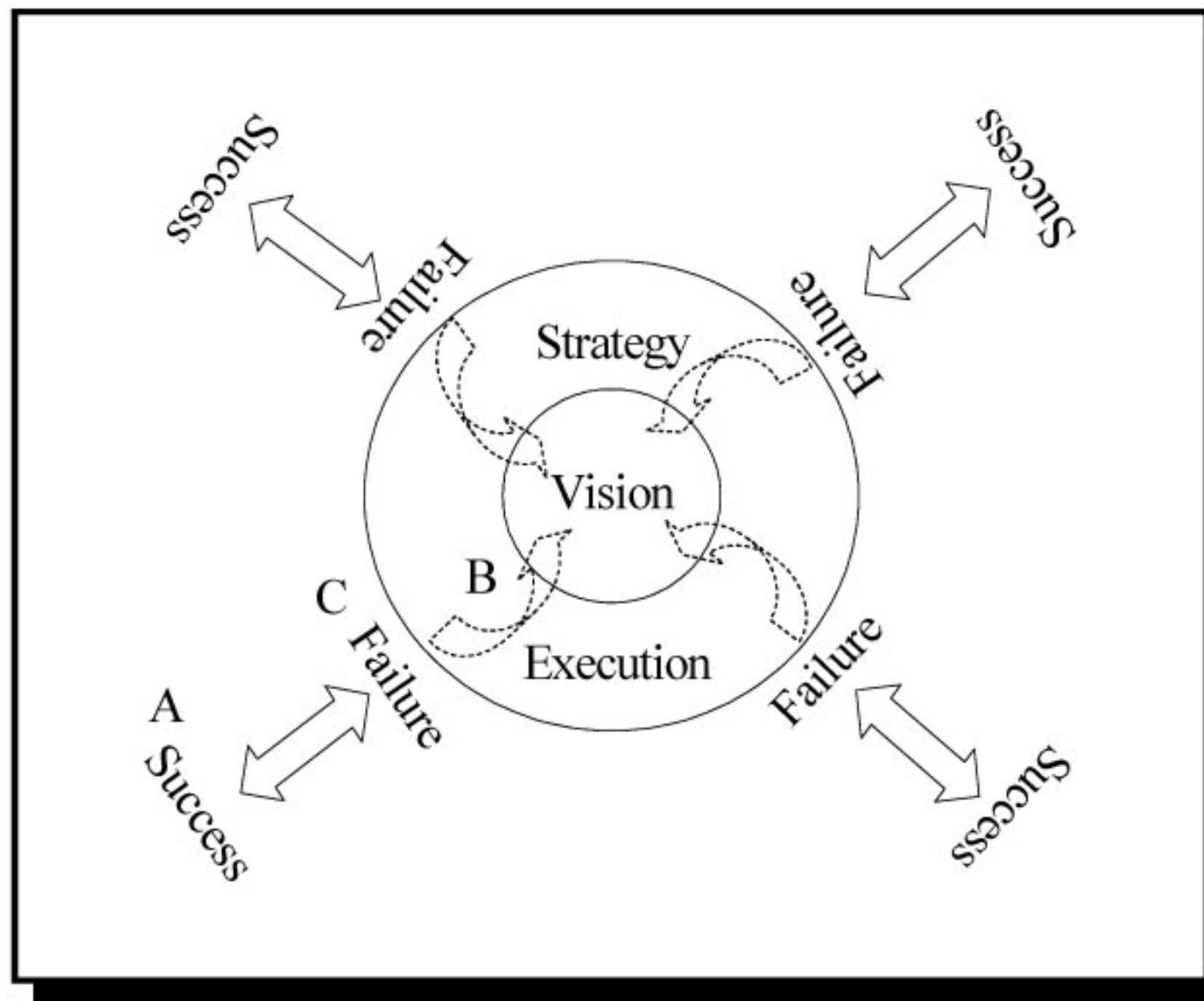
Cowles (1898, 1899) is credited with establishing the concept of ecological succession. Ecology, a term coined by Ernst Haeckel, studies "the relations of living organisms to the external world" (Tamm, 2004). Ecological succession is the process by which a natural community moves from a relatively simple level of organization to a relatively more complex level of organization. Allee (1932) showed that success and failure in biological terms was more complex than a mere struggle for survival; cooperation amongst competitive species and exogenous factors had to be taken into account in properly model the evolution of species. Similarly, Tisdale (2004) has shown that the modeling of economic competition benefits from consideration of ecological succession.

Figure 2 attempts to capture the concept of ecological succession in a model of entrepreneurial failure. Morgan, Newell, Vasko and Walker's entrepreneurial vision (shown in the center of the model) were responsible for the initial entrepreneurial strategy that they adopted (shown as the second ring of the model). This strategy, either resulted in success (shown as "A" in the model) or in a failure that led to revision of the vision and strategy (shown as "B" in the model). However, pressures on the venture could also cause the ecological collapse and ultimate failure of the venture (shown as "C" in the model).

Table 2: Failures Encountered by Ron Morgan, Dan Newell, Tim Vasko and Cathy Walker					
Entrepreneur	Initial vision	What went wrong	Learning	Revised strategy	Final outcome
Ron Morgan	Establish new invention in marketplace	Operation of marketing company was expensive	Better at developing company than running it	Lease product to Neilson and Bainbridge	Successful 15 relationship with Neilson and Bainbridge
	Replication of success of "Thumbnail"	Cargo Jacket was not well received in marketplace	none	Sold home and returned to the practice of law	Entrepreneurial Failure
Dan Newell	Re-create the kind of work environment found initially at Microsoft	Management of company left to others	None possible	Lost \$6-\$7 million and closed venture	Entrepreneurial Failure
Tim Vasko	VIP Global Capital founded to turn-around troubled real estate ventures	Opportunity created by failure of Savings and Loans companies ended	Apply same logic to other ventures	Applied same logic to operating companies	Developed Powerline, a successful printing company
	Expand Powerline into developing Chinese trade	Management of company left to others; expansion took capital from Powerline	Relationship with children more important than business	Took children and moved to Canada	Entrepreneurial failure
Cathy Walker	Create interesting website	Website became very popular, but Walker could not generate income	Partner with others who can do marketing	Sold company to Uproar	Satisfactory 2 year strategic partnership
	Develop popular internet site	Bottom fell out of internet advertising market	None possible	Vivendi decided to close site	Entrepreneurial Failure

While the model of entrepreneurial failure created from the interviews of Dr. Reddy suggested a recursive pattern of learning similar to that proposed by McGrath (1999); the model of entrepreneurial failure, created from the interviews of Morgan, Newell, Vasko and Walker, proposes a more intricate dynamic. The advanced model of entrepreneurial failure explains both the ability of the individual to learn from failure and the possibility that success and failure can be caused by exogenous factors.

Figure 2: Advanced Model of Entrepreneurial Failure



CONCLUSIONS

The research reported in this paper investigated phenomenon of entrepreneurial failure through hermeneutic analysis of entrepreneurial narrative. The researchers found rich data in the narratives of the five entrepreneurs studied. The technique of hermeneutic analysis proved fruitful in the development of a complex model from the narratives studied. Successive interpretations of the data resulted in deeper and deeper understanding of the phenomenon of entrepreneurial failure.

The researchers adopted “deviation from the entrepreneurs’ desired expectations” as the working definition of entrepreneurial failure in this study. The researchers found that sometimes the individuals and organizations of this study learned from entrepreneurial failure and thus improved on their chances of ultimate success. However, sometimes the entrepreneurs studied did not learn from their failure and other times it appeared that there were no lessons to be learned from entrepreneurial failure. As a result of these observations, the authors have created a model of entrepreneurial failure based on an ecological perspective.

The ecological model of entrepreneurial failure positions failure within the context of both endogenous and exogenous forces. Previous studies of entrepreneurial failure have focused on endogenous forces and have successfully shown the importance of learning from entrepreneurial failure. However, the research reported in this paper has shown that exogenous forces can also cause entrepreneurial failure. Often there is no learning possible from failure caused by exogenous

forces. Rather, this kind of failure must be seen as a collapse of the business environment in which the entrepreneur has chosen to place his or her venture.

DISCUSSION

This research has resulted in the development of a theoretical model of entrepreneurial failure. The model developed in this research meets the criteria for theory set out by Weick (1989): “an ordered set of assertions about a generic behavior or structure assumed to hold throughout a significantly broad range of specific instances.” The model offers the promise of both descriptive and prescriptive understanding of the phenomena of entrepreneurial failure. Further empirical research is required to test the validity and reliability of the model. The validity of the model will be tested by formal measurement of the accuracy of information and its generalizability (Creswell & Miller, 2000). The reliability of the model will be tested by measurement of the likelihood of similar conditions giving rise to similar observations (Aunger, 1995).

This paper extends the ecological perspective from the organizational literature into the entrepreneurship literature. Hannan and Freeman (1977) are credited with establishing a population ecology perspective within management research. This perspective investigates the relationship between organizations and their environment as an alternative to the adaptation perspective, which investigates the adaptability of organizations over time. Hannan (2005) notes that organizational ecology builds on the assumption “that core structures of organizations are subject to strong inertial pressures and effort at changing such structure substantially increase the chances of failure.” This paper extends the organizational ecology perspective into the entrepreneurship literature. While organizational ecology tends to examine the life stories of organizations (Hsu & Hannan, 2005); this study recognizes the importance of examining the life stories of entrepreneurs. The model developed in this study offers important new insights to entrepreneurship researchers and to entrepreneurship practitioners.

Entrepreneurship researchers can use the model developed in this paper to envision the complex relationship between the vision of the entrepreneur, his or her strategy and the forces of the business and social environment. One of the difficulties faced by entrepreneurship researchers has been the idiosyncratic nature and non-linear relationships (Stevenson & Harmeling, 1990) inherent in the phenomenon. Low and MacMillan (1988) indicated the need for more contextual and process oriented research in the field of entrepreneurship. This study suggests a model for such contextual analysis in the investigation of entrepreneurial failure. While the study does not refute the findings of McGrath (1999), it suggests that entrepreneurial failure must be viewed within the context of endogenous and exogenous forces.

Entrepreneurship practitioners can use the model developed in this paper to determine whether or not there is learning available from particular instances of entrepreneurial failure. The model presented allows entrepreneurs the means to determine if failure was caused by forces which

the entrepreneur can control, such as a flawed vision or strategy or if failure was caused by forces outside of the control of the entrepreneur. It is hoped that further development of this research can provide prescriptive suggestions for practicing entrepreneurs.

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