**Lancaster University Management School
Working Paper
2003/079**

**Towards a dynamic learning perspective of
entrepreneurship**

Jason Cope

Institute for Entrepreneurship and Enterprise Development
Lancaster University Management School
Lancaster LA1 4YX
UK

Towards a dynamic learning perspective of entrepreneurship

Dr. Jason Cope

Lecturer in Entrepreneurship
Institute for Entrepreneurship and Enterprise Development
The Management School
Lancaster University
LA1 4YX
Tel: 01524 594860
e-mail: j.cope@lancaster.ac.uk

Abstract

This conceptual paper introduces a dynamic learning perspective of entrepreneurship that builds upon existing 'dominant' theoretical approaches to understanding entrepreneurial activity. As many aspects of entrepreneurial learning remain poorly understood, this paper presents key conclusions from in-depth empirical work and synthesises a broad range of contributory adult, management and individual learning literatures to develop a robust and integrated conceptualisation of entrepreneurial learning. Three interrelated elements of entrepreneurial learning are proposed – dynamic temporal phases, interrelated processes and overarching characteristics. The paper concludes by demonstrating how a 'learning lens' can be applied to create further avenues for research in entrepreneurship from a learning perspective.

Introduction

An examination of the entrepreneurship literature reveals several 'dominant' theoretical perspectives that have heavily influenced both the scope and legitimacy of extant research. Stevenson and Sahlman (1989) identify three primary schools of thought regarding the nature of entrepreneurship. First, theories that equate the word with an economic function, which can be described as the *functional perspective*. Second, theories that associate entrepreneurship with an individual, which can be termed the *personality* perspective. Third, theories that conceptualise entrepreneurship from a *behavioural* perspective. As Gartner's (1988) work illustrates, within this final perspective the term 'behavioural' can be understood as a broad descriptor for theories that focus primarily on the entrepreneurial process of new venture creation.

The aim of this paper is to introduce a dynamic learning perspective of entrepreneurship that builds upon these existing theoretical approaches to explaining entrepreneurial activity. It is apparent that learning is gaining acceptance as an integral element of entrepreneurial practice and study. As Minniti and Bygrave (2001) state, 'entrepreneurship is a process of learning, and a theory of entrepreneurship requires a theory of learning' (p7). However, a convincing argument exists that the entrepreneurship discipline does not currently possess sufficient conceptual frameworks to explain how entrepreneurs learn (Cope and Watts, 2000). Consequently, in terms of theory building many aspects of entrepreneurial learning remain poorly understood (Deakins, 1996; Rae and Carswell, 2001). Utilising a wide range of theories and models from management, adult and individual learning literatures, the paper introduces new concepts for the study of entrepreneurial learning and develops a broader conceptualisation of emergent themes embodied within the growing literature on learning in entrepreneurial contexts.

Informed by qualitative empirical work with practising entrepreneurs (Author, 2001), this conceptual paper works towards an integrated understanding of entrepreneurial learning by proposing three different yet interconnected elements of a learning perspective of entrepreneurship.[1] Theory building begins by conceptualising the dynamic nature of entrepreneurial learning, illustrating key temporal *phases* that are central to how and what entrepreneurs learn. Interrelated *processes* of entrepreneurial learning are then conceptualised and, importantly, the relationship between processes demonstrated. Particular emphasis is placed on the emerging significance of 'critical learning events' (Cope and Watts, 2000; Deakins and Freel, 1998) as an essential entrepreneurial learning mechanism. Finally, the affective and social *characteristics* of entrepreneurial learning are introduced, which represent integrative, overarching dimensions of a dynamic learning perspective of entrepreneurship.

Before engaging in this process of conceptualisation, it is vital to establish the credibility of a learning perspective of entrepreneurship as a useful and distinctive approach to comprehending and researching entrepreneurship. In demonstrating how it extends beyond existing theoretical approaches, the following section makes two meaningful claims. First, this paper contends that entrepreneurship is an inherently dynamic phenomenon, the study of which extends beyond a focus on new venture creation. As

such, the ways in which entrepreneurs manage and grow their businesses represents a rich arena for studying entrepreneurial learning (Rueber and Fischer, 1999). This reflects a wider recognition that a better conceptual grasp is needed of entrepreneurship *post* start-up, as Naffziger et al (1994) emphasise.

> 'Previous models imply that entrepreneurship ceases somewhere during the operation of the ongoing venture…An expanded view of entrepreneurship should include the entirety of the entrepreneurial experience, that is, behaviours necessary in the operation of the firm, its performance, and the psychological and non-psychological outcomes resulting from firm ownership' (Naffziger et al, 1994; p31).

The second proposition put forward is that the entrepreneur continues to be a worthy subject for research. Rather than trying to define 'who an entrepreneur is', it is argued that it is more productive to view entrepreneurship as a contextual process of 'becoming' (Rae, 2000), where the entrepreneur is continually learning and developing in relation to his/her business and the wider environment.

Dominant perspectives of entrepreneurship

Early theories of entrepreneurship originate from the field of economics and have been concerned with defining the 'entrepreneurial function' (Casson, 1982), which encapsulates those activities and behaviours characteristic of entrepreneurship. Conceptualising the entrepreneur's interaction with his/her environment has been a major thrust of theorising within this *functional* perspective. More contemporary economic theorists, Hébert and Link (1988), describe the notion of entrepreneurial 'action', which is defined as 'the creation of an opportunity as well as a response to existing circumstances' (p159).

More recently, research in entrepreneurship has been dominated by the desire to define the entrepreneur through the identification of 'entrepreneurial traits'. The main premise of this *personality* perspective is the notion that certain individuals have a unique set of inherent, stable and enduring personality characteristics that predispose them to entrepreneurial activity (Greenberger and Sexton, 1988). Of significance is the perception that these traits are permanent and remain consistent across time and context. This search for the entrepreneurial personality has received heavy criticism in recent years and it is

not the intention here to engage in a prolonged critique of this approach. Several seminal papers have already undermined the credibility of this trait-based perspective (see, for example, Gartner, 1988; Shaver, 1995).

One of the most problematic aspects of much theorising within the entrepreneurial personality perspective is that it symbolizes a static approach to understanding entrepreneurs and therefore represents the antithesis of a dynamic learning perspective of entrepreneurship. The assumed permanence of entrepreneurial personality traits precludes the ability of entrepreneurs to learn, develop and change as they manage their businesses. As Deakins and Freel (1998) assert, 'most writers of this [personality] approach would not allow for an experiential learning role to alter behaviour in entrepreneurship' (p146). In moving the study of entrepreneurs forward, this paper argues that rather than trying to identify 'who an entrepreneur is' (an objective that, as Gartner (1988) demonstrates, has unsuccessfully preoccupied trait-based theorists), it is beneficial to consider the evolutionary nature of entrepreneurship and explore who, through learning, an entrepreneur may become (Rae, 2000).

A more comprehensive approach to conceptualising the nature of entrepreneurial activity is provided by the *behavioural* perspective. First proposed by Gartner in 1985, the emergence of this process-based view of new venture creation was, in part, the result of the 'inherently futile' (Low and Macmillan, 1988; p148) search for the elusive entrepreneurial personality. From a behavioural perspective, the personality characteristics of the entrepreneur are viewed as ancillary to behaviours. Consequently, research should concentrate on what entrepreneurs do rather than who they are (Gartner, 1988). The main aim of this perspective is to discern the 'entrepreneurial process', defined by Bygrave and Hofer (1991) as 'the functions, activities, and actions associated with the perceiving of opportunities and the creation of organisations to pursue them' (p14).

A key aim of the behavioural perspective is to examine the entrepreneurial 'function' that enables new organisations to come into existence, by developing 'contingency approaches which examine the behaviour of the subject in relation to salient contextual variables' (Chell and Haworth, 1988; p16). As Gartner (1985) asserts, 'entrepreneurs do

not operate in vacuums - they respond to their environments' (p700). Clearly, similarities can be observed between the functional and behavioural perspectives of entrepreneurship.

In appreciating how a dynamic learning perspective complements and extends beyond the behavioural perspective, two key areas for development are proposed. First, by defining entrepreneurship in terms of new venture creation, as many behavioural theorists tend to do (Bygrave and Hofer, 1991; Gartner, 1985; Gartner, 1988; Greenberger and Sexton, 1988; Herron and Sapienza, 1992; Learned, 1992; Shaver and Scott, 1991), the ability of entrepreneurs to learn and adapt *once the business is established* is largely overlooked. Gartner (1988) highlights the problematic issue of deciding when entrepreneurship ends, yet he maintains that 'the individual who creates the organization as the entrepreneur takes on other roles at each stage – innovator, manager, small business owner, division vice president etc' (p26).

Regardless of the contentious issue as to whether these roles cited by Gartner (1988) are entrepreneurial or not,[2] empirical work on entrepreneurial learning indicates that an interdependent developmental relationship exists between the entrepreneur and the small business beyond the start-up phase that cannot be ignored (Author, 2001). This paper contends that the process of personal change described above by Gartner (1988) represents a rich arena for studying entrepreneurial learning and development. Specifically, the complex ways in which entrepreneurs learn to adapt their role and develop new behaviours in order to negotiate the successful management and growth of their businesses.

Several theorists have articulated the need to develop broader models of the entrepreneurial process (Chell and Howarth; 1988; Naffziger et al, 1994). As Merz et al (1994) state, 'as a complement to the traditional notion of entrepreneurship as enterprise formation or birth, firm growth or expansion is becoming increasingly accepted as a valid indicator of entrepreneurship within firms well beyond the founding event' (p48). From a learning perspective, Reuber and Fischer (1993) demonstrate that the learning process within entrepreneurship is essentially dynamic and appears to be continuous throughout the life of a firm, rather than being concentrated in the first few years. Similarly, Woo et al (1994) advocate a broader process perspective characterised by experimentation and

learning and the dominance of random events. In viewing effective entrepreneurs as 'exceptional learners' (Smilor, 1997), it is *only* by continuing to study the nature of entrepreneurship both during and post start-up that a comprehensive understanding of entrepreneurial learning can be developed.

The second pertinent issue for entrepreneurship research regards the importance of the entrepreneur as a subject of continued academic interest. Although a process-based perspective of entrepreneurship is laudable given the fundamental problems associated with the personality perspective, a learning perspective offers a new, capacious avenue for studying entrepreneurial individuals. As Shaver and Scott (1991) argue, the deep dissatisfaction with attempts to identify psychological characteristics of entrepreneurs has resulted in a tendency to concentrate 'on almost anything except the individual' (p39). They go on emphasise, however, that the entrepreneur is the catalyst for entrepreneurial activity and represents the essence of entrepreneurship.

In offering avenues for further research on the entrepreneur, Gartner (1988) recognises that entrepreneurship involves a process of learning, particularly in terms of acquiring knowledge and skills regarding organization creation.[3] More recently, Gelderen et al (forthcoming) have explored the learning process associated with new venture creation, stating that 'we chose young firms as we expected learning experiences to be generally relevant in the first few years of the firm' (p8). Whilst clearly of interest, such assumptions marginalize the study of entrepreneurial learning and restrict a dynamic appreciation of the entrepreneur as an individual who learns and develops in conjunction with his/her evolving business and the wider environment. This point is reinforced by the work of Rueber and Fischer (1999), suggesting that 'founders continue to learn, and…studying the venture's stream of experience can provide a better understanding of this learning process' (p33).

Within the entrepreneurship domain a body of research is emerging that explores how entrepreneurs learn during the creation and management of entrepreneurial ventures. Concurrently, a body of theory is growing regarding organizational learning in smaller firms (Anderson and Skinner, 1999; Chaston et al, 2001; Matlay and Mitra, 2002; Gray and Gonsalves, 2002; Honig, 2001; Penn et al., 1998; Sadler-Smith et al., 1999).[4]

However, Deakins (1996) emphasises the need for greater theoretical development around the concept of entrepreneurial learning.

> 'We do not understand how entrepreneurs learn, yet it is accepted that there is a learning experience from merely establishing a new venture…Entrepreneurship involves a learning process, an ability to cope with problems and to learn from those problems… There is now a need for re-focusing research away from the emphasis on picking successful entrepreneurs or picking winners, to identifying key issues in the learning and developmental process of entrepreneurship' (Deakins; 1996; p21-22).

The remainder of the paper will work towards a theoretical framework for understanding entrepreneurship from a learning perspective, thereby developing a deeper appreciation of the nature of entrepreneurial learning. As literature on learning in entrepreneurial contexts is still emerging, the main thrust of this paper is to provide a strong and robust conceptual basis for developing further research on this important subject. New concepts of entrepreneurial learning will be introduced and deeper insights will be developed into emergent themes within the extant literature on entrepreneurial learning. Key areas for further research will also be highlighted. This theoretical progression will be achieved by presenting key conclusions from in-depth empirical work on entrepreneurial learning (Author, 2001) and by applying a broad range of contributory adult, management and individual learning literatures that provide useful and coherent explanatory theories of learning. More specifically, the following sections will conceptualise three distinctive yet interconnected elements of a learning perspective of entrepreneurship. Namely, dynamic temporal *phases* of entrepreneurial learning, interrelated *processes* of entrepreneurial learning and overarching *characteristics* of entrepreneurial learning.

Conceptualising dynamic temporal phases of entrepreneurial learning

The concept of dynamic, temporal phases of entrepreneurial learning serves to demonstrate the complex connections between two pertinent stages of learning – learning prior to start-up and learning during the entrepreneurial process. The following section introduces the theoretical frameworks of 'entrepreneurial preparedness', 'learning history' and 'learning task' as useful concepts to illustrate the importance of learning

prior to start-up but also to provide an integrated understanding of the multifaceted relationship between these two phases of learning.

Re-conceptualising entrepreneurial preparedness as a learning process

Rueber and Fischer (1999) illustrate that each prospective entrepreneur enters the start-up process with a 'stock of experience', consisting of the background or history of the individual that has accrued up to that point. Similarly, Harvey and Evans (1995) propose that each individual approaches the entrepreneurial process with a unique range of accumulated skills and abilities, which shape their level of 'entrepreneurial preparedness'. They go on to propose that the preparation for entrepreneurship can be a proactive process, where each individual must focus on 'their personal/psychological attributes, their stage of career and personal life-cycles, a skills assessment inventory, and the goals and level of motivation of becoming an entrepreneur' (Harvey and Evans, 1995; p342). More specifically, Harvey and Evans suggest that there are two primary elements to assessing one's level of entrepreneurial preparedness; namely, those personal versus business skills and attributes (both tangible and intangible) brought to the new venture creation process.

Although only implicit within Harvey and Evans' (1995) work, from a dynamic learning perspective it is constructive to envisage 'entrepreneurial preparedness' as a concept that encapsulates the immense complexity of accumulated learning that individuals bring to the new venture creation process. This present re-conceptualisation of entrepreneurial preparedness as a cumulative learning process has strong similarities to the concept of 'anticipatory socialisation' (Gibb Dyer, 1994; Starr and Fondas, 1992), which is described as the collective prior experiences and learning that prepares an individual for an entrepreneurial career and which shapes the individual's attitudes, beliefs and abilities (Starr and Fondas, 1992). Although preparing for entrepreneurship can be an implicit and explicit process that has personal and interactive dimensions, it is necessary to recognise that such learning and development occurs throughout an individual's life rather than concentrated during the immediate pre-start-up phase (Author, 2001).

In comprehending the nature of entrepreneurial learning, this paper emphasises the need to appreciate that the way in which individuals perceive new situations and thereby

'experience' learning during the entrepreneurial process is inextricably linked to prior learning and is a product of one's evolving 'learning history' (Boud et al., 1993; Mezirow, 1991). Minniti and Bygrave (2001) emphasise that an entrepreneur's history is influential and that 'knowledge is cumulative. What is learned in one period builds upon what was learned in an earlier period…An entrepreneur's previous investments and repertoire of routines constrains his future behaviour' (p7). More broadly, the importance of one's learning history is also emphasised within the adult learning domain by theorists such as Mezirow (1991).

> 'As adult learners, we are caught in our own histories. However good we are at making sense of our experiences, we all have to start with what we have been given and operate within horizons set by ways of seeing and understanding that we have acquired through prior learning' (Mezirow, 1991; p1).

The learning history of each prospective entrepreneur defines the unique level of entrepreneurial preparedness brought to start-up. Harvey and Evans (1995) call for prospective entrepreneurs to actively assess their learned skills and abilities, which in learning terms essentially requires the entrepreneur to look *backwards* and *inwards*, reflecting on the relevance of past experiences, but also looking introspectively at how ready they are to enter into entrepreneurship. However, it is argued here that there is not only a need for individuals to know themselves better, but to envisage that their 'preparedness' for entrepreneurship is also defined by the specific situation that confronts them and the social groups to which they relate (Gibb and Ritchie, 1982; Katz, 1992; Kolvereid, 1996).

To be as fully prepared as possible for entrepreneurship, this paper maintains that individuals must look *outwards* in order to interact with, and learn about, the wider environment and recognise fully the opportunity that confronts them. Prospective entrepreneurs must also look *forwards*, in order to visualise how to make their business grow and succeed. In encouraging and facilitating a more proactive process of learning in readiness for start-up, it is suggested here that understanding one's level of entrepreneurial preparedness is, and must be, an exogenous as well as endogenous process. It is a dual, interactive process, where the individual develops a clear appreciation of their own strengths and weaknesses and those of their potential business

in relation to the wider environment. The significance of conceptualising entrepreneurial preparedness as a reflection of the prospective entrepreneur's cumulative learning or 'learning history' is that this prior learning is a definitive factor in shaping the entrepreneurial 'learning task' once the business is established.

The entrepreneurial learning task

Due to the complexity and diversity of each individual's learning history, it is important to recognise the unique range of experiences, skills and abilities that shape the 'learning task' of every prospective entrepreneur once they enter into the new venture creation process. In appreciating that the past, present and future all impact on the entrepreneurial learning task, factors such as the environment within which the business operates, the nature of the business and its staff, and its concomitant level of growth will all have an appreciable role to play in defining this learning challenge. A key argument of this paper is that it is vital to view each entrepreneur's learning task as dynamic, contextual and cumulative, reflecting Minniti and Bygrave's (2001) assertion that 'entrepreneurs learn by updating a subjective stock of knowledge accumulated on the basis of past experiences' (p5).

Although it is difficult to prepare fully for the trials and tribulations of small business ownership, empirical work illustrates that some prospective entrepreneurs are more prepared than others (Author, 2001). Nevertheless, it is clear that most people still enter entrepreneurship 'in a substantial "learning" situation' (Gibb and Ritchie, 1982; p35). From a dynamic learning perspective, there remains a pressing need to understand how entrepreneurs learn to become effective managers of people and resources, or to use Rae's (2000) words, how individuals learn to work in entrepreneurial ways. A better theoretical grasp of entrepreneurial learning is imperative, as it is through learning that entrepreneurs develop and grow, and have the potential to become more 'capable' business owners (Rae and Carswell, 2000). This reflects a broader recognition within the adult learning literature that a deeper appreciation of different forms of learning task is necessary, as Boud et al (1985) emphasise. 'Learning theory, despite some hopeful signs, has yet to make any substantial contributions to the kind of learning tasks with which we are normally faced' (Boud et al, 1985; p38).

Developing a deeper grasp of the key elements of the entrepreneurial learning task is a prime objective of this present work and represents a significant dimension of a learning perspective of entrepreneurship. This paper does not purport to offer a definitive conceptualisation of either the 'content' or 'process' dimensions of this learning task. As Cope and Watts (2000) argue, we are still a long way from the development of sufficiently broad-based frameworks to illustrate the diversity of the entrepreneurial learning task with any adequacy. Rather, the intention is to map out the current boundaries of thinking regarding entrepreneurial learning and to synthesise and develop existing theorising into coherent and integrative themes that provide a clearer direction for further research from a learning perspective.

In terms of the content dimension of the entrepreneurial learning task i.e. 'what' entrepreneurs have to learn about, much of this learning remains context-specific but preliminary work by Sexton et al (1997) has identified important 'learning needs' of growth-oriented entrepreneurs. Topics proposed include learning about management succession and the problems and pitfalls of growth. Their work also indicates that the learning priorities of entrepreneurs may vary according to industry sector. Clearly, more research is needed in this area and this paper proposes five broad areas of significance that require further exploration, which are outlined in Table 1.

> **Learning about oneself** - learning issues include understanding one's strengths and weaknesses; one's changing role within the business; personal and family needs and objectives; areas for personal development; personal interests and motivations.
>
> **Learning about the business** - including strengths and weaknesses, opportunities and threats; internal business needs; requirements for growth; areas for development; understanding and facilitating one's staff; future direction.
>
> **Learning about the environment and entrepreneurial networks** - learning about how to manage relationships with existing and potential customers, suppliers and competitors. Also about appreciating and maximising the relationship with advisory agencies and support services such as the bank, the accountant.
>
> **Learning about small business management** - learning about how to run and control the business effectively e.g. important procedures and systems such as recruiting, reward structures, financial monitoring.
>
> **Learning about the nature and management of relationships** - This regards both internal (to the firm) and external relationships. This final element of the learning task forms an integral part of the other four elements outlined above.

Table 1: *Key elements within the 'content' dimension of the entrepreneurial learning task*

The development of a dynamic learning perspective of entrepreneurship requires a theory of entrepreneurial learning that not only takes account of what entrepreneurs must and do learn about during the establishment and management of entrepreneurial ventures, but also the specific *processes* of learning that stimulate the learning content outlined above. To conceptualise the entrepreneurial learning task from a process perspective, the following section focuses on the emerging importance of critical learning events within the entrepreneurial learning literature. In extending current understanding of this discernable entrepreneurial learning mechanism, the paper goes on to explore the specific forms and levels of learning triggered by these non-routine experiences.

Conceptualising interrelated processes of entrepreneurial learning

Recent work on entrepreneurial learning has begun to conceptualise the 'process' dimension of entrepreneurial learning. In comprehending 'how' entrepreneurs learn, there is a widely endorsed view that entrepreneurs are action-oriented and much of their learning is experientially based (Rae and Carswell, 2000). Several theorists have emphasised that entrepreneurs learn primarily through 'learning by doing' (Cope and Watts, 2000; Smilor, 1997), including such learning processes as trial and error, explicit problem solving and discovery (Deakins and Freel, 1998; Young and Sexton, 1997). As Minniti and Bygrave (2001) argue, knowledge about 'how to be entrepreneurial' can only be acquired through learning-by-doing or direct observation. Postle (1993) refers to this as the 'affective' mode of learning, which 'refers to learning by encounter, by direct experience. It finds expression through "being there", through immersion in an experience' (p33). The notion that 'we begin where we are, and learn as we act' (Hutton, 1989; p54) is extremely relevant to the study of entrepreneurial learning, as Gibb (1997) emphasises.

> 'The predominant contextual learning mode in this [small business] environment is that of…learning from peers; learning by doing; learning from feedback from customers and suppliers; learning by copying; learning by experiment; learning by problem solving and opportunity taking; and learning from making mistakes' (Gibb, 1997; p19).

Entrepreneurial learning from critical experiences

Accepting that entrepreneurs learn through experience, Reuber and Fischer (1993) argue that it is the need to conceive more deeply *how* entrepreneurs learn from formative experiences, through the identification of entrepreneurial learning 'mechanisms', which remains a key research objective. More recently, there is growing evidence to suggest that significant 'events' or 'episodes' have an influential role to play in stimulating entrepreneurial learning (Author, 2001; Deakins and Freel, 1998; Rae and Carswell, 2000). Crucially, both positive and negative experiences, such as notable successes and failures, are seen to impact on the entrepreneurial learning process (Minniti and Bygrave, 2001; Rueber and Fischer, 1999). As Young and Sexton (1997) assert, the learning activities of entrepreneurs emerge in response to meaningful opportunities and problems.

The importance of unusual, discontinuous learning 'events' is also apparent within the management and adult learning literatures (Burgyone, 1995; Marsick and Watkins, 1990; Mumford, 1994). Although learning is a continuous process (Mumford, 1991), it appears that confronting and overcoming challenges and problems can be rich sources of learning (Daudelin, 1996; Kleiner and Roth, 1997).

The notion of 'critical learning events' has become an emergent theme within theorising on entrepreneurial learning (Cope and Watts, 2000; Deakins et al, 2002; Deakins et al, 2000; Deakins and Freel, 1998; Sullivan, 2000; Taylor and Thorpe, 2000). Interestingly, Rae and Carswell (2000) postulate the existence of wider 'learning episodes', where entrepreneurs have described seminal periods of learning that have been instrumental in forming their approaches to life and work. Similarly, empirical work on entrepreneurial learning has demonstrated the major impact that 'critical episodes' can have on the entrepreneur's personal learning and development (Author, 2003b). Deakins and Freel (1998) eloquently summarise the importance of critical events in distinguishing how entrepreneurs learn.

> 'Entrepreneurship and the growth process is essentially non-linear and discontinuous. It is a process that is characterised by significant and critical learning events. The ability of entrepreneurs to maximise knowledge as a result of experiencing these learning events will determine how successful their firm eventually becomes' (Deakins and Freel, 1998; p153).

Although critical learning events represent an appreciable entrepreneurial learning process, there exists currently a lack of understanding within the entrepreneurship discipline regarding the specific forms and levels of learning associated with these exceptional experiences. Drawing on wider learning literatures, it can be demonstrated that a pertinent aspect of critical events is that the learning from these experiences can be 'transformational' (Appelbaum and Goransson, 1997), in the sense that when individuals face such non-routine situations, their learned responses and habitual ways of behaving prove ineffectual (Marsick and Watkins, 1990). Such unusual circumstances require heightened attention and experimentation, forcing individuals to question their taken-for-granted beliefs and assumptions and reframe their appreciation of the situation at hand (Argyris and Schön, 1978; Schön, 1983). In this respect, a key argument put forward here

is that there is more to learning from critical events than the gradual accumulation of more routinised and habitual 'incremental' learning (Mezirow, 1991).[5]

Rather, this paper contends that significant opportunities and problems during the entrepreneurial process have the power to create 'higher-level' learning outcomes. Such fundamental learning involves radical change and has the capacity to transform the underlying assumptions and values that guide one's actions (Argyris and Schön, 1978; Mezirow, 1991), thereby creating a shift in 'mindset' (Applebaum and Goransson, 1997). It is suggested here that higher-level learning creates the capacity for entrepreneurs to 'do things differently' rather than refining the efficacy of extant behaviours and actions. As Fiol and Lyles (1985) assert, some kind of 'crisis' is a prerequisite for 'higher-level' learning and that such 'shocks', 'jolts' or 'crises' are necessary for 'unlearning, new higher-level learning and readaptation to take place' (p808).

Within the organisational learning literature the terms 'double-loop', 'transformational' and 'generative' are used interchangeably by some theorists to describe the same kind of higher-level learning (Appelbaum and Gorannson, 1997; Nevis et al, 1995). Recent work within the entrepreneurship domain (Author, 2003a), however, illustrates that entrepreneurs can experience very different forms of higher-level learning with regard to critical events. It demonstrates that discontinuous events can trigger both 'double-loop' (Argyris and Schön, 1978) and 'transformative' (Mezirow, 1991, 1990) learning outcomes - forms of learning conceptualised by management and adult learning theorists that are both of a higher-order and yet remain qualitatively different.

More specifically, this empirically based research (Author, 2003a) highlights that critical events can create double-loop learning in entrepreneurs that generates a renewed understanding or redefinition of *organizational* processes and strategies. In contrast, such experiences can also stimulate transformative learning that has a distinctly personal dimension and has the capacity to trigger considerable changes in the entrepreneur's *self-awareness*. As Mezirow (1991) states, transformative learning involves 'an enhanced level of awareness of the context of one's beliefs and feelings [and]…involves profound changes in self, changes in cognitive, emotional, somatic, and unconscious dimensions' (p161, p177).

To develop a deeper conceptualisation of the specific learning outcomes triggered by critical events during the entrepreneurial process, it is proposed here that these experiences not only have the capacity to create fundamental changes in the entrepreneur's awareness regarding the effective management of their business but also in terms of the entrepreneur's personal identity; learning that impacts directly on the their self-understanding, perceptions and behaviour at a much deeper level. Adult learning theorists Boud et al (1985) emphasise the powerful impact that such learning can have.

> 'Some learning can become so related to the self that it enters into our sense of identity and can have considerable importance and become a significant force in our lives. Significant feelings can come to be attached to this type of learning and any learning experience which touches this area can give rise to strong emotions' (Boud et al, 1985; p33).

In conceptualising the relationship *between* higher-level and lower-level forms of entrepreneurial learning, empirical work by the author (Author, 2001) also demonstrates that learning from critical events can be 'metamorphic', in the sense that more fundamental higher-level learning is often followed by a period of more adaptive, incremental learning. This work illustrates that this more gradual learning can either positively or negatively reinforce the more radical, transformational change in awareness created by a discontinuous event. Within the context of entrepreneurial learning, such findings stand in contrast to Nevis et al's (1995) work in the management learning domain, which asserts that subsequent adaptive learning necessarily reinforces transformational learning.

The affective dimension of critical experiences

Although critical events can act as triggers for fundamental forms of entrepreneurial learning, it is imperative to acknowledge that such learning can often be traumatic and stressful for the entrepreneur to endure (Author, 2001). With regard to transformative learning, for example, Mezirow (1991) concedes that there is often considerable emotional 'fallout' associated with learning that challenges the individual's perceptions of himself or herself. 'Any major challenge to an established perspective can result in a transformation. These challenges are painful; they often call into question deeply held personal values and threaten our very sense of self' (Mezirow, 1991; p168). A constituent

element of many significant experiences during the entrepreneurial process, particularly more negative experiences or 'crises', is that they are emotionally charged events (Cope and Watts, 2000). This reflects Brown's (2000) recognition that 'learning and emotion work together in a tandem motion' (p290). Within the field of management, Snell (1992) illustrates that such negative critical experiences can often represent painful psychological blows, which he describes as 'hard knocks'. However, Snell (1992) goes on to emphasise that there is much more to crises than merely viewing them as wholly negative experiences.

> 'By looking at the stressful nature of these events, we overlook the potential learning involved when a manager is forced to face a difficult situation and his/her own weaknesses' (McCauley, 1986; in Snell, 1992; p17).

Accepting that mistakes, crises and failures can have a negative immediate impact in both business and personal terms, it is useful to highlight here the positive and productive learning outcomes that can result from these events in the longer-term. Reuber and Fischer (1999) highlight that 'a particular event can have both positive and negative impacts. For example, the loss of a key customer might reduce sales revenue in the short term, but if the firm can learn from this experience, it may result in better long-term performance through reduced dependency and/or improved service quality' (p31). This paper stresses how valuable negative critical events can be not only in gaining both confidence and knowledge, but also in terms of reflecting on the consequences of one's actions and actively trying to ensure that such events do not reoccur (Author, 2001). As Smilor (1997) states, entrepreneurs 'learn from what works and, more importantly, from what doesn't work' (p344). This reflects Snell's (1992) acknowledgement that 'personal development and total control are incompatible, hard knocks cannot be totally prevented if the person wishes to continue to learn and develop' (p18).

The importance of routinised learning

It must be highlighted at this point that entrepreneurs do not learn solely through facing exceptional learning 'events'. Rather, entrepreneurs are constantly learning and developing as they manage their business (Hines and Thorpe, 1995; Rueber and Fischer, 1993), and can learn through regularised and repetitive activity as well as more non-

linear, discrete events (Costello, 1996; Reuber and Fischer, 1999). As Minniti and Bygrave (2001) point out, 'learning is a process involving repetition and experimentation that increases the entrepreneur's confidence in certain actions and improves the content of his stock of knowledge' (p7).

Within the field of management learning, Burgoyne and Hodgson (1983) illustrate the importance of everyday learning by doing in creating a gradual or tacit change in one's orientation or attitude. They indicate that managers appear to draw on elements of a 'background consciousness' as they deal with events and that this background consciousness can change, in a gradual manner, in the light of a continual flow of information. Thus, this paper argues that although critical learning events play a central role in triggering higher-level entrepreneurial learning, they are not the only learning mechanism capable of creating such deep learning. Although more routinised, 'adaptive' learning is normally associated with lower-level learning outcomes (Appelbaum and Gorannson, 1997; Argyris and Schön, 1978; Fiol and Lyles, 1985), the work of Burgoyne and Hodgson (1983) demonstrates that higher-level learning can also arise from the accumulation of more gradual, incremental learning.

> 'The forms of learning that came nearest to being changes in 'deeper' underlying values, ways of thinking, *etc.* seem to have come through the process of '*gradual and tacit change*'…where the learning process seems to have been a simple, single loop one of gradually eroding one belief and building another with the gradual accumulation of evidence and experience' (Burgoyne and Hodgson, 1983; p398).

Understanding the relationship between reflection, learning and action

It is vitally important, given the consensus that much entrepreneurial learning is action-oriented, to dispel the misconception that entrepreneurs are merely 'doers', 'whose time is best spent in doing, not in dreaming or retrospective sense-making' (Bird, 1988; p446). Rather, it is beneficial to view entrepreneurs as 'reflective practitioners' (Cope and Watts, 2000; Schön, 1983). In developing a deeper understanding of how the process of entrepreneurial learning takes place, this paper draws on a range of adult learning literature to emphasise that it is through reflection that experience is turned into learning (Boud et al, 1985; Daudelin, 1996; Preskill; 1996). As Marsick and Watkins (1990) argue, 'learning takes place through an ongoing, dialectical process of action and

reflection' (p8). Reflection can be viewed as a process that brings meaning to experience (Rae and Carswell, 2000), for as Jarvis (1987a) states, 'for an experience to become meaningful, people have to think about it, reflect upon it' (p168). Although Boud et al (1985) recognise the difficulties associated with defining reflection they offer the following conceptualisation. 'A generic term for those intellectual and affective properties in which individuals engage to explore their experiences in order to lead to new understandings and appreciations. It may take place in isolation or in association with others' (p19).

This paper contends that an essential feature of critical learning events within the entrepreneurial process is their capacity to stimulate challenging or 'deep' reflection, particularly more negative mistakes or crises, which is instrumental in creating higher-level entrepreneurial learning from these experiences (Author, 2003a). As Jarvis (1987a) points out, it is disjunction and unexpected events, rather than more routinised experiences, which provide a greater stimulus for thought and reflection. This point is reinforced by Marsick and Watkins (1990), stating that 'mistakes are potent tools for learning, in part, because individuals often feel so brittle about making them. As a result, they will be more likely to reflect on the mistake to determine its causes and to prevent its repetition' (p13). It also imperative to stress the complex relationship between reflection and action, and to recognise that critical experiences have the capacity to create 'reflection-for-action' (Preskill, 1996), which involves the individual's ability to focus on the future rather than the past and to predict how they will use what they have learned from previous experiences. Action learning theorists McGill and Beaty (1995) illustrate the complex relationship between reflection and action with regard to critical experiences.

> 'We all learn through experience by thinking through past events, seeking ideas that make sense of the event and help us find new ways of behaving in similar situations in the future. This thinking through or reflection is the essential link between past action and more effective future action…In times of crisis or radical change reflection becomes more important and also more difficult; it is at times like these we make powerful decisions about our future' (McGill and Beaty, 1995; p21).

The generative process of entrepreneurial learning

Numerous learning theorists argue that reflection and learning inform further action (Boud et al., 1985; Hutton, 1989; Jarvis, 1987a; Kolb, 1984; Mezirow, 1991). As Boud et al (1985) assert, 'while reflection is itself an experience, it is not, of course, an end in itself. It has the objective of making us ready for new experience. The outcomes of reflection may include a new way of doing something, the clarification of an issue, the development of a skill or the resolution of a problem' (p34). There is the notion that, through reflection, individuals are not only able to learn from events and experiences, but that they are also able to 'bring forward' this learning to new situations and encounters. This ability to extrapolate one's learning and develop new ways of looking at the world is described as 'generative' learning (Senge, 1990), which Gibb (1997) introduces within the context of entrepreneurial activity.

> 'Learning entails not only a process of adaptive learning in order to cope with change
> and survive but also what has been deemed 'generative' learning which embodies the
> capacity to create and 'bring forward' experience, rather than wait for (and learn from)
> it' (Gibb, 1997; p17).

Interpretation suggests that generative learning is both retrospective and prospective, as it is the interaction between the past and the future that provides the basis for intention and further action (Boud et al., 1985; Jarvis, 1987a). As Daudelin (1996) asserts, there are two key conditions for learning from experience, 'developing insights from past events and applying them to future actions' (p38). It is this *application* of reflective learning that encapsulates the distinctive nature of generative learning. In apprehending the generative process of learning from critical events, Gibb's (1997) conceptualisation is adapted here to define 'generative' learning as the ability to extrapolate and 'bring forward' one's learning from critical events to new situations, incidents and experiences.

Although the concept of generative learning is touched upon by Gibb (1997), this paper maintains that this is a valuable concept for the study of entrepreneurial learning that remains significantly under-conceptualised. A key argument put forward here is that the importance of generative learning rests on its ability to enable entrepreneurs to abstract and generalise across contexts, to recognise patterns and build relationships between different situations and events. Generative learning outcomes not only allow for more

effective action, but also allow for more effective action in a *broader* range of new situations (McGill and Warner Weil, 1989); thereby creating 'higher-order skills that are generalisable and lead to a greater transfer of learning' (Henry, 1989; p29). With regard to critical learning events, through generative learning processes entrepreneurs are able to make sense of current and immediate critical events by understanding their 'relatedness' to previous critical experiences. In essence, developing new cognitive 'frames of reference' (Huber, 1991) that may help to recognise the underlying reasons why certain events occur.

In developing the concept of generative learning, this paper draws on empirical research to introduce two distinctive forms of generative learning, *adaptive* and *proactive* (Author, 2001). This work illustrates that cumulative learning through experience enables entrepreneurs to develop what could be described as a 'cognitive store' of accessible experiential learning, which they are able to reflect upon and subsequently utilise in similar situations, which can be understood simply as the acquisition of 'know-how' (Kim, 1993). Other entrepreneurship theorists have described such learning as the 'subjective stock of knowledge' (Minniti and Bygrave, 2001), or 'experiential stock' (Reuber and Fischer, 1999) that entrepreneurs accumulate over time.

In their attempts to develop a conceptual framework of entrepreneurial learning, Young and Sexton (1997) differentiate between 'explicit' and 'implicit' learning. They make the valuable suggestion that implicit learning appears to develop gradually, and that entrepreneurs often 'possess a "feel" or "knack" for performing certain tasks and understanding how a particular system works. This feeling or knack, may be the result of implicit learning that allows entrepreneurs to improve their performance' (Young and Sexton, 1997; p227). This incremental process of positive affirmation of one's actions can have a 'self-reinforcing strength' (Minniti and Bygrave, 2001). Empirical evidence demonstrates that this evolutionary form of learning can produce a kind of *adaptive* generative learning, where the entrepreneur employs successful, tried and tested responses when faced with a new event or set of circumstances that is perceived to have distinct similarities to his/her previous experiences (Author, 2001). As Minniti and Bygrave (2001) state, 'knowledge gained in earlier problems is used later to solve similar ones and becomes embedded in expectations and beliefs' (p14).

The concept of *proactive* generative learning describes a learning process that enables entrepreneurs to become sensitised to potential critical incidents by becoming attuned to factors and circumstances that may become 'critical'. This form of generative learning enables entrepreneurs to develop what could be described as a cognitive 'early warning system' that enables the visualisation and anticipation of critical events more effectively. In this respect, generative learning can be a highly productive form of entrepreneurial learning, as it can endow entrepreneurs with more control over the successful management of their businesses. Furthermore, there is evidence to suggest that entrepreneurs who experience such learning are able to proactively put measures in place to try and avoid the repetition of more negative experiences (Author, 2001). This resonates with Boud et al's (1985) acknowledgement that the benefits of reflection may be lost unless they are linked to action and a commitment of some kind based on one's reflective learning.

It is vital to recognise that the generative process of bringing forward one's learning to new situations and experiences may not be immediate. With regard to entrepreneurial learning, Reuber and Fischer (1999) highlight the issue of 'timing' between learning events and the subsequent application of lessons learned. Similarly, Mezirow (1991) indicates that more challenging and critical forms of reflection require a 'hiatus' in which adult learners are able to put their experiences into perspective. Consequently, the learning that results from such reflective practice cannot become an integral element of the action process. Boud et al (1993) come to similar conclusions.

> 'For learning to take place, the experience does not have to be recent. The experience
> itself may not change, but the learning from it can grow, the meaning of it can be
> transformed, and the effects of it can be altered. The linking of new experiences with
> those of the past can provide new meanings and stimulate us to explore again those parts
> of our world which we have avoided' (Boud et al, 1993; p9).

A central proposition of this paper, therefore, is that entrepreneurial learning can be conceptualised as an evolutionary process of awareness, reflection, association and application; the important issue being that the *utilisation* of entrepreneurial learning may take place long after the learning experience itself.

More radically, it must be emphasised that it may not always be possible for entrepreneurs to 'bring forward' learning from previous experiences. As Kleiner and Roth (1997) point out, in certain instances individuals continue to make mistakes and 'seem to stumble along, oblivious to the lessons of the past…Most important, the old ways of thinking that led to the mistakes are never discussed, which often means that they are still in place to spawn new mishaps again and again' (p172). Jarvis (1987) postulates the existence of 'non-learning' responses to situations in which individuals may learn errors that fit in with their existing view of the world or that reinforce erroneous beliefs.

Similarly, within the field of entrepreneurship, West and Wilson (1995) argue that it is possible for entrepreneurs to fall into 'learning traps', whereby they misinterpret new situations due to their over-reliance on preconceived perceptions formed through past experience. What must be stressed here is that learning extrapolated to new situations is not necessarily positive or beneficial and does not always increase an entrepreneur's effectiveness, for 'individuals can incorrectly learn, and they can correctly learn that which is incorrect' (Huber, 1991; p89). Thus, lengthy experience can actually be counterproductive to entrepreneurial effectiveness (Reuber and Fischer, 1999), as entrepreneurs may over-exploit actions that generate initially desirable outcomes, thereby bringing forward learning that is false (Minniti and Bygrave, 2001).

The aim of the final section that follows is to emphasise that any conceptualisation of how or what entrepreneurs learn must be mediated by an appreciation of the overarching affective and social characteristics of entrepreneurial learning. Put simply, in moving towards a robust learning perspective of entrepreneurship, this paper stresses that it is vital to understand the context in which learning takes place (Taylor and Thorpe, 2000). It is argued that although literature on these fundamental dimensions of entrepreneurial learning is emerging, much further theoretical development is required.

Conceptualising the affective and social characteristics of entrepreneurial learning

Within the adult and management learning literatures it has long been recognised that learning is located within certain situations and contexts (Fox, 1997) and that learning is an intrinsically social process (Burgoyne, 1995; Holman et al, 1997; Pavlica et al, 1998).

Lave and Wenger (1991) explicate the concept of 'situated learning', where learning is described as 'an integral and inseparable aspect of social practice' (p31). In applying Lave and Wenger's work to the entrepreneurship domain, this paper stresses the importance of viewing entrepreneurs as practitioners who operate within multiple, overlapping social communities of knowledge and practice.

> 'Learning therefore can be viewed as a responsive, rhetorical and argumentative process that has its origins in relationships with others. As such, learning cannot be located entirely within the individual. Argument and debate with oneself (or selves) and in collaboration with others is the basis of learning' (Holman et al, 1997; p143).

Researchers have begun to conceptualise the social dynamic inherent within entrepreneurial learning (Deakins et al, 2000; Rae, 2002; Taylor and Thorpe, 2000). Particular emphasis has been placed on entrepreneurial networks as 'learning systems' (Mäkinen, 2002). Hines and Thorpe (1995) argue that a complex network of 'learning agents' exists and entrepreneurs learn within the wider context of these personal as well as business relationships. Similarly, Gibb (1997) defines the 'learning environment domain' for small business as embedded within the transactional and business relationship networks of the entrepreneur including suppliers, customers, bankers, staff as well as family and peers. Gibb (1997) goes onto emphasise that 'learning partnerships' need to be created where small businesses and their owners need to learn from, and with, key network agents.

Several theorists also highlight the social characteristic of entrepreneurial learning in relation to critical learning events (Boussouara and Deakins, 1999; Taylor and Thorpe, 2000). As Boussouara and Deakins (1999) state, 'critical incidents and learning occur from the experience of dealing with customers/suppliers and other stakeholders' (p221). Taylor and Thorpe (2000) conclude that there is a powerful social dimension to owner-manager learning from non-routine events, though the significance of this influence is yet to be revealed.

More empirical work is clearly required to identify the distinctive forms of learning that arise from the entrepreneur's engagement in social relationships, both inside and outside the venture. For example, compelling evidence suggests that the role of the entrepreneur's domestic partner in facilitating reflection and learning is an important yet

currently neglected area of research (Author, 2001). In terms of 'who' entrepreneurs learn from and with, work by Deakins et al (2000), Sexton et al (1997) and Sullivan (2000) indicate that issues such as trust, respect and shared experience impact on the quality of the learning experience. Substantial research issues surround the influence that social issues such as these have in terms of stimulating different types and levels of entrepreneurial learning.

In creating conceptual links between the emotional and social characteristics of entrepreneurial learning, empirically based theorising (Author, 2003a) highlights the importance of highly emotional relationship conflicts in stimulating higher-level forms of entrepreneurial learning. Further research is required to understand more clearly the role of social conflict in the entrepreneurial learning process. This paper concludes that developing a small business and learning to be an effective entrepreneur is by no means a smooth or easy process. Entrepreneurship can be understood as an emotionally intense process. To use Snell's (1992) terminology, an exploration of the learning experiences of entrepreneurs suggests that many aspects of the entrepreneurial learning task are achieved through 'painful' experiential learning and *repeated* 'hard knocks' (Author, 2001).

Glimpses of the powerful emotional dimension of entrepreneurial activity and learning can be observed in extant research (Cope and Watts, 2000) and yet the complex connection that exists between emotion and learning is yet to be conceptualised within the context of entrepreneurship. This reflects a broader recognition within the adult learning domain that most research on learning has failed to take into account its inherently affective dimension (Boud et al, 1985). As Boud et al (1993) remark, 'emotions and feelings are key pointers for, and barriers to, learning' (p15). A constructive avenue for inquiry involves exploring the affective dimension of critical events during the entrepreneurial process in greater depth, particularly the relationship between the emotional 'intensity' of the experience and the resultant depth of reflection and learning.

Conclusion

This paper has synthesised a broad range of learning literatures to propose a learning perspective of entrepreneurship as a valuable and distinctive approach for studying the

dynamic nature of entrepreneurship both during and beyond the new venture creation phase. This approach to researching entrepreneurship offers a new way of looking at the field, particularly those individuals engaged in entrepreneurial activity. It offers fresh opportunities for understanding entrepreneurs *in context*, by highlighting the complex, interactive learning relationship that exists between the entrepreneur, his/her business and the wider environment.

In conceptualising the nature of entrepreneurial learning in terms of phases, processes and characteristics, this paper has sought to provide a coherent and integrative theoretical basis from which additional research can continue to build an appreciation of entrepreneurship from a learning perspective. These interconnected elements of entrepreneurial learning are by no means definitive. Further research may reveal entirely new dimensions of learning in entrepreneurial contexts and more interdisciplinary, in-depth empirical work is a vital part of this theory building process.

It is concluded that entrepreneurial learning is not characterised by the notions of stability, consistency or predictability. Rather, evidence suggests that the concepts of metamorphosis, discontinuity and change more appropriately encapsulate the dynamics of this phenomenon (Author, 2001). Critical learning events have become a unifying theme within the literature on entrepreneurial learning. This paper has augmented current comprehension of these significant experiences through a process-based conceptualisation of the relationship between reflection, learning and action. A deeper appreciation is required of the periods of intense, fundamental learning that surround these discontinuous experiences in relation to subsequent phases of more stable and gradual learning. To borrow from Greiner's (1972) seminal thesis, new avenues for research exist in exploring the connections between revolutions and evolutions that occur in entrepreneurial learning as organisations grow.

A dynamic learning perspective offers considerable possibilities for the integration and re-conceptualisation of existing bodies of literature within the field of entrepreneurship. A 'learning lens' can be applied to organisational growth and the small business lifecycle, for example. Further exploration is needed to examine the finding that there exists a interactive, mutual developmental relationship between the individual and the

organisation, where entrepreneurs actively share their learning with their business to shape its growth and direction (Cope and Watts, 2000; Deakins and Freel, 1998). In utilising and adapting theoretical propositions put forward in this paper, the concepts of 'entrepreneurial preparedness' and 'learning task' could be viewed as cyclical as well as temporal, where entrepreneurs have to actively prepare for, and learn about, specific opportunities and phases of growth during the entrepreneurial process.

Other aspects of entrepreneurship to which a learning perspective can be applied include entrepreneurial networks and entrepreneurial failure. The concept of generative learning, for example, could be used to explore how entrepreneurs 'bring forward' learning from business failure to new ventures and entrepreneurial endeavours. In terms of integration, the inherent social characteristic of entrepreneurial learning developed here provides new ways of appreciating the evolving nature and value of network relationships in all aspects of entrepreneurial activity. Consequently, a learning perspective places individuals involved in the entrepreneurial learning process, including network actors and 'powerful others' such as the entrepreneur's spouse and family, at the heart of continuing inquiry.

In conclusion, this paper has drawn upon empirical research and numerous learning literatures to develop emergent themes on entrepreneurial learning and to introduce new concepts that clarify the multifaceted nature of the learning experienced by entrepreneurs. Solid theoretical foundations have been laid but researchers committed to understanding entrepreneurship from a learning perspective are confronted with innumerable avenues for further research.

Footnotes

[1] The term 'entrepreneurial learning' is used in this paper to mean learning experienced by entrepreneurs during the creation and development of a small enterprise, rather than a particular style or form of learning that could be described as 'entrepreneurial'.

[2] This is part of the wider debate that surrounds the notion that small business owners are only 'entrepreneurial' during the business initiation and creation stage, as discussed by Chan and Lau (1993). It is not the intention of this paper to become embroiled in this debate but rather to illustrate that rich opportunities for research exist beyond the new venture creation phase.

[3] This point by Gartner (1988) highlights the significant relationship between learning and knowing in relation to skill development. Although vital to developing a comprehensive learning perspective of entrepreneurship, it is not possible in this current paper to engage in a conceptualisation of the complex connections between entrepreneurial learning and entrepreneurial knowledge creation.

[4] Although organisational learning in entrepreneurial firms is central to developing a comprehensive learning perspective of entrepreneurship, it is not possible to engage in a substantive analysis of this literature in this particular paper. Furthermore, it is not the intention to engage in a debate regarding the relationship between individual versus organizational learning, although it is clear that this issue continues to attract significant attention (see, for example, Prange, 1999). Rather, the aim of this paper is to conceptualise the learning experienced by entrepreneurs during the initiation and growth of entrepreneurial ventures.

[5] As Mezirow (1991) explains, 'instrumental' learning is involved in task-oriented problem solving i.e. how to do something or how to perform. Such learning involves developing an understanding of the procedural assumptions guiding the problem-solving process. In this sense, instrumental learning relates to what is described as 'lower-level' (Fiol and Lyles, 1985) or 'adaptive' learning (Appelbaum and Goransson, 1997), which concerns more repetitive, everyday learning.

References

Anderson, V., and Skinner, D. (1999), Organisational Learning in practice: How do small businesses learn to operate internationally?, *Human Resource Development International*, 2(3).

Appelbaum, S. H., and Goransson, L. (1997), Transformational and adaptive learning within the learning organisation: A framework for research and application, *The Learning Organisation*, 4(3), 115-128.

Argyris, C., and Schön, D. A. (1978), *Organisational Learning: A Theory of Action Perspective*, Reading, MA: Addison-Wesley Publishing Co.

Author, (2001), The entrepreneurial experience: Towards a dynamic learning perspective of entrepreneurship, Unpublished Ph.D. thesis, University of Lancaster.

Author, (2003a), Entrepreneurial learning and critical reflection: Discontinuous events as triggers for higher-level learning, *Management Learning*, 34(4).

Author, (2003b), Exploring the nature and impact of critical experiences within small business growth and entrepreneurial development, Lancaster University Management School Working Paper Series.

Bird, B. (1988), Implementing entrepreneurial ideas: The case for intention, *Academy of Management Review*, 13(3), 442-453.

Boud, D., Cohen, R., and Walker, D. (1993), Introduction: Understanding learning from experience, in *Using Experience for Learning*, D. Boud, R. Cohen, and D. Walker, eds., Buckingham: SRHE & Open University Press.

Boud, D., Keogh, R., and Walker, D. (1985), What is reflection in learning?, in *Reflection: Turning Experience into Learning*, D. Boud, R. Keogh, and D. Walker, eds., 18-39, London: Kogan Page.

Boussouara, M., and Deakins, D. (1999), Market-based learning, entrepreneurship and the high technology small firm, *International Journal of Entrepreneurial Behaviour and Research*, 5(4), 204-223.

Brown, R. B. (2000), Contemplating the emotional component of learning, *Management Learning*, 31(3), 275-293.

Burgoyne, J. G. (1995), Learning from experience: From individual discovery to meta-dialogue via the evolution of transitional myths, *Personnel Review*, 24(6), 61-72.

Burgoyne, J. G., and Hodgson, V. E. (1983), Natural learning and managerial action: A phenomenological study in the field setting, *Journal of Management Studies*, 20(3), 387-399.

Bygrave, W., and Hofer, C. W. (1991), Theorising about entrepreneurship, *Entrepreneurship: Theory and Practice*, 15(4), 13-22.

Casson, M. (1982), *The Entrepreneur: An Economic Theory*, Oxford: Martin Robertson & Co. Ltd.

Chan, K. F., and Lau, T. (1993), Are small business owner/managers really entrepreneurial? *Entrepreneurship and Regional Development*, 5, 359-367.

Chaston, I., Badger, B., and Sadler-Smith, E. (2001), Organisational learning: An empirical assessment of process in small U.K. manufacturing firms, *Journal of Small Business Management*, 39(2), 139-151.

Chell, E., and Haworth, J. M. (1988), Entrepreneurship and entrepreneurial management: The need for a paradigm, *Graduate Management Research*, 4(1), 16-33.

Cope, J., and Watts, G. (2000), Learning by doing: An exploration of experience, critical incidents and reflection in entrepreneurial learning, *International Journal of Entrepreneurial Behaviour and Research*, 6(3), 104-124.

Costello, N. (1996), Learning and routines in high-tech SMEs: Analysing rich case study material, *Journal of Economic Issues*, 30(2), 591-597.

Daudelin, M. W. (1996), Learning from experience through reflection, *Organisational Dynamics*, 24(3), 36-48.

Deakins, D. (1996), *Entrepreneurship and Small Firms*, Maidenhead: McGraw-Hill.

Deakins, D., and Freel, M. (1998), Entrepreneurial learning and the growth process in SMEs, *The Learning Organisation*, 5(3), 144-155.

Deakins, D., O'Neill, E., and Mileham, P. (2000) Executive learning in entrepreneurial firms and the role of external directors, *Education and Training*, 42(4/5), 317-325.

Deakins, D., Sullivan, R., and Whittam, G. (2002) Developing support for entrepreneurial learning: Evidence from start-up support programs, *International Journal of Entrepreneurship and Innovation Management*, 2(4/5), 323-338.

Fiol, C. M., and Lyles, M. A. (1985), Organisational Learning, *Academy of Management Review*, 10(4), 803-813.

Fox, S. (1997), Situated learning theory versus traditional cognitive learning theory: Why management education should not ignore management learning, *Systems Practice*, 10(6), 727-747.

Gartner, W. B. (1985), A conceptual framework for describing the phenomenon of new venture creation, *Academy of Management Review*, 10(4), 696-706.

Gartner, W. B. (1988), Who is an entrepreneur? Is the wrong question, *American Journal of Small Business*, 13(1), 11-32.

Gelderen, M. V., Van Der Sluis, L., and Jansen, P. (forthcoming), Learning opportunities and learning behaviours of small business starters: Relations with goal achievement, skill development and satisfaction, *Small Business Economics.*

Gibb Dyer, W. Jr (1994), Toward a theory of entrepreneurial careers, *Entrepreneurship: Theory and Practice*, (Winter), 7-21.

Gibb, A. A. (1995), "Learning skills for all: The key to success in small business development?" *International Council for Small Business - 40th World Conference*, Syndey, Australia.

Gibb, A. A. (1997), Small firms' training and competitiveness: Building on the small business as a learning organisation, *International Small Business Journal*, 15(3), 13-29.

Gibb, A. A., and Ritchie, J. (1982), Understanding the process of starting small businesses, *European Small Business Journal*, 1(1), 26-45.

Gray, C., and Gonsalves, E. (2002), Organisational learning and entrepreneurial strategy, *International Journal of Entrepreneurship and Innovation*, 3(1), 27-34.

Greenberger, D. B., and Sexton, D. L. (1988), An interactive model of new venture creation, *Journal of Small Business Management*, 26(3), 1-7.

Harvey, M., and Evans, R. (1995), Strategic windows in the entrepreneurial process, *Journal of Business Venturing*, 10, 331-347.

Hébert, R. F., and Link, A. N. (1988), *The Entrepreneur: Mainstream Views and Radical Critiques*, New York: Praeger.

Henry, J. (1989), Meaning and practice in experiential learning, in *Making Sense of Experiential Learning: Diversity in Theory and Practice*, S. Warner Weil and I. McGill, eds., Milton Keynes: SRHE & Open University Press.

Herron, L., and Sapienza, H. J. (1992), The entrepreneur and the initiation of new venture launch activities, *Entrepreneurship: Theory and Practice*, 17(1), 49-55.

Hines, T., and Thorpe, R. (1995), "New approaches to understanding small firm networks - the key to performance, managerial learning and development." *Proceedings of the 18th ISBA National Small Firms Policy and Research Conference*, Paisley.

Holman, D., Pavlica, K., and Thorpe, R. (1997), Rethinking Kolb's theory of experiential learning in management education, *Management Learning*, 28(2), 135-148.

Honig, B. (2001), Learning strategies and resources for entrepreneurs and intrapreneurs, *Entrepreneurship: Theory and Practice*, 26(1), 21-35.

Huber, G. P. (1991), Organisational learning: The contributing processes and the literatures, *Organisation Science*, 2(1), 88-115.

Hutton, M. (1989), Learning from action: A conceptual framework, in *Making Sense of Experiential Learning: Diversity in Theory and Practice*, S. Warner Weil and I. McGill, eds., Milton Keynes: SRHE & Open University Press.

Jarvis, P. (1987), *Adult Learning in the Social Context*, London: Croom Helm.

Jarvis, P. (1987a), Meaningful and meaningless experience: Towards an analysis of learning from life, *Adult Education Quarterly*, 37(3), 164-172.

Katz, J. A. (1992), A psychosocial cognitive model of employment status choice, *Entrepreneurship: Theory and Practice*, (Fall), 29-37.

Katz, J., and Gartner, W. B. (1988), Properties of emerging organizations, *Academy of Management Review*, 13(3), 429-441.

Kim, D. H. (1993), The link between individual and organisational learning, *Sloan Management Review*, (Fall), 37-50.

Kleiner, A., and Roth, G. (1997), How to make experience your company's best teacher, *Harvard Business Review*, 75(5), 172-177.

Kolb, D. A. (1984), *Experiential Learning*, Englewood Cliffs, NJ: Prentice Hall.

Kolvereid, L. (1996), Organisational employment versus self-employment: Reasons for career choice intentions, *Entrepreneurship: Theory and Practice*, (Spring), 23-31.

Lave, J., and Wenger, E. (1991), *Situated learning: Legitimate Peripheral Participation*, Cambridge: Cambridge University Press.

Learned, K. E. (1992), What happened before the organization? A model of organization formation, *Entrepreneurship: Theory and Practice*, 17(1), 39-48.

Low, M. B., and MacMillan, I. C. (1988), Entrepreneurship: Past research and future challenges, *Journal of Management*, 14(2), 139-161.

Mäkinen, H. (2002), Intra-firm and inter-firm learning in the context of start-up companies, *International Journal of Entrepreneurship and Innovation*, 3(1), 35-43.

Marsick, V. J., and Watkins, K. E. (1990), *Informal and Incidental Learning in the Workplace*, London: Routledge.

Matlay, H., and Mitra, J. (2002), Entrepreneurship and learning: The double act in the triple helix, *International Journal of Entrepreneurship and Innovation*, 3(1), 7-16.

McCauley, C.D. (1986), Developmental experiences in managerial work: A literature review, *Technical Report No. 26*, Centre for Creative Leadership, Greensboro, North Carolina.

McGill, I., and Beaty, L. (1995), *Action Learning*, London: Kogan Page.

McGill, I., and Warner Weil, S. (1989), Continuing the dialogue: New possibilities for experiential learning, in *Making Sense of Experiential Learning: Diversity in Theory and Practice*, S. Warner Weil and I. McGill, eds., Milton Keynes: SRHE & Open University Press.

Merz, G. R., Weber, P. B., and Laetz, V. B. (1994), Linking small business management with entrepreneurial growth, *Journal of Small Business Management*, 32(4), 48-60.

Mezirow, J. (1991), *Transformative Dimensions of Adult Learning*, San Francisco: Jossey-Bass.

Mezirow, J. (1990), How critical reflection triggers transformative learning, in *Fostering Critical Reflection in Adulthood: A Guide to Transformative and Emancipatory Learning*, J. Mezirow and Associates, eds., San Francisco: Jossey-Bass.

Minniti, M., and Bygrave, W. (2001), A dynamic model of entrepreneurial learning, *Entrepreneurship: Theory and Practice*, 25(3), 5-16.

Mumford, A. (1991), Individual and organisational learning - the pursuit of change, *Industrial and Commercial Training*, 23(6), 24-31.

Mumford, A. (1994), Four approaches to learning from experience, *The Learning Organisation*, 1(1), 4-10.

Naffziger, D. W., Hornsby, J. S., and Kuratko, D. F. (1994), A proposed research model of entrepreneurial motivation, *Entrepreneurship: Theory and Practice*, (Spring), 29-42.

Nevis, E. C., DiBella, A. J., and Gould, J. M. (1995), Understanding organisations as learning systems, *Sloan Management Review*, (Winter), 73-85.

Pavlica, K., Holman, D., and Thorpe, R. (1998), The manager as a practical author of learning, *Career Development International*, 3(7), 300-307.

Penn, D. W., Ang'wa, W., Forster, R., Heydon, G., and Richardson, S. J. (1998), Learning in smaller organisations, *The Learning Organisation*, 5(3), 128-137.

Postle, D. (1993), Putting the heart back into learning, in *Using Experience for Learning*, D. Boud, R. Cohen, and D. Walker, eds., Buckingham: SRHE & Open University Press.

Prange, C. (1999), Organisational learning - desperately seeking theory? In *Organizational Learning and the Learning Organisation*, M. Easterby-Smith, J. Burgoyne, and L. Araujo, eds, London: Sage Publications.

Preskill, H. (1996), The use of critical incidents to foster reflection and learning in HRD, *Human Resource Development Quarterly*, 7(4), 335-347.

Rae, D. (2002), Entrepreneurial emergence: A narrative study of entrepreneurial learning in independently owned media businesses, *International Journal of Entrepreneurship and Innovation*, 3(1), 53-59.

Rae, D. (2000), Understanding entrepreneurial learning: A question of how?, *International Journal of Entrepreneurial Behaviour and Research*, 6(3), 145-159.

Rae, D. and Carswell, M. (2001), Towards a conceptual understanding of entrepreneurial learning, *Journal of Small Business and Enterprise Development*, 8(2), 150-158.

Rae, D., and Carswell, M. (2000), Using a life-story approach in researching entrepreneurial learning: The development of a conceptual model and its implications in the design of learning experiences, *Education and Training*, 42(4/5), 220-227.

Reuber, A. R., and Fischer, E. (1999), Understanding the consequences of founders' experience, *Journal of Small Business Management*, 37(2), 30-45.

Reuber, A. R., and Fischer, E. M. (1993), The learning experiences of entrepreneurs, in *Frontiers of Entrepreneurship Research*, N. C. Churchill et al., eds., Wellesby, Mass.: Babson Centre for Entrepreneurial Studies.

Sadler-Smith, E., Chaston, I., and Spicer, D.P. (1999), Organisational learning in smaller firms: An empirical perspective, *Proceedings of the 3rd International Organisational Learning Conference*, M. Easterby-Smith, L. Araujo and J. Burgoyne, eds., Department of Management Learning, Lancaster University.

Schön, D. A. (1983), *The Reflective Practitioner: How Professionals Think in Action*, New York: Basic Books.

Senge, P. M. (1990), *The Fifth Discipline: The Art and Practice of the Learning Organisation*, London: Century Business.

Shaver, K. (1995), The entrepreneurial personality myth, *Business and Economic Review*, 41(2), 20-23.

Shaver, K. G., and Scott, L. R. (1991), Person, process, choice: the psychology of new venture creation, *Entrepreneurship: Theory and Practice*, 16(2), 23-45.

Smilor, R.W. (1997), Entrepreneurship: Reflections on a subversive activity, *Journal of Business Venturing*, 12(5), 341-346.

Snell, R. (1992), Experiential learning at work: Why can't it be painless?, *Personnel Review*, 21(4), 12-26.

Starr, J. A., and Fondas, N. (1992), A model of entrepreneurial socialization and organisation formation, *Entrepreneurship: Theory and Practice*, (Fall), 67-76.

Stevenson, H. H., and Sahlman, W. A. (1989), The entrepreneurial process, in *Small Business and Entrepreneurship*, P. Burns and J. Dewhurst, eds., Basingstoke: Macmillan.

Sullivan, R. (2000), Entrepreneurial learning and mentoring, *International Journal of Entrepreneurial Behaviour and Research*, 6(3), 160-175.

Taylor, D. W., and Thorpe, R. (2000), The owner-manager – no isolated monad: Learning as a process of co-participation, *Proceedings of the 23rd ISBA National Small Firms Policy and Research Conference*, Aberdeen.

West, G. P., and Wilson, E. V. (1995), A simulation of strategic decision making in situational stereotype conditions for entrepreneurial companies, *Simulation and Gaming*, 26(3), 307-327.

Woo, C.V., Daellenbach, U. and Nicholls-Nixon, C. (1994), Theory building in the presence of 'randomness': The case of venture creation and performance, *Journal of Management Studies*, 31(4), 507-524.

Young, J. E., and Sexton, D. L. (1997), Entrepreneurial learning: A conceptual framework, *Journal of Enterprising Culture*, 5(3), 223-248.