

TOWARD A THEORY OF **ENTREPRENEURIAL ACTION**
Exploring Risk, Opportunity and Self in Technology Entrepreneurship

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Abstract

This thesis sets out to develop a model of entrepreneurial action that takes its point of departure in entrepreneurs' experiences of risk-taking, opportunity identification and the role of self. By focusing on what entrepreneurs experience as relevant aspects of their life worlds the goal is to attain a better understanding of the drivers and motivations of venture creation and development.

Action has traditionally been defined as doing something with a degree of intentionality or awareness, as opposed to mere thinking or mechanical behavior. This opens up for a number of alternative interpretations of entrepreneurial action, which is also reflected in the existing literature in the field of entrepreneurship. After a brief stocktaking of influential economic perspectives, this literature is reviewed under three broad headings, viz. behavioral, cognitive and discursive approaches to entrepreneurial action. These approaches in different ways increase our understanding, but also fail to capture important aspects of entrepreneurial action as a contextually embedded process while retaining the entrepreneur as a reflexive and strategically thinking subject.

To complement existing research the appended studies use phenomenological methods to explore the entrepreneurial life world. The general ambition is to examine how entrepreneurs experience and conceptualize their actions, including how key phenomena are conceptualized and enacted as part of the venture creation and development process. This is specifically addressed in four appended studies that investigate risk (study **I** and **IV**), opportunity (study **III**) and the role of self (study **II**) among technology entrepreneurs. The argument is that these themes cover key aspects of the entrepreneurial life world and therefore provide a good starting point for analyzing entrepreneurial action writ large.

Based on the individual studies, the discussion section outlines the contours of a general model of entrepreneurial action that centers around the questions: Who am I?, What do I see?, What do I do?, and What are the effects? By taking the experiences of the acting entrepreneur as the point of departure, it is also possible to re-examine many questions and assumptions in the study of entrepreneurship. Theoretically the salience of individual experiences suggests a new understanding of who the entrepreneur is. It also indicates that personal and often conflicting perceptions of risks and opportunities, regardless of their realism, constitute important drivers of entrepreneurial action. Practically the results may allow entrepreneurs, managers, educators, venture capitalists and others to take more informed actions. For entrepreneurs the results may increase awareness of their own role, problematize risks and opportunities, and also suggest new and creative ways for developing the venture. More specifically the results can be used as an analytical template in the evaluation of, e.g. financial and technological risks. The thesis also contributes methodologically by demonstrating how phenomenological methodologies may advance understanding of entrepreneurship and entrepreneurial action.

Keywords: Action, behavior, entrepreneur, technology entrepreneurship, innovation, embeddedness, enactment, phenomenology, risk, self, opportunity.

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My wife Pia and my family, Håkan, Helena, Jonas, Erik and David, fall mostly into the latter category. For this I am very grateful.

List of publications

This thesis is based on the following studies which will be referred to in the text by roman numerals.

- I. **Berglund, H.** & Hellström, T. (2002). Enacting Risk in Independent Technological Innovation, *International Journal of Risk Assessment and Management*. 3(2/3/4): 205-221.
- II. Hellström, T., Hellström, C. and **Berglund, H.** (2002). The Innovating Self: Exploring Self Among a Group of Technological Innovators, *Journal of Managerial Psychology*, 17(4): 267-286.
- III. **Berglund, H.** (forthcoming). Opportunities as Existing and Created: A Study of Entrepreneurs in the Swedish Mobile Internet Industry, *Journal of Enterprising Culture*.
- IV. **Berglund, H.** (forthcoming). Risk Conception and Risk Management in Corporate Innovation: Lessons from two Swedish Cases, *International Journal of Innovation Management*.

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1 Introduction

This thesis sets out to develop a model of entrepreneurial action that takes its point of departure in entrepreneurs' experiences of risk-taking, opportunity identification and the role of self^I.

Entrepreneurial action is widely acknowledged as an essential driver of industrial dynamics and growth. The insights and findings of authors like Joseph Schumpeter, Paul Romer (1986) and David Birch (1987) point to technological innovation and the entrepreneurial process as "the fundamental impulse that sets and keeps the capitalist engine in motion" (Schumpeter 1975: 83) in terms of industrial dynamics, economic growth and job creation. Still the majority of new firms fail (Kirchhoff 1997). This has prompted researchers to ask why some people become entrepreneurs^{II} and how to best understand what from the outside may seem to be a group of 'optimistic martyrs' (Dosi and Lovallo 1997) who sacrifice themselves for the common good.

Economists have traditionally had problems addressing entrepreneurship since the motivations of entrepreneurial action in many respects defy the rigorous systematization that is the hallmark of the discipline (Baumol 1968). Still investigating entrepreneurship, not only on the micro level but also as a social and economic phenomenon, requires an understanding of the nature of entrepreneurial action (Swedberg 2000, Boettke et al. 2004).

Most authors agree that entrepreneurship is about doing things differently or in a non-routine manner, typically developing a venture (Katz and Gartner 1988) with the goal to make profit (Kirzner 1973). Some take an inclusive stance and extend entrepreneurship to non-profit organizations and cultural development (e.g. Steyaert and Katz 2004). Regardless of how the profit motive is viewed, entrepreneurs are typically defined as perceiving situations differently, especially exercising good business judgment in the face of uncertainty (Casson 2003: 14). By virtue of having a unique understanding of a certain situation, an entrepreneur is said to be in a position to bring forth new and potentially profitable innovations. However, just having different perceptions and ideas is not enough. Another crucial characteristic of entrepreneurs is that they 'get things done' (Schumpeter 1975). Entrepreneurs not only understand situations differently; they also act assertively to exploit such differences. Were this not the case, entrepreneurship would not have any economic or social impact. Entrepreneurship is thus about perceiving things differently but also getting things done. This combination of thinking and doing puts the notion of action at the center of entrepreneurship studies.

While entrepreneurship is a topic of investigation in many scientific disciplines, the field of economics has a unique influence. Many empirical investigations use methods from psychology and sociology, but it is typically economic discourse that defines the entrepreneurial character. Attempts to delineate the field of entrepreneurship studies also tend to rely on economic theories for both theoretical input and academic legitimacy (e.g. Venkataraman 1997, Davidsson 2003).

Most economists, however, are concerned with understanding entrepreneurship as an economic function, typically comprising innovation and coordination, and only speculate as to the detailed workings of entrepreneurial action. Van de Ven for instance noted that while innovation is very much the engine of Schumpeter's theory of economic

development “he is remarkably silent about the process of innovation, other than observing that they come from entrepreneurs” (Van de Ven 1992: 218). In spite of this limited interest in the specific nature of entrepreneurial action or perhaps because of it, the most famous economists of entrepreneurship provide some rather inspiring speculations regarding the nature of entrepreneurial action.

“The importance of uncertainty as a factor interfering with the perfect workings of competition in accordance with the laws of pure theory necessitated an examination of foundations of knowledge and conduct. The most important result of this survey is the emphatic contrast between knowledge as the scientist and the logician of science uses the term and the convictions or opinions upon which conduct is based outside of laboratory experiments. The opinions upon which we act in everyday affairs and those which govern the decisions of responsible business managers for the most part have little similarity with conclusions reached by exhaustive analysis and accurate measurement” (Knight 1921: 231).

“What has been done already has the sharp-edged reality of all things which we have seen and experienced; the new is only the figment of our imagination. Carrying out a new plan and acting according to a customary one are things as different as making a road and walking along it. How different a thing this is becomes clearer if one bears in mind the impossibility of surveying exhaustively all the effects and counter-effects of the projected enterprise. Even as many of them as could in theory be ascertained if one had unlimited time and means must practically remain in the dark” (Schumpeter 1961: 85).

It seems that entrepreneurial action goes beyond *a priori* strategies and that understanding entrepreneurial action requires a closer examination of the convictions and opinions of practicing entrepreneurs as they create and develop ventures in the face of uncertainty. In line with this preliminary insight, the ambition of this thesis is to investigate key aspects of entrepreneurial action and in doing so develop a tentative action framework that takes its point of departure in the entrepreneurial life world^{III}. Before this ambition can be more specifically formulated, the notion of action is briefly elaborated.

1.1 What is action and how can it be understood?

Action is often defined as behavior or activity that carries subjective meaning to the agent, i.e. doing something with a degree of intentionality or awareness. This is then distinguished from mere thought or from behaviors that happen mechanically (Care and

Landesman 1968). This rather wide definition opens up for a number of alternative views, which are also reflected in entrepreneurship studies.

In entrepreneurship studies, most theories implicitly subscribe to some form of the ‘causal model’ of action (see Fig. 1). In this tradition, action is broken down into a combination of intentions and actions, i.e. cognitive or mental states exist in the minds of people and then cause specific actions (cf. Ajzen 1991). This suggests that external factors, intentions and performed actions can be analytically separated and also studied in relative isolation, often with one causing the other. The causal model of action is related to the functionalist paradigm that dominates entrepreneurship research (Grant and Perren 2002). Traditionally, studies have focused on how entrepreneurial actions are caused by personality traits (Delmar 2000), entrepreneurial intentions (Krueger et al. 2000), contextual pressures (Reynolds 1991), and the direct and indirect effects of the entrepreneurial climate (Carter et al. 2004). Many of these studies focus on a specific activity or event, such as the decision to become an entrepreneur, and try to empirically or theoretically identify the causing factors.

In recent years, scholars have also begun to investigate the actual behaviors of entrepreneurs as they take place over time. Typically these investigations focus directly on behaviors and pay relatively little or indirect attention to issues of meaning and intention (cf. Gartner and Carter 2003). By emphasizing either intentions or performed behaviors in isolation, these studies fail to capture important aspects of entrepreneurial action.

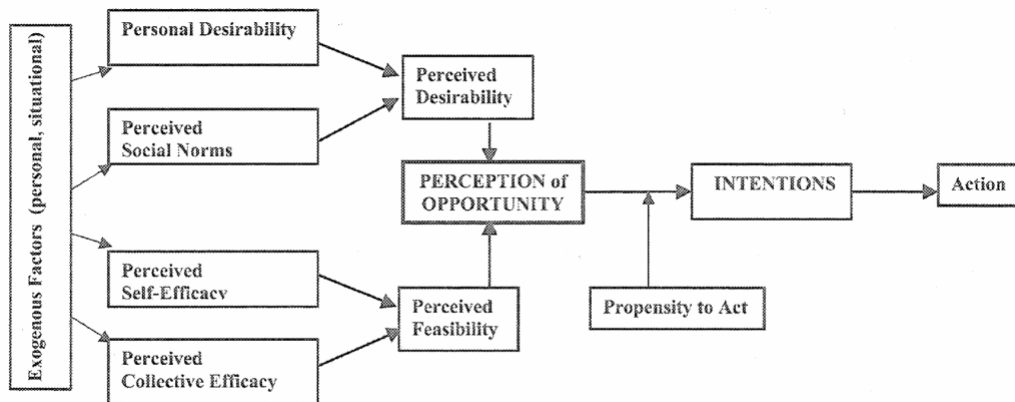


Figure 1. A causal model of entrepreneurial action (Krueger 2003).

There are, however, other explanations of action. Many philosophers and sociologists regard intention and action as inseparable and emphasize the importance of comprehending action from the point of view of an engaged actor (e.g. Merleau-Ponty 2002, Giddens 1979, Engeström 1987). If the previous tradition emphasized thinking and intentions as independent causes of actions, authors in this tradition focus more on praxis and reflection-in-action. In this tradition, concepts such as situatedness and social embeddedness become central for understanding human action. The embeddedness is also temporal, where time is seen as a continuous flow of nested events that are grounded

in, but not bounded by, the present (Emirbayer and Mische 1998). Action thus takes place in different temporal-relational contexts where actors try to understand and reconstruct their understanding of the past in ways that make it possible to comprehend the emerging present, which in turn affects how the future is enacted.

Many influential organization-theorists emphasize experience and situatedness rather than reflection and planning in their action models (Weick 1979, Brown and Duguid 1991, Brunsson 1993). This approach is argued to be especially relevant for theorizing about creative and innovative action, which requires stepping beyond both rational and normatively oriented views of human action (Joas 1996, Spinoza et al. 1997). It is also reflected in writings that contrast traditional management with the uncertainties and creative demands placed on entrepreneurial action (e.g. Van de Ven 1986, Stevenson and Harmeling 1990, Gartner et al. 1992). The argument is that creative action cannot be understood as the unproblematic execution of a preexisting intention or as following directly from a socially given role designation. Instead, creativity is seen as grounded in a highly practical involvement with the world. Actions are typically intuitive or habitual, but these habits constantly encounter unexpected obstacles in the form of interrupted plans, unattainable aspirations, conflicting goals etc. As such obstacles are encountered, action situations have to be reconstructed to enable continued action. Such reconstruction does not merely serve to overcome obstacles on the path towards fulfilling given goals. Instead the way in which the action situation is understood, including perceived goals and meanings, changes when reconstructions take place. This means that action is not merely restricted by the situation; the situation partly, and in unpredictable ways, constitutes the action by forcing the actor to creatively respond to it. Creative action is thus the situated and imaginative enactment of a specific problematic situation that draws on the individual as a historically and socially embedded being for its resolution. Consequently, the socially embedded and historically experienced person-in-a-situation is seen as the basic point of departure for understanding action (cf. Engeström 1987, Dreyfus 1991, Joas 1996).

Figure 2 provides a schematic image of such a view. This model is taken from activity theory (Engeström 1987) and describes how intentional actions are always situated in a world of mediating instruments, explicit and implicit rules, and shared communities with certain work organizations. While this general view of action, i.e. as historically and socially situated, serves as the analytical point of departure in this thesis, this specific figure is only included for illustrative purposes and should not be seen as an analytical framework for the present investigation.

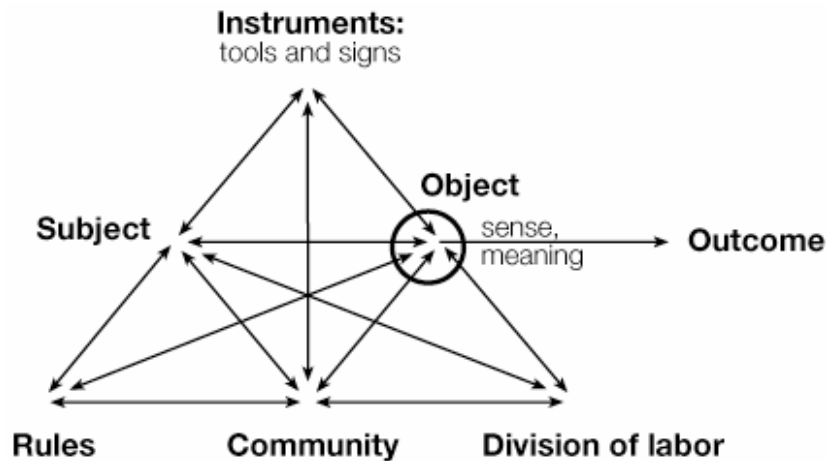


Figure 2. A model of socially and historically situated action (from Engeström 1987).

The situated view of entrepreneurial action is becoming more common in entrepreneurship studies. Sarasvathy (2001) describes entrepreneurship as a form of open-ended design work grounded in personal identity and network position. A number of authors use Giddens' structuration theory to theorize issues of social embeddedness (Jack and Anderson 2002) and opportunity identification (Chiasson and Saunders 2005), with others more broadly invoking the linguistic turn to situate entrepreneurship within ongoing discourses (Hjorth and Steyaert 2004). A recent special issue in *Entrepreneurship Theory & Practice* on 'alternative perspectives in entrepreneurship research' explicitly encourages a step away from the dominant functionalist paradigm, with its emphasis on predefined goals and objective measurements, since such a view "tends to write individuals out of the story ... and ignores the emotion and personal angst of entrepreneurs" (Jennings et al. 2005: 147; see also Steyaert and Katz 2004).

As seen above, both causal and situated perspectives are represented in entrepreneurship studies, with the overwhelming majority of studies belonging to the first category. There is also a tendency within the latter category to focus on situations to the detriment of individual initiative and agency. Hence there is a need for studies that view entrepreneurial action as situated practice, while retaining focus on the entrepreneur as a reflexive and strategically thinking subject.

1.2 Purpose

The purpose of this thesis is to develop a model that explains venture creation and development in terms of entrepreneurial action. As opposed to behavior, entrepreneurial action is taken to be reflexive and always taking place in relation to specific situations and a broader social and historical context. A theory of entrepreneurial action that builds on the entrepreneur as a reflexive and engaged subject should consequently describe how entrepreneurs experience and conceptualize their actions as they create and develop their ventures.

The working hypothesis is that entrepreneurial action can be understood in terms of the interrelated themes of risk, opportunity and self. These themes are analytically connected in that entrepreneurs seek to attain future opportunities, however vaguely perceived, by taking risky actions that transform this vagueness into a (profitable) enterprise. They are also reflected in the literature. Hébert and Link review the history of economic thought and conclude that “Entrepreneurial action may mean creation of an opportunity as well as a response to existing circumstances. Entrepreneurial action also implies that entrepreneurs have the courage to embrace risks in the face of uncertainty” (Hébert and Link 1988: 159). What is perceived as a risk or a desirable opportunity depends on what stands out as relevant for specific entrepreneurs. This highlights the notion of self as a mediator between subjective and social/structural conditions. Entrepreneurship researchers have historically had a somewhat mechanical view of the entrepreneur with focus on specific personality characteristics, adaptation to structural pressures and more recently different entrepreneurial cognitions. In the present treatment the self is seen as a mix of subjective identity and internalized roles that continuously develop as a result of social interaction (cf. Mead 1934). This means that interpretations of risks and opportunities are both highly personal and influenced by specific situations, and as a result develop with experience.

To reiterate, the working hypothesis is that entrepreneurial action can be understood in terms of the interrelated themes of risk, opportunity and self. These themes are empirically investigated in a number of sub-studies that explore perceptions of risks and opportunities as well as the role of self among technology entrepreneurs, including how these issues are experienced and enacted as part of the venture creation and development process. The results of these studies are then brought together in a more general discussion of entrepreneurial action, with the final goal of proposing a tentative model of entrepreneurial action.

1.3 Structure of the thesis

The thesis is structured as follows. Next comes a literature review that covers economic perspectives as well as research in the field of entrepreneurship studies. Following the literature review, the methodological assumptions and procedures are described in some detail. Then the appended studies are summarized and the results elaborated and discussed in terms of what a more general model of entrepreneurial action may look like. Thereafter the results are discussed in terms of theoretical, practical and methodological implications including some suggestions for future research.

2 Literature review

Much of the literature on entrepreneurship can be divided into two broad camps focusing on individuals and structure respectively (e.g. Martinelli 1994, Thornton 1999). The first seeks to explain the prevalence of entrepreneurs in terms of innate psychological traits or how special characteristics are formed in certain social groups. The second highlights how social and cultural structures call forth entrepreneurs by providing opportunities for entrepreneurship. The goal is not always to explain entrepreneurial action on the micro

level, but rather the amount of entrepreneurial activity in a certain place or time (Reynolds 1991).

An early and important contribution to the study of entrepreneurial individuals was David McClelland's 'The Achieving Society' (1961). McClelland argued that some societies have cultural attitudes which translate into primary socialization practices that foster entrepreneurial individuals. Kets de Vries (1977) similarly argued that the entrepreneurial personality was the result of a particularly painful upbringing. Other researchers have sought the entrepreneurial personality in risk-taking propensity, internal locus of control, tolerance for ambiguity, over-optimism and need for autonomy (cf. Delmar 2000).

The structural tradition on the other hand seeks to understand how social, cultural and institutional factors induce entrepreneurship. Some argue that deviance and marginality encourage entrepreneurship, but most authors instead emphasize that cultural and institutional support, including good access to resources, is what encourages entrepreneurship (Martinelli 1994). Busenitz, Gomez and Spencer (2000) break this down into regulatory factors (e.g. institutions and policies), cognitive factors (e.g. knowledge of how to start ventures and obtain financial support), and normative factors (e.g. the perception of entrepreneurship as a career) which are used to explain both types and levels of entrepreneurship in different countries. Management researchers often emphasize the special influence of organizations and especially prior employment in established firms (Freeman 1986). Organizations are said to serve three critical functions: they provide opportunities to build confidence especially in the ability to create new organizations; provide general industry knowledge and specific information about entrepreneurial opportunities; and provide social networks and access to critical resources (Audia and Rider 2005).

As mentioned, these approaches typically seek to explain the amount of entrepreneurial activity. Both traditions have also been criticized for failing to account for entrepreneurial action on the micro level: the individual approach for its single-cause logic, insensitivity to temporal dynamics and failure to account for contextual factors, and the situational approach for its focus on adaptation and consequent failure to account for human agency (e.g. Gartner 1988, Shaver and Scott 1991, Thornton 1999). The current trend is instead to regard heterogeneity in terms of knowledge, preferences, abilities, behaviors etc. as a fundamental assumption for theory-building (Gartner et al. 1992, Venkataraman 1997, Davidsson 2003). The increased focus on heterogeneity naturally downplays interest in stable personality traits and broad contextual pressures in favor of more detailed investigations and explanations of entrepreneurial action.

In Chapter 1.1, action was defined as behavior that carries subjective meaning to the agent. It was also mentioned that entrepreneurship researchers tend to interpret this differently. In the following review these efforts are organized in three themes which reflect broad research programs in entrepreneurship studies and also correspond to generic views of human action, viz. the empiricism of behavioral approaches, the rationalism of cognitive approaches, and the interpretivism of discursive approaches (cf. Packer 1985, Tsoukas 2005). Behavioral approaches tend to downplay the issue of meaning in favor of direct examinations of specific actions, decisions and events. Cognitive approaches address intentionality and meaning by examining entrepreneurial thought styles and knowledge structures as important causes of action. Discursive

approaches also probe the notion of meaning but investigate how entrepreneurial actions are motivated through more or less public stories and discourses. Naturally these approaches contain numerous internal differences and also overlap to some degree. Still I use this division as the best and most practical way of organizing the literature.

Before reviewing these approaches, the notion of entrepreneurial action will be examined from a number of economic perspectives. Interest in social, political and cultural entrepreneurship is currently flourishing. But whether we like it or not, both public and scholarly understandings of entrepreneurial action are inspired by economic theory. This is true in terms of both defining the phenomenon and guiding empirical research, and also as a source of legitimacy in theory development (e.g. Ogbor 2000, Steyaert and Katz 2004). The focus on individual traits has been linked to both neoclassical assumptions about complete information (Shane 2000) and Schumpeter's elite entrepreneur (Gick 2002). The current tendency towards heterogeneity is also inspired and legitimized by economic theories, especially Austrian economics (e.g. Venkataraman 1997, Shane 2003). Other economic perspectives also dovetail, more or less, with contemporary efforts to empirically examine and conceptualize entrepreneurial action. Schumpeter's focus on entrepreneurship as 'getting things done', for instance, is a source of inspiration for empirical research on entrepreneurial behaviors (Ripsas 1998, Aldrich 2005). Given this pervasive influence, the review of contemporary research is preceded by a brief stocktaking of economic perspectives on entrepreneurial action.

2.1 Economic perspectives on entrepreneurial action

Schumpeter is arguably the most influential economist of entrepreneurship. In Schumpeter's writings the individual entrepreneur embodies the innovation function in society and stands out as a leader in an otherwise equilibrating world of habitual actors.^{IV} Contrary to the rest of the population, entrepreneurs are creative actors who are defined by their non-rational and extraordinary qualities. Schumpeter saw information as more or less available to everyone and did not regard entrepreneurs as having any unique knowledge or capabilities compared to non-entrepreneurs. Schumpeter rather emphasized the non-utilitarian qualities of entrepreneurs and speculated about their unique psychological make-up. The Schumpeterian entrepreneur is an aristocratic character, part of a creative elite in capitalist society that is driven by a dream of founding a "private kingdom", an intrinsic desire to "succeed for the sake ... of success itself", who feels "the joy of creating" and "delights in ventures" (Schumpeter 1961: 93-94). Schumpeter also stressed the practical side of entrepreneurship, arguing that entrepreneurs are the individuals that 'get things done' in society (Schumpeter 1975). By introducing new innovations, the entrepreneurs shock and destroy prevailing equilibria, thereby disrupting existing goals and changing the direction of the economy. To Schumpeter, entrepreneurial action thus starts with a unique individual's creative flash of insight that, combined with assertive actions, also provides charismatic leadership which inspires others both within firms (Witt 1998) and on markets (Langlois 1998a).

In *neoclassical economics* individuals are assumed to act rationally and maximize their expected utility within an equilibrium framework. Both preferences and action alternatives are therefore seen as given. Action thus becomes choice and choice merely

calculation. It has therefore been argued that neoclassical economics has no real place for entrepreneurs (Baumol 1968, Bianchi and Henrekson 2005). Entrepreneurial action will only occur when the economic system is at a disequilibrium. This typically happens as a result of exogenous forces such as public R&D (Schultz 1980). The result is a novel framework in which individuals may optimize their utility. Since all individuals have access to the same information, entrepreneurs are often characterized as extraordinarily capable or fast at optimizing given problem frameworks (e.g. Demsetz 1983, Caplan 1999) or extreme in terms of risk-taking propensity (e.g. Kihlstrom and Laffont 1979). Others use the opportunity cost of time to differentiate individuals in terms of human capital (Schultz 1980, Becker 1965). The argument is that the way people have historically allocated their time (i.e. built up entrepreneurial ‘human capital’) will affect the opportunity cost and hence value of entrepreneurship. This affects both the decision to pursue existing opportunities (Schultz 1980) and the decision to search for yet unknown opportunities (Fiet 1996, Gifford 2003). Entrepreneurs are still completely rational but make different choices based on extraordinary capacities or acquired human capital.

Neoclassical economists typically start with a situation of perfect information and rational agents driven by subjective preferences. As seen above, this subjectivity is typically captured in a stylized fashion as human capital or other forms of ‘representative agents’ (cf. Langlois 1998b). *Austrian economists* on the other hand are strict methodological individualists and take subjectivism to mean that action is guided by highly private beliefs and desires. Contemporary entrepreneurship research often draws on Kirzner who sought to merge Mises’ assertion that the market process is driven by entrepreneurial speculation with Hayek’s notion of increased market coordination. Mises was an ardent subjectivist “Ultimate ends are ultimately given, they are purely subjective, they differ with various people and with the same people at various moments in their lives ... The notions of abnormality and perversity therefore have no place in economics.” (Mises 1996: 95). Hayek too started from the subjectivity of human intentions but emphasized spontaneous social coordination of knowledge through markets (Hayek 1945). Since knowledge is highly dispersed and typically incomplete, it is socially dispersed and exists only in the minds and preferences of individual actors. Nevertheless Hayek argued that the ‘tendency toward equilibrium is clearly an empirical proposition, that is, an assertion about what happens in the real world” (Hayek 1937: 44). In Kirzner’s framework, Mises’ subjectivism is reified into an ideal type, the alert entrepreneur, who embodies Hayek’s coordinating function in society. Entrepreneurial alertness is thus no longer based on a wide range of subjective beliefs but constitutes a more general ability to spot coordination opportunities “a gift individuals enjoy in quite different degrees” (Kirzner 1979: 148).

Radical subjectivists are often included in the Austrian camp. Still, they differ by extending the subjective basis for action from personal beliefs to imaginative speculations about the future (Lachmann 1976). This shift means that entrepreneurial action is not merely an automatic fit between personal beliefs or alertness and existing coordination opportunities. Instead, entrepreneurship entails a measure of genuine creativity. Nothing absolute can be known about the future because it is envisioned in individual imaginations. As a result the future is created in action as “the imagined, deemed possible” (Shackle 1979: 26). In the neoclassical as well as Austrian frameworks,

true knowledge of the future exists albeit in dispersed and tacit forms. This allows, in theory, for an omniscient agent who may predict the consequences of his or her actions (Buchanan and Vanberg 1991). In the radical subjectivist tradition, such an omniscient agent is inconceivable because true knowledge of the future is not only dispersed, it is unknowable (Shackle 1979). This does not mean that the future is beyond conjecture. Quite to the contrary, entrepreneurs speculate all the time as to what will happen but do so within the confines of what they deem possible, which is in turn influenced by cultural and institutional arrangements (Boettke et al. 2004). This cultural embeddedness of individual imagination suggests that subjectivism should not be interpreted as strict individualism or cognitivism but rather as socially embedded interpretivism (Lavoie 1991b, Lewis 2005). This confusion about the notion of subjectivism has prompted some researchers to emphasize the hermeneutic heritage of the Austrian tradition and the influence of Max Weber and especially Alfred Schütz (e.g. Pendergast 1986, Lachmann 1990, Augier 1999). Schütz is often referred to as one of the ‘master subjectivists’ of the Austrian school and while his analyses emphasized individual experiences a major goal was to understand the social embeddedness of individual action. Like the economists with whom he collaborated, Schütz argued that an imagined act is grounded in personal expectations (Schütz 1953). However, Schütz went on to show how the individual’s imagination is always couched against a set of more or less shared stereotypes and procedures. All people are born and socialized into a culture that is partly shared by family members, neighbors, colleagues and so on. Actions are therefore guided by a range of subjective drives and more shared typifications that span from the very private to the highly general.

2.2 Entrepreneurship studies and entrepreneurial action

2.2.1 Behavioral approaches

“The focus of research on entrepreneurial behavior is about exploring ‘how’ various activities undertaken by individuals emerge into organizations.” (Gartner and Carter 2003: 195).

Focus

Entrepreneurial behavior research is mainly concerned with what entrepreneurs do, in what order and to what extent, and how these activities help create, discover and develop new organizations (Van de Ven 1980, Gartner 1988) or new economic activity (Shane and Venkataraman, 2000, Davidsson, 2003). As such, the behavioral tradition typically emphasizes entrepreneurship as an emergent process. This approach does not imply a radical behaviorism in the Skinnerian sense of seeing mental explanations as unscientific or regarding consciousness as nonexistent. Instead it should be understood as part of the organizational behavior tradition, and in terms of methodology it often follows Mintzberg (1973) and others in the tradition of managerial work (cf. Gartner et al. 1992).

Antecedents

The focus on entrepreneurial behaviors is a development away from both the contextual and especially the traits traditions. During the 1980s, researchers from the contextual tradition used models of aggregate population dynamics that downplayed the micro level, i.e. the behaviors of individual entrepreneurs (Aldrich 1990, Reynolds 1991). At about the same time, the traits approach was criticized both conceptually and for lack of results. The argument was that just as general management (Mintzberg 1973) and leadership research (Van de Ven 1980) had benefited from investigating behaviors, so would entrepreneurship. Entrepreneurship is about what people do rather than who they are. This means that entrepreneurship can and should be exercised systematically (Drucker 1985). Entrepreneurial behaviors should consequently be studied and systematized without “trying to pin down ... inner qualities and intentions” (Gartner 1988: 26).

This line of research finds legitimacy in the work of Schumpeter and his statement that “everyone is an entrepreneur only when he actually ‘carries out new combinations,’ and loses that character as soon as he has built up his business” (Schumpeter 1961: 78). So even if individual characteristics and contextual influences are important (as Schumpeter also thought), it is the actual observable behaviors that matter and should be the main focus of investigation. This position is reaffirmed in a recent review that explicitly pits the behavioral approach against both personality factors and contextual pressures, by first stating that “organizations are not created by their context”, and later that differences in individual characteristics and intentions are of interest only because “they are likely to be associated with differences in individual behaviors. But, it is the behaviors, themselves, that produce organizations” (Gartner and Carter, 2003: 197).

Method

Research on entrepreneurial behaviors has traditionally been dominated by cross-sectional surveys and retrospective methods. Such approaches make it hard to establish causal relationships and more generally to appreciate the emergent nature of the entrepreneurial process (Davidsson 2004: 61ff.). In recent years more and more researchers have therefore begun to employ longitudinal methods. These studies typically identify emerging ventures and then track their development by measuring startup behaviors, events, strategic decisions, and typical activities (e.g. Van de Ven et al. 1999, Reynolds 2000). In the Panel Study of Entrepreneurial Dynamics (PSED) and related large-scale studies, behaviors are often predefined and then measured on a number of occasions (e.g. Gartner et al. 2004). Others use more open-ended measures that allow for more qualitative interpretations of the emerging processes (Van de Ven 1992).^V

Findings

Many early theories of entrepreneurial behavior suggested that the entrepreneurial process consists in an ordered sequence of activities such as: Discover a problem, Develop a solution, Accumulate resources, Market the product, Create an organization, Produce, Sell (e.g. Block and MacMillan 1985).

A number of empirical comparisons suggest that there is no particular sequence of behaviors associated with entrepreneurial success (Gartner and Carter 2003). Based on

longitudinal in-depth case studies of high-tech innovation projects, Van de Ven et al. (1999) similarly found that entrepreneurial actions were neither sequentially ordered nor completely random, but followed a chaotic pattern during early phases only to become more ordered as the venture matured.

Others maintain that even if the specific sequences may vary between cases, there exists a set of behaviors that are common for all successful entrepreneurs. Variation in the sequence is caused by differences in initial resource endowments, but once this is factored in there exists a fairly general recipe for success (Newbert 2005). Delmar and Shane (2003b) similarly argue that expert entrepreneurs prefer a specific sequence of events and in an empirical test also found that “following the correct sequence of organizing activities is beneficial to firm founders” and increasingly so as venture complexity increases.

Some of the earliest investigations of entrepreneurial behaviors found that high levels of entrepreneurial activity among nascent entrepreneurs were positively related to success, i.e. establishing a firm (Carter et al. 1996). However, the results also indicated that those who started a firm and those who failed had similar activity patterns. Both groups expended a lot of energy and effort, i.e. undertook many activities, early on in the start-up process. Those who neither failed nor succeeded but kept on trying were found to undertake substantially fewer start-up activities. This indicates that entrepreneurs should generally speed up the venture process so that the value of an identified opportunity may be evaluated as soon as possible (Carter et al. 1996).

Others reach different conclusions. Alsos and Kolvereid (1999) investigated how novice, serial, and portfolio entrepreneurs differed in their start-up behaviors. Drawing on real options reasoning, their conclusion was that what looks like procrastination may sometimes be explained as a strategic choice to defer certain decisions. Experienced founders and especially portfolio entrepreneurs were found to be especially well suited to benefit from a prolonged start-up period.

In another early study Gatewood et al. (1995) classified 29 start-up behaviors into five categories: gathering market information, estimating potential profits, finishing the groundwork for the business, developing the company structure, and setting up operations. Perhaps unsurprisingly they found that setting up operations (i.e. purchasing supplies, hiring employees, producing, distributing and marketing products) was the only category of behaviors that correlated with venture creation. Carter et al. (1996) similarly found that tangible activities that made the venture appear ‘real’ to others were common among successful entrepreneurs. These findings support the idea that entrepreneurs who undertake tangible and highly visible activities, and ‘act as if’ they are in business, will increase their chances of survival by signaling legitimacy and credibility to customers, investors, potential employees and other stakeholders (Gartner et al. 1992, Carter and Gartner 2003).

In a similar vein Delmar and Shane (2004) use institutional theory and evolutionary arguments to make the case that entrepreneurs who signal legitimacy will be selected for survival in an evolutionary framework. Such organizing activities also allow entrepreneurs to establish important social ties and enable the establishment of routines for resource transfer. It can however be argued that the use of survival as the measure of success may have introduced biases in the findings. Delmar and Shane in a brief

comment noticed that beginning marketing ‘oddly’ increased the hazard of venture disbanding by 84% (Delmar and Shane 2004: 402). Talking to customers similarly increased the hazard by 17%. A tentative conclusion seems to be that the variables that drive survival are different from those that drive success in the marketplace. This would qualify Carter et al.’s (1996) finding that intense activity up-front is associated with both survival and disbanding. Signaling legitimacy may perhaps increase survival only up to a certain point, the point perhaps being the litmus test of real customer interaction.

Planning is a contested notion in entrepreneurship studies. Delmar and Shane (2003a) argue that business planning has been neglected in the literature. They argue that activities such as gathering and analyzing information, identifying risks and establishing a business strategy are highly valuable especially under conditions of high uncertainty.

This goes against the thrust of much of the entrepreneurship literature, which often promotes fast action and opportunistic adaptation rather than careful planning as ways to reduce risk and increase development speed (e.g. Bhidé 2000). This is especially true in uncertain industries with mobile customers and where specialized assets are no reliable source of sustainable competitive advantage (Bhidé 1986). Honig et al. (2005) use data similar to that of Delmar and Shane (2003a) but reach an almost opposite conclusion. They found that incremental and adaptive learning strategies were beneficial in developing new ventures whereas systematic and more formal planning activities were found not to impact venture progress at all. Here venture progress was measured as an increase in the number of entrepreneurial behaviors in the subsequent period.

Trends and suggestions

Just as with the literature on managerial work, investigations of entrepreneurial behaviors are mainly descriptive and typically do not draw on specific theoretical perspectives. This means that conclusions will tend to rely on what theoretical perspectives, e.g. institutional theory, evolutionary frameworks, and Weickian enactment, are used to interpret the data (Aldrich 2001). Typical outcome measures such as success, survival and growth are the result of numerous dynamically interacting factors, whose relative weights and interdependencies are very difficult to determine. This means that it is inherently difficult to draw solid conclusions (cf. Manicas 1997). These limitations are often acknowledged and, to complement large-scale investigations, researchers in this tradition repeatedly press for more qualitative investigations. Van de Ven has explicitly criticized efforts to understand and explain entrepreneurial processes and actions by using only variance theories and deterministic causation (Van de Ven and Engleman 2004). Case studies and other investigations of so-called ‘micro-behaviors’ are needed to complement the behavioral data, and researchers are therefore called on to spend “more time with entrepreneurs as part of the theory-building process” (Gartner et al. 1992: 22; cf. also Carter et al. 1996, Gartner and Carter 2003).

2.2.2 Cognitive approaches

“Entrepreneurial cognitions are the knowledge structures people use to make assessments, judgments or decisions involving opportunity evaluation, venture creation and growth” (Mitchell et al. 2002: 97).

Focus

Cognitive approaches focus explicitly on thinking as a cause of action. Findings from the study of human cognition indicate that people have limited information-processing capacities and consequently do not always think in accord with postulates of rational choice. People therefore rely on mental scripts and heuristics to make sense of the world. Researchers thus seek to uncover the specific ways in which entrepreneurs process information and store knowledge as means to understand entrepreneurial action. In the following review, research on entrepreneurial cognition is structured along two broad streams. Both build on the notion of bounded rationality but interpret this concept quite differently. In the first, the external world is seen as given and the focus is on different biases that obstruct entrepreneurs’ ability to fully comprehend this reality, e.g. evaluating risks and opportunities. The second stream tries to identify useful entrepreneurial cognitions and pays only limited attention to classical notions of decision rationality.

Antecedents

In management and organization studies, cognitive approaches emerged mostly as a response to theories emphasizing the situation, including population ecology, transaction cost economics and resource dependency approaches (cf. Walsh 1995). This is also true in entrepreneurship studies, but here researchers more often position themselves against the tradition of personality traits (e.g. Baron 1998, Mitchell et al. 2002). Empirical studies show that traits do not single out entrepreneurs (Brockhaus 1980). Coupled with the theoretical argument that traits are causally too far from micro-level actions, this has led researchers to focus on more proximate factors that compare entrepreneurs and others along specific cognitive dimensions and in relation to certain situations (e.g. Shaver and Scott 1991).

Method

As mentioned, the review of entrepreneurial cognition is divided into two broad sections. In the first tradition researchers typically review existing psychological research and identify cognitive biases that may be used to comprehend typical entrepreneurial activities such as evaluating risky opportunities. These cognitive biases constitute logical flaws which researchers then use to elaborate entrepreneurial action. The second tradition is more inductive and tries to identify specific entrepreneurial cognitions via more direct examinations of how entrepreneurs think. These researchers often do not bother with the rules of probability but try to identify positive heuristics that are functional in specific situations.

Findings

General Biases

Drawing on the findings of psychologists like Tversky and Kahneman (e.g. 1974) a number of authors have found that entrepreneurs exhibit greater than normal reliance on a range of cognitive biases (cf. Baron 2004).

Palich and Bagby (1995) measured both general risk-taking propensity of a group of entrepreneurs and the way this group framed a venture scenario. Consistent with traits research (e.g. Brockhaus 1980) they found that entrepreneurs are not generally more risk-prone than others. The entrepreneurs were, however, more optimistic about the future developments of the venture. They also consistently framed both the internal and external situation of the venture as less risky compared to non-entrepreneurs. Sarasvathy et al. (1998) found similar results in a comparison between entrepreneurs and bankers. In their study entrepreneurs did not merely perceive less risk but instead used more personal values to frame venture risks. They were also more confident in their ability to influence the development of the venture in the future. Simon et al. (2000) similarly found that entrepreneurs 'suffer' from an illusion of control, which means they believe their skill will affect performance positively even in situations where it realistically cannot, or where it is evident that outcomes are highly dependent on chance.

Busenitz and Barney (1997) propose that entrepreneurs are more overconfident and more likely to generalize from small random samples than managers. Overconfidence exists when decision-makers are overly optimistic in their initial assessments of a situation and as a result are also slow to improve these assessments by incorporating additional information. It is argued that a high level of overconfidence can be positive in that it generally makes entrepreneurs more likely to act on opportunities. This is because overconfident entrepreneurs take action without necessarily having gathered all relevant information. The overconfidence breeds enthusiasm which in turn makes these entrepreneurs better at 'selling' their perceived opportunity in contacts with investors, suppliers, customers and other stakeholders. Entrepreneurs were also found to be more willing to generalize from small, nonrandom samples. This also has positive effects on the pursuit of opportunities since entrepreneurs often make key decisions based on personal interaction with only a very limited number of stakeholders, e.g. positive feedback from one or two potential customers. It also enables entrepreneurs to act swiftly on potential opportunities with a minimal risk of revealing key information, something that may happen as a result of research. These findings were partly confirmed by Simon et al. (2000) who found that overconfidence and belief in the law of small numbers reduced people's risk perception and increased the likelihood of starting a venture.

Baron (1998) argues that entrepreneurs often act in highly stressful environments and therefore make a number of cognitive errors that they would not make in less pressing situations. The proposed cognitive errors are based on the cognitive psychology literature but are not empirically tested on entrepreneurs. Among the biases proposed is affect infusion, which means that thoughts and decisions are more strongly impacted by emotions when situations are novel and demand reflection, something that is common with entrepreneurs. Another is self-serving bias, which means that entrepreneurs tend to attribute successful outcomes to themselves and negative outcomes to external factors. The planning fallacy makes entrepreneurs underestimate the time things will take to complete, since previous time-overruns are seldom taken into account. The final bias is

escalating commitment, which means that initial investments of time, effort and resources, as well as a deep personal engagement, often make it hard for an entrepreneur to pull out of a venture that does poorly. The major point is that entrepreneurs' cognition suffers from serious biases because they operate under extreme conditions and that these biases lead the entrepreneurs to take risks and act on opportunities that they would not consider under more normal conditions.

Attribution theory deals with how individuals account for what happens in the world, including the behaviors of themselves and others. The self-serving bias mentioned by Baron is an example of an attribution style. Shaver et al. (2001) discussed the causes attributed to entrepreneurial outcomes along the two general dimensions internal/external and stable/variable. These two dimensions yield four general attribution styles, namely internal-stable (ability), internal-variable (effort or motivation), external-stable (difficulty), external-variable (luck). Attribution can for instance be used to explain why some individuals persist and others quit after having experienced a venture setback. If a person attributes a setback to external and variable causes, there is no reason not to try again, whereas attributing the failure to lack of personal ability might discourage future attempts.

Biases are often seen as negative, and a common implication is that techniques should be devised to teach entrepreneurs to take more appropriate actions (e.g. Baron 1998). Others emphasize the advantages and even necessity of certain cognitive biases to induce action in pursuit of risky opportunities. Busenitz and Barney (1997) for instance argue that overconfidence may be needed to become an entrepreneur "without some unsubstantiated enthusiasm, many ventures would never be started or would quickly die following their start-up" (Busenitz and Barney 1997: 14). It may also be that certain biases such as over-optimism, affect infusion, and illusion of control help explain the decision to become an entrepreneur, whereas quite different mechanisms affect entrepreneurial success (Baron 2004).

Specific Heuristics

Biases are often bundled together with heuristics in denoting some form of deviance from ideal rationality (Tversky and Kahneman 1974). However, some researchers separate the two and reserve the term heuristic to denote any form of simplified thought process that people actually use to cope in everyday life. Investigating such positive heuristics may be especially relevant for understanding entrepreneurial action since "In the production of novelty, everything one does is a heuristic, and nothing is a bias" (Sarasvathy 2004a: 523). Such an interpretation of heuristics builds on a view of bounded rationality that sees real-life action as not even theoretically susceptible to substantively rational optimization (Todd and Gigerenzer 2003, Gigerenzer 2004). Instead, entrepreneurial cognitions evolve as more or less appropriate responses to limited information-processing capacities, resource constraints and the characteristics of specific situations.

In this vein Mitchell and his colleagues (Mitchell 1996, Mitchell et al. 2000, Mitchell et al. 2002) seek to identify a specific expert venturing script that is thought to trigger and guide entrepreneurial actions. Expert entrepreneurs are thought to possess specific knowledge structures that allow them to process and act on information that novices often miss. The basic premise is that entrepreneurial expertise is captured and organized in

scripts or 'chunks' of typically tacit experiential knowledge. When individuals possessing such a script are exposed to only a little bit of appropriate situational context, a so-called script cue, they will have available to them a number of likely inferences of what will happen next (Mitchell and Chesteen 1995). Based on literature surveys and extensive empirical testing, the expert venturing script has been found to consist of three distinct parts: arrangement, willingness and ability scripts (Mitchell et al. 2000). Arrangement scripts contain mental maps of resources and relationships that are necessary to perform well as an entrepreneur. Two specific arrangement sub-scripts concern idea protection and resource acquisition. Willingness scripts include cognitions that push the entrepreneur to seek out and pursue opportunities, thus providing the commitment and drive necessary to undertake a venture. Ability scripts consist of knowledge and skills in areas like opportunity assessment, including the ability to match opportunities with personal ability. In much the same vein Baron (2004) suggests that, through experience, entrepreneurs have constructed cognitive prototypes of entrepreneurial opportunities. These prototypes capture the 'essential nature' of opportunities, including "attributes such as newness, novelty, practicality, the ease with which it can be described to venture capitalists, the likelihood of competitors, appeal to a specific, identifiable market, and so on" (Baron 2004: 228). Entrepreneurial action is then triggered by real-life opportunities to the extent that these match the mental prototype.

Intention-based models seek to explain specific entrepreneurial events or actions such as searching for opportunities, deciding to start or exit a venture, or pushing for continued growth. Entrepreneurial intentionality has been described as "a conscious state of mind that directs attention (and therefore experience and action) toward a specific object (goal) or pathway to achieve it (means)" (Bird 1989: 8). Researchers typically trace entrepreneurial intentions to three general factors (Krueger et al. 2000).^{vi} First, the individual's attitude toward the behavior. This is seen as the weighted sum of perceived consequences and the likelihood of different outcomes of the behavior, including intrinsic rewards. Here Krueger et al. (2000) found that perceived desirability and expected utility were significantly correlated with intentions to become an entrepreneur. The second factor is perceived social norms. This means that the beliefs of relevant groups and actors such as family, friends, colleagues and customers, will affect the intentions of the entrepreneur. Krueger et al. (2000) found that perceived social norms of family and friends did not affect intentions to start a business, whereas Davidsson (1991) found that Swedish entrepreneurs were affected by social norms. This has prompted researchers to examine the influence of national culture and also whether perhaps business networks are a more relevant social group. Finally, perceived behavioral control affects intentions. This means that the entrepreneur's self-efficacy will influence intentions. Efficacy beliefs have been found to greatly influence entrepreneurial behavior, and improving the perceived feasibility of certain courses of action is therefore seen as vital to encourage specific results (Krueger 2003).

Since entrepreneurial intentions do not always lead to entrepreneurial actions, some form of triggering event (Krueger 2003), displacement (Shapiro 1984), or moment of inspiration (Bird 1989) is often included in intentions-based entrepreneurship theories. These can be both negative, such as getting a divorce or losing one's job, and positive, such as inheriting money.

One of the central assumptions of intention-based models is that a change in objective circumstances is interesting mainly in terms of how it is perceived and consequently how it affects attitudes and intentions (cf. Shaver et al. 2001). This means that a lot can be done by educators, managers and policy-makers to encourage entrepreneurial action. Krueger (2000) suggests a series of interventions to build a 'cognitive infrastructure' that is more conducive to entrepreneurship. These include increasing the perceived feasibility of entrepreneurship as a career, providing minor positive experiences to gradually increase self-efficacy, dispelling beliefs that entrepreneurship is extremely difficult and designing reward systems that are sensitive to intrinsic rewards and informal forms of punishment.

Saras Sarasvathy views entrepreneurial action as rooted in a form of creative expertise called effectuation (Sarasvathy 2001). The theory of effectuation builds on Herbert Simon's investigations of human behavior and assumes that entrepreneurship studies is a quintessential science of the artificial (Simon 1996) in that it focuses not primarily on decision-making among given ends, but on creation and enactive design under conditions of uncertainty (Sarasvathy 2004a). One of the most salient characteristics of the realm of the artificial is its focus on interfaces between inner and outer systems (Simon 1996). Entrepreneurial action is consequently described as a form of design activity that creatively bridges the bounded capacities of the entrepreneur and the complexities of the surrounding environment. To understand entrepreneurial action therefore requires a focus on the cognitive processes whereby entrepreneurs use their highly personal resources to adapt to and enact the external environment.

The effectuation logic of entrepreneurial action can be summarized in two taxonomies (Sarasvathy 2001). First, entrepreneurial action starts from three internal 'resources' or 'means' that are available to all entrepreneurs. They know *who* they are, *what* they know and *whom* they know. This translates into an awareness of what they are willing, able and happy to do, the know-how and competencies they possess, and what social networks they are part of. The entrepreneurs are then guided by these three resources as they enact their uncertain future. This perspective is aligned with the radical subjectivist position of regarding opportunities as created. The underlying logic is that the uncertainty of the future is never allowed to paralyze action since the future is created as a result of entrepreneurial actions.

This logic is explicated in the second taxonomy where three general design principles are said to be prevalent in the reasoning of expert entrepreneurs. First, these entrepreneurs focus on affordable losses rather than expected returns. This means that experts do not bet all their resources on what seems to be the best option. Instead they take small affordable steps that, if they should fail, do not ruin the venture. Second, they focus on enlisting partners rather than on conducting competitive analyses. This implies that entrepreneurs have an inviting attitude and focus on creating and expanding their own set of options, rather than avoiding relations that do not attain preconceived goals. Finally, expert entrepreneurs seek to use rather than avoid contingencies. Since the future is seen as open to negotiation and creation, serendipitous events are seen as possibilities to enact a different and perhaps more profitable future rather than as an obstruction to a given path.

Trends and Suggestions

Entrepreneurial cognition research seeks to identify how and when entrepreneurs think and subsequently act differently than others. Cognitions are described as information-processing biases (e.g. Baron 1998), as complex expert-knowledge structures (e.g. Mitchell et al. 2000), or as heuristics that contribute to the design of entrepreneurial opportunities and markets (Sarasvathy 2001). While internally diverse, these explanations share a view of entrepreneurial action as essentially caused by different cognitions. Compared to the behavioral tradition, cognitively oriented researchers are not content with observing overt behavior; they take intentionality seriously. However, since intentionality and meaning are conceptualized as schemas and scripts, the role of the entrepreneurial subject is typically given a marginal role. Instead, cognitions operate on a sub-conscious level where they, in a sense, maneuver the entrepreneur about with little left over to the entrepreneur as an engaged subject.

This review has distinguished between two streams of research, one focusing on deviations from traditional probabilistic reasoning and the other on more positive forms of entrepreneurial expertise. In the latter stream there is a tendency to more explicitly incorporate the subject into the models. This may be done directly by reconstructing the entrepreneur's intentions through attitudes, perceived norms and efficacy beliefs (Krueger et al. 2000). Alternatively the subject is black-boxed and treated as an original source of energy which is channeled through more general principles of action (Sarasvathy 2001).

2.2.3 Discursive approaches

“Rather than to see entrepreneurs as masters of their own creation, entrepreneurial identities are formed in the webs of actualized discourses” (Steyaert 2004a).

Focus

In the discursive tradition, individuals, events and actions are not treated in isolation. Investigations instead focus on the individually held and socially shared stories and discourses that tie events, actions and phenomena together. This ability to reflect back and think forward in terms of sensible stories and to see actions as part of a greater storyline is what allows people to make sense of specific phenomena, events and actions (Weick 1995).^{VII} Entrepreneurs thus draw on different discourses to make sense both of situations and their own part in these situations, and then proceed to act out their perceived roles (Downing 2005). An important goal is therefore to highlight alternative and marginalized ways of comprehending entrepreneurial action and entrepreneurship writ large (Hjorth and Steyaert 2004).

Antecedents

The discursive or linguistic turn has had a great impact on management and organization studies generally (cf. Weick 1995, Czarniawska 1997) and is also beginning to create waves in entrepreneurship studies (e.g. Hjorth and Steyaert 2004, Jennings et al. 2005). Speaking of the behavioral tradition and especially longitudinal investigations, Van de

Ven and Engleman (2004) argue that meaningful and coherent narratives are necessary if researchers wish to move beyond describing sequences of behaviors to actually explain entrepreneurial processes. They argue that most existing investigations of entrepreneurial processes use a variance approach that pays scant attention to issues of meaning and purpose. Steyaert (2004a) similarly complains that psychologically inspired entrepreneurship researchers have been preoccupied with first traits and later cognitive mechanisms. He suggests that asking 'who is an entrepreneur' is not a bad question but that, following recent developments in psychology, researchers should reconstruct the entrepreneurial subject in terms of different public discourses. Discursively oriented entrepreneurship researchers thus reject anthropocentric and decontextualized knowledge in the form of both behavioral sequences (Van de Ven and Engleman 2004) and cognitive mechanisms (Steyaert 2004a). Instead, stories and storytelling are proposed as means of understanding entrepreneurial identities, how entrepreneurs legitimate their actions to themselves and to others, and as a general way of imposing order on uncertain situations. The discursive approach can also be seen as a more reflexive extension of traditional research on the influence of culture and institutional pressures (Lounsbury and Glynn 2001).

Method

Some economists and sociologists point out the importance of understanding entrepreneurial actions against the backdrop of prevailing institutional frameworks and the general culture (e.g. Lavoie and Chamlee-Wright 2001). This tradition is related to research on contextual pressures mentioned in the introduction of Chapter 2. Others take a more micro-level approach and try to describe locally valid narratives that capture specific entrepreneurial processes. Drawing on Burke (1945), such stories often include a plot that describes what is taking place, the contextual backdrop, the purpose or moral that the story seeks to convey, a set of more or less salient actors, and a sequence of events taking place over time (e.g. O'Conner 2004, Van de Ven and Engleman 2004, Downing 2005). By bringing these different parts together in detailed and coherent narratives, entrepreneurial actions and events can be given meaningful interpretations that go beyond mere event sequences. The underlying logic is that "the story provides the reason for a particular action, thus giving it meaning" (Steyaert and Bouwen 1997: 54).^{VIII}

Findings

Since most economists equate action with choice (Lane et al. 1996), entrepreneurial action has often been reduced to an optimizing exercise where culture and the specific situation are reduced to variables in the decision framework. In the discursive tradition, issues of culture and embeddedness are instead brought to the forefront. What counts as entrepreneurial or what is an efficient entrepreneurial strategy differs depending on specific cultural and social structures. Successful entrepreneurial actions are therefore influenced by the culture in which they take place; entrepreneurs who succeed are those who are attuned to prevailing cultural norms and trends, and who manage to align their venture activities with these (Lavoie and Chamlee-Wright 2001). There are numerous examples of this phenomenon, especially in writings on economic sociology. In her

investigation of the direct-selling industry, Biggart (1989) for instance found that Taiwanese women succeeded by recruiting relatives to increase their standing in the organization. Given the negative attitude toward nepotism, this practice was less common in the US.

Entrepreneurship is often associated with profit. However, the focus on entrepreneurship as culturally embedded, in combination with the inherent uncertainty of the future, suggests that the actions that turn out to be profitable are not always economically motivated. Since all forms of socially embedded action may potentially lead to profitable opportunities, all actions should be considered as potentially 'entrepreneurial' actions. The results of networking and building up social capital may identify potential risks and disclose new opportunities. However, this is typically not why such activities are undertaken. Social networks are often built up for reasons other than their potential economic value (Arrow 2000). Jack and Anderson (2002) illustrate this in an investigation of entrepreneurs in the Scottish highlands. The authors conclude that being embedded in local social structures provides resources and opportunities that crucially support venture development. The authors specifically emphasize non-economic networks and family ties in this process (cf. Johannisson and Mönsted 1997). Entrepreneurs should consequently not be viewed solely in terms of received 'entrepreneurial' qualities, behaviors or relationships. Instead it may be useful to see entrepreneurs as "complete human beings" (Johannisson 1989: 105) since it is almost impossible to know beforehand what will prove to be relevant input for creative syntheses and actions (Koestler 1964).

This suggests that the traditional management vocabulary which borrows heavily from sports, warfare, computers and machines may fail to describe important aspects of entrepreneurial action. Many researchers have noticed that the meaning systems and vocabularies which entrepreneurs (and researchers) use to make sense of events and situations will affect what actions are taken (and what questions are asked) (Gartner 1993, Steyaert and Bouwen 1997). Cardon et al. (2005) suggest that parenting may provide a new and fruitful metaphor for entrepreneurship. The relation between parent and child contains irrational emotions, passion, identification and unconditional support. In such a relational and emotional idiom, risks and opportunities that may otherwise have seemed paradoxical and irrational can instead make perfect sense (Poolton and Ismail 2000). Hjorth (2003) similarly argues that the entrepreneurship discourse is preoccupied with a managerial vocabulary that tends to crowd out play, creativity and passion.

Such alternative metaphors imply a less heroic understanding of entrepreneurship and a focus on more mundane qualities of entrepreneurial action. Everyday actions and feelings are seen as important, especially during early phases, because it is in everyday life that entrepreneurs can pick up the hints that may lead to the development of profitable entrepreneurial ventures. Sarasvathy urges researchers to begin "in the mud of common human experience" (Sarasvathy 2004b: 289) and Steyaert argues that "the everyday is the scene where social change and individual creativity take place as a slow result of constant activity" (Steyaert 2004b: 10).

Researchers in the discursive tradition often emphasize the tension between universal theories and specific cases. The goal is often to challenge taken-for-granted truths and theories by developing detailed narratives that emphasize alternative viewpoints and

purposes (Hjorth and Steyaert 2004). The focus on mundane and context-specific actions can also yield more functional strategies for how entrepreneurs can survive and succeed by interacting and aligning their ambitions with different stakeholders. As mentioned above, entrepreneurs need to align their actions with prevailing cultural norms in order to gain legitimacy (Lavoie and Chamlee-Wright 2001). However, at the same time entrepreneurs must break with prevailing norms and stand out as unique in some respect. This requires a reflexive use of discourse such as when entrepreneurs construct stories of themselves that balance the need to stand out as different and unique with the projection of legitimacy and appropriateness (Lounsbury and Glynn 2001). Lane and Maxfield (1996) similarly describe a number of general lessons for constructing new stories that extend into the future. Specifically they argue that entrepreneurs need to foster generative relationships that produce new and unforeseeable sources of value in the face of short planning horizons. First entrepreneurs should continuously interrogate their understanding of themselves, other agents and the artifacts around which the venture is organized. Based on such understanding the entrepreneur should identify and nurture key relationships. It is important that partners in such relationships share some general goals but also differ in some respects. In such generative relationships and conversations with others, entrepreneurs are thus able to reevaluate the identity and meaning of the venture and its future prospects. This allows the entrepreneur to construct a coherent storyline that extends into the future, thus enabling confident actions even in the face of great uncertainty (Lane and Maxfield 2005).

It is clear that the emergent identities of the venture and the entrepreneur constitute important parts of understanding action in the discursive tradition. Entrepreneurs in different ways try to make sense of their situation including their own identity and perceived role in these situations. This in turn determines which actions stand out as legitimate and appropriate. Also the decision to become an entrepreneur has been explained as a result of identity change, where the relative salience of the entrepreneurial self-identity becomes more central as the result of certain experiences (Hoang and Gimeno 2005).

The importance of identity and local interpretations means that a given activity or event observed by an outsider, e.g. making a sale, may mean radically different things at different times to the entrepreneur performing it (Van de Ven and Engleman 2004). This is nicely illustrated in a study by Ellen O'Connor (2004) who followed a Silicon Valley Internet start-up, partly as an employee, over the course of its lifetime. Her story details how the actions undertaken were in fundamental ways shaped by the evolving identity or storyline through which the people in the venture understood themselves and consequently sought to legitimize themselves and their product to external stakeholders. Originally the business idea was described in terms of radicalizing democracy and perhaps even overthrowing capitalism. This was to be accomplished by using Internet technology to harness individual opinions about firm misbehavior and social problems, thereby affording common but dispersed opinions a loud and focused voice. With time the organization was forced to redefine itself and its goals in order to gain access to resources and customers. As a first step the founders complemented their original vision with a traditional profit-seeking product line. The ambition was that the commercial profits would be a side activity that could financially and technologically support the original vision. Over time and with the entry of new team members, conflicts emerged

and the commercial story became more and more dominant as the firm saw itself forced to comply with traditional product definitions and accepted behavior. In the end the firm found itself developing a sub-system for a customer relations management tool. Over the course of the firm's development, the nature of relevant risks and legitimacy of opportunities changed. This means that the same kind of activity, such as developing a product or approaching a partner, implied radically different things depending on what storyline it was part of. Ultimately the entrepreneurs found themselves forced to gain necessary legitimacy through a step by step "grafting of the storyline of the new company onto existing relevant, generally accepted, and taken for granted storylines" (O'Conner 2004: 106).

Trends and Suggestions

The discursive approach to entrepreneurial action gives meaning and interpretation a central position. The idea is that entrepreneurs are contextually embedded and have to develop their ventures against a backdrop of publicly available and locally constructed discourses. Considering these discourses is therefore seen as necessary to understand both the goals and workings of entrepreneurial action

By describing entrepreneurial action as essentially dependent on discourses, for instance as acting out a role in a perceived storyline, this tradition runs the risk of downplaying creativity and individual agency. Discursive approaches may therefore stand to benefit from studies that emphasize the reflexive and skilled use of stories and discursive resources (Lounsbury and Glynn 2001, Downing 2005). This is what Lane and Maxfield describe in their discussion of community-building and nurturing generative relationships as means to overcome uncertainty (Lane and Maxfield 1996).

Researchers in the discursive tradition often highlight marginalized stories and conceptualizations of entrepreneurship as a way to enrich theoretical understanding. One outcome of such studies is the development of new metaphors for entrepreneurship. Such enriched discourse may expand our interpretive toolbox and influence the way we view entrepreneurial action. Some examples are notions such as enactment (Gartner 1993), emergence (Steyaert and Bouwen 1997) and the emotional idiom of parenting (Cardon et al. 2005), which all provide alternative interpretive lenses compared with the traditional functionalist vocabulary.

2.3 Summary

The present review of research on entrepreneurial action is organized under the three broad headings of behavioral, cognitive and discursive approaches. This division is admittedly rather crude as the different approaches overlap each other and also contain a lot of internal variation. Still, these three themes broadly describe how entrepreneurial action has been conceived and researched to date. In the same sketching manner they indicate in what ways current research may be complemented. Table 1 summarizes some relevant aspects of these approaches.

	Behavioral	Cognitive	Discursive
<i>Paradigm of inquiry</i>	Empiricism	Rationalism	Interpretivism
<i>Goal of inquiry</i>	Construct covering laws that reflect behavioral patterns and stable cause-effect relationships	Uncover formal rules in the form of cognitive scripts or processes	Produce a plausible and interesting account that makes sense of an action or process
<i>Typical method</i>	Mainly quantitative and inductive, collecting and statistically analyzing data from surveys and panel studies	Mainly quantitative and deductive, testing hypotheses about cognitions using questionnaires and attitude scales	Mainly qualitative and abductive, generating plausible narratives that include individual action as part of a greater situation
<i>Main contribution to understanding of entrepreneurial action</i>	Emphasizes the heterogeneous and open-ended nature of entrepreneurial processes	Emphasizes cognitions and thoughts as important drivers of entrepreneurial action	Emphasizes that entrepreneurial action must be understood in relation to its greater context
<i>Main drawback for understanding entrepreneurial action</i>	Little attention is given to the subjective meanings of actions	Little attention is given to the entrepreneur as a situated and reflexive subject. Actions take place 'behind the backs' of entrepreneurs	Tends to downplay individual agency and initiative in favor of contextual influences and process descriptions

Table 1. Summary of research approaches in entrepreneurship studies.

All three approaches seek to describe and explain how entrepreneurs take action, i.e. take risks to pursue opportunities in the face of uncertainty. Each approach also brings important contributions to our understanding of entrepreneurial action, not least the critical issue of how actions are motivated under conditions of great uncertainty. The behavioral approach emphasizes the heterogeneous and open-ended nature of the entrepreneurial process and suggests that undertaking many and publicly visible actions may be good strategies. The cognitive approach targets individual thinking and suggests that different biases and heuristics make action feasible in the face of great uncertainty. The discursive approach embeds actions and thoughts in a greater context and makes uncertainty manageable by invoking or creating new realities that are viewed as legitimate by relevant stakeholders.

This thesis seeks to complement these findings by exploring how entrepreneurs experience risk, opportunity and the role of self as part of the venture creation and development process. The goal is to investigate these aspects of the entrepreneurial life world in some detail and then use the findings to further elaborate the notion of entrepreneurial action.

Such investigations seem to be in line with trends in the existing literature. In the behavioral tradition the methodology used typically yields rather coarse-grained results, and repeated calls have been made for micro-level investigations (Gartner and Carter 2003). In the cognitive tradition, interesting efforts are made to identify positive heuristics that capture the thoughts and strategies of entrepreneurs (Sarasvathy 2001). Similar tenets are also elaborated in the discursive tradition where researchers investigate the skilled and reflexive use of discursive resources (e.g. Lounsbury and Glynn 2001).

The present investigations take a cue from these suggestions, and focus explicitly on entrepreneurs' reflexive and contextually embedded thoughts and strategies. The goal is thus not to identify either cognitive mechanisms or relevant discourses in isolation. Instead the ambition is to explore the entrepreneurs' life worlds, especially how they make sense of their situation and find meaning and structure in the venture development process. By changing the point of departure, from a view of individuals and situations as separate to a focus on lived experience, it should be possible to reach new insights about entrepreneurial action.

Methodologically this suggests a phenomenological approach, i.e. one that captures how entrepreneurs experience and enact phenomena like risk and opportunities in everyday life (van Manen 1990, Berglund 2005). The phenomenological methodology also resonates with the radical subjectivist tradition (Boettke et al. 2004). Early writers in this tradition were also strongly influenced by phenomenology, especially via Alfred Schütz (cf. Pendergast 1986) who insisted that subjects' common-sense understandings should be used when developing theories about their conduct:

“The answer to the question ‘what does this social world mean for me the observer?’ requires as a prerequisite the answering of the quite other questions ‘what does this social world mean for the observed actor within this world, and what did he mean by his acting within it?’” (Schütz 1940: 48)

In the following section the research methodology is described in some detail before the specific studies are summarized. Thereafter the results are revisited and discussed in relation to the more general topic of entrepreneurial action

3 Methodology

Methodology can be said to comprise two things: the underlying assumptions and justification guiding the choice of methods, and the technical aspects of the methods themselves including procedures and methods for analyzing empirical material, dealing with ambiguities and so on (Alvesson and Deetz 2002). Management research is most often concerned with the technical aspects of methods, but as argued in the introduction

and previous sections, entrepreneurship research may stand to gain from a deepened reflection over issues such as the nature of human intentions and actions, and the relationship between scientific ‘third person’ and entrepreneurial ‘first person’ knowledge. This chapter will therefore discuss some methodological assumptions before describing the technical aspects of the methods used.

3.1 Methodological assumptions

Ontology

Ontology is about the nature of being, or in this case the nature of human action. As discussed in the introduction, action can be understood from two opposing perspectives: one where intentions somehow cause action, and a more holistic version of situated action. The first perspective reflects an ontological dualism in that action is divided into a mental state that exists independently of, and gives rise to, a specific action that takes place in the physical world (e.g. Ajzen 1991). The second perspective views action as a form of situated coping in which intentions and actions are inseparable. Here action exists in its own right and is not merely an epiphenomenon that is made up of more ‘real’ mental states, social/structural pressures, physical behaviors and so on (e.g. Dreyfus 1991).

This second position, which is adopted here, implies that actions do not really exist outside of both the concrete circumstances and the greater social and historical situation in which they appear. This emphatically does not mean that humans do not have intentions or that entrepreneurs do not explicitly plan ahead. It only means that to comprehend and study action, especially creative action (Joas 1996), it is important to acknowledge it as more than isolated intentions and performed behaviors.

Epistemology

This ontological position is reflected in an epistemology that prioritizes entrepreneurs’ life worlds or lived experiences, i.e. the immediate experience of a situation or phenomenon as it is lived through, over abstract knowledge or reflection (cf. van Manen 1990). The focus on lived experiences follows a hermeneutic and phenomenological tradition where human knowledge is not seen as an objective mirror of some world ‘out there’. Instead all human knowledge is seen as relative to situations, social contexts, purposes, previous experiences etc. This means that an entrepreneur’s knowledge of something like risk (in the context of entrepreneurial action) consists in the meaning that risk has for him or her and in the ways that risks are perceived and enacted in specific situations.

The hermeneutic stance also affects researchers’ attempts to understand subjects’ experiences. Traditionally investigators have tried to neutrally observe how things appear ‘in themselves’ (e.g. the entrepreneur’s experience of risk) by recourse to objective rules that validate knowledge in such a way that personal opinions or preexisting theoretical frameworks do not influence results. Such neutrality builds on a dualistic ontology and a realist epistemology where the world can be known independently of any human

interpretation. Such neutrality is seen as impossible. Access to the world, e.g. subjects' experiences, is always complicated by the researcher's culturally and socially conditioned preconceptions and interests. Such preconceptions constitute the basis for understanding in the first place. Preconceptions and general knowledge interests are what provide the initial and often ill-structured understanding of a phenomenon that triggers interest, leads to the formation of tentative hypotheses, and also implies certain modes of inquiry rather than others (Packer and Addison 1989).

The unavoidable influence of preconceptions tends to give people a sense of the circularity of understanding. Unfortunately the circularity of human knowledge is often misunderstood as being vicious instead of essential (Dreyfus 1991: 200). The fact that there can be no procedures that guarantee objective knowledge of reality is no reason to give in to full-blown relativism. On the contrary, the very fact that an inquiry starts with certain preconceptions and interests indicates that research is not mere speculation that shoots beyond available evidence in a random way. The results therefore rest on a dynamic process involving researchers' preconceptions, observations and reflections. This points to the importance of reflecting on why the research is undertaken and in what way results are produced and justified.

Methodology

Methodology concerns criteria for choosing methods of investigation in a way that both fulfills the original research purpose and harmonizes with ontological and epistemological positions. The stated purpose is to explore the subjects' meaningful experiences of risks, opportunities and the role of self in order to better understand the venture creation and development process. Methods should emphasize the situatedness of experiences, but retain focus on the individual rather than the situation as such. This suggests that methods should be qualitative and idiographic, i.e. seeking to appreciate the unique and concrete. The explorative ambition also demands an open mind to unexpected insights that the investigations may reveal.

The methods should consequently pay close attention to specific personal and contextualized experiences, while at the same time using techniques that ensure the trustworthiness of results. To this end researchers should thus strive to be explicit about the basis of their interpretations, employ systematic procedures to monitor and check their influence, and also try to display the results in lucid and transparent ways that allow for confident conclusions. However, too much formal rigor will introduce risks such as limited scope of findings, overconfidence in results and blindness to emergent or marginal phenomena. As mentioned above, there are no procedures that guarantee objectivity. Instead researchers should always try to find a balance between interpretive openness and rigor. Huberman and Miles summarize the dialectic of qualitative inquiry in a general piece of advice to "Seek formalism, and distrust it" (Huberman and Miles 2002: 396). These issues are discussed further under the heading 'Limitations and Validity' below.

Methods used

The appended studies (I – III) use an interpretive phenomenological method (cf. Smith and Osborn 2003). This method draws on hermeneutic and phenomenological traditions and seeks to access and describe how subjects experience specific phenomena in a structured way (e.g. Smith and Osborn 2003, Giorgi 1985). Phenomenologically oriented methods are common in psychological research (Giorgi 1985) and in applied fields such as nursing (Benner 1994) and pedagogy (van Manen 1990) where researchers' and practitioners' interests are guided by a deep interest in the subjective experiences of their subjects. To be a good nurse or teacher takes more than competent reading of vital signs, making diagnoses or delivering lectures and setting grades. Professions such as these also require empathy and intuition, and researchers have therefore used phenomenological methods to capture subjects' lived experiences in ways that allow for sympathetic care and more attentive pedagogy. To this end phenomenological methods have been used to investigate aspects like the lived experiences of recovering from drug addiction (Banonis 1989), living with chronic pain (Hellström 2001), or schoolchildren's feelings of loneliness (Kirova-Petrova 2000). Recently it has been argued that phenomenological methods are suitable also in entrepreneurship research (Berglund 2005, Cope 2005).

In this thesis, phenomenological methods are used to describe entrepreneurs' personal experiences of risk, opportunity and self, including the cognitive and practical strategies used to make sense of and manage these experiences. The method has no ambition to dig beneath or replace these everyday understandings. In this way it differs from both the cognitive and discursive approaches, which seek to explain meaningful experiences by recourse to either underlying cognitions or linguistic and other cultural resources respectively (Berglund 2005). Instead the goal is to empirically examine the variety of ways in which risk, opportunities and the role of self are experienced and how this relates to action.

Studies I-III are based on individual interviews which are then analyzed and merged by the researchers into a composite whole. Study IV explores risk perceptions in a corporate innovation setting. This study builds on the same basic premises as the other three studies, i.e. it starts with individual experiences that are brought together to construct a composite picture. However, here the analysis and merger of the individual level results are done by the subjects themselves as part of a facilitated group exercise.

Below the methods are described under the headings of sampling, data gathering, analysis and results. Since the methods differ somewhat between studies, each heading includes presentations of multiple procedures.

3.2 Methodological procedure

Sampling

The general population from which the samples were taken is entrepreneurs involved in technology venturing, i.e. individuals who had themselves initiated and taken an active role in developing a technology-based business idea. Sampling in the different studies was purposive with focus on identifying a manageable group of entrepreneurs suitable for

exploring the issue at hand. The aim was thus not to present intrinsically interesting cases or to represent some general population but rather to gain a more detailed picture of the phenomenon.

Studies **I** and **II** were based on interviews with 12 and 15 Swedish entrepreneurs. The selection was purposive, meaning that inclusion criteria were set up and then used to choose the sample (Berg 2001). The criteria were that the entrepreneurs should have initiated, and still work in, technology-based ventures that were between one and three years old. The ventures were identified using lists of firms provided by different innovation support centers. The entrepreneurs that were identified had all taken a key role in driving the process of inventing, producing and marketing a technological innovation in the fields of either information technologies, biotech or advanced services. Some came from a research background, others from employment in large firms, and still others directly from university studies.

The sample in study **III** consisted of 19 founding entrepreneurs who alone or together with others started new firms in the Swedish mobile Internet industry between the years 1998 and 2000. These entrepreneurs were randomly chosen from a list consisting of 121 Swedish mobile Internet ventures started between 1995 and 2000. This list was compiled during 2000-2001 as part of a larger project and contained approximately 80% of the firms in the Swedish mobile Internet industry at the time. Not all ventures were based directly on technological inventions but they were all embedded in and dependent on a technologically sophisticated environment.

Study **IV** drew on a sample of corporate innovators active in two large multinationals in advanced IT services and aeronautical development respectively. These two units were purposefully selected because they varied greatly in terms of things like work performed and corporate history. Access to the two units was obtained via industrial PhD students who were employed in other parts of the corporations in question. At each unit a cross-section of individuals with roles central to the innovation process were identified through discussions between the researchers and representatives of the respective organizations. The selected group of people covered all important aspects of the respective units' key activities.

Interviews/data gathering

The first three studies used semi- to non-structured interviews which gave respondents room to speak freely and also allowed the interviewers to follow respondents' leads into novel and unexpected areas as the conversations progressed. The interviews took place at the respondents' offices or in their homes and averaged about two hours. In studies **I** and **II** between two and four interviewers were present at the interviews. One interviewer had the main interviewing responsibility and the others focused on taking detailed notes. Study **III** was part of a larger research program and the interviews were conducted by a team of interviewers. Here interviews were conducted by single interviewers. The interviews were tape-recorded and transcribed verbatim.

Study **IV** used group exercises that were conducted on location at the two corporate units. The exercises lasted for about half a day each and were based on the broadly articulated question: "What are the major risks/threats hindering us from achieving our objectives?"

The exercise started with all participants individually reflecting on the theme question, writing down a number of risks (at both units participants asked if they could also include improvements, which they were encouraged to do). The participants then proceeded to jointly, as a group, discuss and merge the individual risks, producing a set of broad and thematically structured risk categories. During the discussion the categories were allowed to change, merge and split up, so that the end result represented a negotiated common understanding of each category.

Analysis

In studies **I** and **II**, when there was more than one interviewer per session, the individual interview protocols were read by all the interviewers in order to establish interpretative flexibility and common meaning. In this way the interpretation of the general narratives, as well as of specific quotations, was agreed upon. The individual protocols were then re-read line by line and broken down into discrete parts, not according to grammatical rules such as sentences but with respect to visible changes in meaning, i.e. meaning units (MU) (e.g. Giorgi 1985). Each MU was associated with a tentative descriptive concept and broken out of the text together with its corresponding statements. When the whole text had been broken down in this way, the resulting list of MUs was re-read and discussed within the relevant research group. As the researchers worked their way through the list, MUs with similar meanings were cut out of the original document and pasted into a new document and given a tentative category heading. Each new MU on the list was thus either put in an existing category or given its own new category heading. This process generated a number of categories and during the process some categories which were found to be similar were merged and others split up, until all MUs had been clustered into categories that were agreed to capture specific homogeneous qualities of what was said by the participants. The categories and their interrelationships were then focused on in more detail, and similar themes were clustered into higher-order factors and in one case (study **I**) overarching super-factors.

Study **III** followed a similar procedure but since the interviews were conducted by a larger group of interviewers it was not possible to conduct a joint analysis. Instead the data analysis was carried out by the author with interviewers and transcribers being contacted when there was some doubt regarding what was meant or when details needed to be clarified.

In study **IV** the analysis was conducted as part of the group exercise as described above. Researchers were present but did not participate actively in the analysis and categorization or results.

During the analysis procedures in the interview studies, interpretations and judgments were continuously made by the researchers as categories and factors were developed. By returning to the original protocol and continuously questioning the bases of categorizations, the researchers actively sought to minimize the use of pre-existing theoretical categories and be true to the participants' original expressions. If the MUs clearly coincided with existing theoretical categories, such categories were however used (cf. Smith and Osborn 2003).

3.3 Limitations and validity

Interpretive research is becoming more and more common in social science and management research. Unfortunately this tendency has not been accompanied by the development of appropriate criteria for evaluating results. Instead phenomenological arguments are often invoked to legitimize interpretive approaches only to be replaced by traditional positivist arguments during the validation phase (Kvale 1996).

As a result, qualitative investigations are often justified on the basis of correspondence with 'the things in themselves', e.g. 'what risk really means to entrepreneurs'. The hermeneutic tradition does not acknowledge such an objective baseline. Consequently there can be no methodological algorithm that guarantees valid results. Instead, methodological procedures are seen to increase validity to the extent that the results of research address the original concern that prompted the research and allow for more comprehensive ways to understand and/or engage this concern (Packer and Addison 1989).

What triggered the present studies was a concern that key themes in the entrepreneurship discourse, especially the notions of risk, opportunity and self, were not theoretically understood in ways that improved our understanding of entrepreneurial action. The ambition was therefore to investigate these themes from the perspective of acting entrepreneurs in order to better understand the nature of entrepreneurial action. Results are therefore valid to the extent that this concern is addressed. Given the ontological and epistemological assumptions, no procedures can guarantee objective results. Still, there are ways to improve the trustworthiness of findings, i.e. the extent to which they address the initial concern that prompted the research. These are described and related to the present research under the headings of communicative, pragmatic and transgressive validity (Sandberg 2005).

Communicative validity seeks to assure interpretive coherence in dialogue and may be sought during all stages of the research process. Before conducting interviews (studies **I-III**) and exercises (study **IV**), the general themes were introduced to the subjects to attain common ground. This entails a careful trade-off between making sure that interviewer and subjects understand one and other while at the same time trying not influence the subject too much.

The interviews (studies **I-III**) were conducted in a dialogical form. This allowed misconceptions to be surfaced and elaborated. It also offered a productive way to establish a shared understanding of the topic under investigation. In this way dialogical interviews improve communicative validity, especially compared with more structured questions and answers in which fundamental misunderstandings may remain unnoticed (Kvale 1996).

During the analysis phase (studies **I-III**), meaning units (MUs) and emerging categories were constantly compared with one and other in an effort to identify differences and similarities. The MUs were also evaluated against the original interview protocols to make sure that they were not taken out of context. This constant comparison between parts (specific MUs and emerging categories) and whole (other MUs, categories and the original interview protocols) produced more coherent result-structures and also increased the clarity and validity of specific categories and factors.

Communicative validity was also increased by discussing the empirical results with other researchers. Results were presented at internal seminars and conferences to expose them to dissenting interpretations. In the discussion sections of the four studies, the results were also compared and contrasted with previous literature. Such discussions and comparisons validate findings to the extent that they resemble previous theory. Comparison with previous literature also provides a baseline for assessing the plausibility of novel and unexpected findings.

Communicative validity mainly concerns interpretive coherence, but for a number of reasons there may be discrepancies between what people say in an interview situation and what they do in real life. This leads to the issue of **pragmatic validity**. The methods used did not entail naturalistic observation where accounts could be compared with actual behavior. Instead pragmatic validity was improved by asking questions of a practical nature. This included following up general and vague statements by asking for concrete examples and more generally asking questions in a way that embedded statements in concrete situations. The interviewer also provided practical interpretations and examples of general answers in order to provoke more practical responses (Kvale 1996). This allowed the entrepreneurs to correct the researcher's interpretation and often led to further elaborations and counter examples. These responses were incorporated into the analysis which served to increase the pragmatic validity of the results.

Communicative and pragmatic validity criteria are often promoted as essential when justifying interpretive research (Kvale 1996). However, the focus on coherent and consistent interpretations may fail to capture the ambiguity, complexity and indeterminacy that are also part of lived experience (Sandberg 2005). **Transgressive validity** counters these tendencies by stressing how validity may be lost if lived experiences are presented as overly simple. Transgressive validity may be especially important in the case of innovative entrepreneurship, which is characterized by making judgments and taking actions under conditions of uncertainty. During the interviews, transgressive validity was improved by trying to stay attentive to marginal and non-obvious responses. Probing conflicting and paradoxical responses, e.g. between personal and professional priorities, also provided occasions for increasing validity (studies I-III). This effort was also reflected in the results presentation, where potentially conflicting results were presented and elaborated side by side in order to retain the richness of the results (all studies).

Generalizability has traditionally been upheld as a central criterion for validity in social science. Compared to quantitative studies, which rely on statistical inference, generalizability is a criterion that qualitative research always struggles to accommodate. The appended studies investigated the lived experiences of purposefully selected entrepreneurs with the ambition to probe the phenomena of risk, opportunity and the role of self. The purposive sampling and the focus on meaning rather than frequency imply that results may be analytically generalized to theory, rather than statistically to a certain population (Yin 1994). The findings are also general to the extent that they harmonize with and inform the experiences and practices of relevant stakeholders such as entrepreneurs, incubator managers and teachers (cf. Stake 1994). The philosophical basis for making generalizations in interpretive inquiry is a contested issue. Without entering into this debate it is simply argued that the results are general to the extent that they may inform theory development, and if they may be incorporated into the practice of

entrepreneurship and related activities. There are of course several limitations based on the procedures for sampling, interviewing and analysis. Given the preceding discussion it is however left to the reader to decide what these limitations are.

4 Extended Summaries

This section presents summaries of the appended studies. Since the methods were described in some detail above, the summaries will focus mainly on the research question, empirical results and general conclusions.

Study I: Enacting risk in independent technological innovation

This study examines how risk is perceived and enacted from the perspective of twelve technology entrepreneurs. Risk and innovation are conceptually related in the sense that both are forward-looking, action-oriented concepts that are closely linked with uncertainty and change. Furthermore, general uncertainty is transformed to more specific risks in so far as innovative action is based on a particular stake such as opportunity costs or waged real capital.

In the entrepreneurship and innovation literatures, the specific relationship between risk and innovation is commonly examined from either a cognitive or a social perspective. The cognitive literature shows how entrepreneurs judge, assume and convert risk into action on a purely individual level. The more socially oriented literature shows how risks affect actions via the social and cultural frameworks in which risks receive their meaning. The present investigation bridges these individual and social conceptions of risk and instead examines the local experience of risk and innovation. Such an investigation may provide novel insights into how entrepreneurs view and enact risk as part of the process of venture development.

The findings indicate that entrepreneurs employ a series of practical and cognitive strategies to create, manage and avoid risks. The results are divided into two main categories: innovation ‘risks encountered’ and innovation ‘risks affected’.

The first category recalls risks traditionally treated in the risk management literature, i.e. more or less given risks available for management or intervention. *Human capital* describes the dilemma of attracting and keeping competent and motivated employees, something that can be especially important in technologically sophisticated settings. *Pace and priority* illustrates the common dilemma in new ventures of being pressed for time and uncertain about what to do, as well as the first-mover risks inherent in developing radically new innovations. The category *the world moves* symbolizes how the unruliness and relentlessness of the venture environment give rise to risks that are beyond any form of convenient control, including unpredictable market responses and the decisions of large key players.

The second category contains five broad strategies that describe how entrepreneurs engage risk in different ways. These categories are not simply responses to the more traditional risks described in the first category. Instead they represent risk enactment practices which not only react to, but also actively create and transform, risk as a natural part of the venture development process. These include *Activating social networks* where the entrepreneur can use parts of his or her business and professional network to share and affect risks, and *Risk learning* which refers to how entrepreneurs internalize various experiences to improve confidence and knowledge of how the innovation process works. *Risk incrementalism* depicts how the entrepreneur maintains control in uncertain

conditions by developing the venture in small controllable steps, whereas *Maintaining venture agility* describes a strategy of maintaining a high energy level in the venture. By simultaneously managing and exploring a range of possible ways forward, the innovation process is kept energized and on its toes, thereby giving the entrepreneur leverage toward the future. By *Creating and sustaining autonomy* in different ways, the venture is afforded a certain level of independence from outside pressures. Such autonomy can be financial, existential, or based on the high potential of the technology. The important point is that the autonomy gives the entrepreneur or venture team a measure of control vis-à-vis external pressures and constraints.

The results indicate that risk is not primarily perceived in the form of direct or objective risks. Instead the two main categories, innovation risk encountered and innovation risk affected, describe how more 'objective' risks become relevant through different sense-making conceptualizations and strategies that help develop the venture. As such the results show the potential of examining the micro-dynamics of innovation as a means of understanding what guides and motivates entrepreneurial action.

Study II: The innovating self: exploring self among a group of technological innovators

In entrepreneurship research there is a long-standing and entrenched stand-off between individual and structural (social) explanations of entrepreneurship. This study approaches this duality by re-examining the role of the individual through the lens of psychological and especially sociological perspectives on the concept of self. In this treatment the entrepreneur is more than either a bundle of traits and abilities, or the product of structural or social pressures. Instead the self-concept allows for a balanced infusion of social influences by seeing the self as a historically developed amalgam of reflected and un-reflected identity and also of the interactive processes of social identification and intentional action through which identity evolves. The notion of self thus includes both subjective and reflexively social aspects. This makes it a pertinent construct for understanding the intentional and adaptive qualities that are at the heart of entrepreneurial action.

The study draws on deep interviews with 15 technological entrepreneurs to develop five conceptions of the innovative process that take the social and subjective self as its point of departure. *Innovators' reflexive self-conception* describes how the entrepreneur's view of himself or herself as an entrepreneur and innovator in different ways influences entrepreneurial actions. This includes perceived abilities and limitations as well as a more dynamic 'testing' of different roles as a way of developing the venture. *Innovator ego-involvement* generally relates to the way the entrepreneur identifies with the venture. Partly this is a good thing, and all entrepreneurs were genuinely committed and dedicated to what they were doing. It is however important to be mindful of one's ego-involvement and reflexively try to balance engagement with a more instrumental relationship to the venture. *Commitment and control* reminds of innovator ego-involvement, but here the tension is between maintaining control over the internal processes in the face of external influences and potentially paralyzing uncertainty. Focus is on strategies to retain control over the venture, including talking action to overcome uncertainty and trading off 'wants' and 'shoulds' to envision realistic goals. *Innovator's personal stakes* are to some extent

material. These economic stakes were however seen as secondary to the existential and social stakes, including the risk of losing one's personal freedom or envisioned and actual status in certain social contexts. *Cognitive strategies of the self* describes how the entrepreneurs used particular cognitive strategies to cope with certain stressful aspects of the venture. These include making use of certain conflicting roles to cope with specific situations or similarly, on the level of time, envisioning a glorious future in order to emotionally authorize a stressful present.

Traditionally, entrepreneurial action has been seen as the result of the interaction between subjective traits and contextual pressures. The notion of an innovating self instead allows for a view of the entrepreneur as a reflexive actor who is able to re-negotiate priorities, situations and personal identity as part of the innovation process. The results thus indicate that the self may fill a void in entrepreneurship research by providing a conceptual basis for comprehending the entrepreneur that balances subjective intentions and social/structural pressures.

Study III: Opportunities as Existing and Created: A Study of Entrepreneurs in the Swedish Mobile Internet Industry

The concept of opportunities has emerged as central to the field of entrepreneurship studies. Among the many ways in which opportunities have been defined and integrated into theory, two main perspectives can be discerned: opportunities as existing prior to being discovered by alert and sometimes fortunate entrepreneurs, and opportunities as created in social processes.

Both perspectives are grounded in established economic traditions. The discovery perspective draws on Austrian and to some extent neoclassical economics, whereas the creation perspective is inspired by radical subjectivist economics. Both perspectives have also been elaborated by a number of entrepreneurship scholars, notably Scott Shane and Saras Sarasvathy. Shane focuses on the sources of opportunities in combination with what distinguishes enterprising individuals and the different activities undertaken to exploit and protect opportunities. Sarasvathy discusses how entrepreneurs depart from their local conditions, emphasize social collaboration rather than individual initiative, and seek to control rather than predict the future.

After reviewing these perspectives, they were contrasted with the experiences of 19 entrepreneurs who started operations in the Swedish Mobile Internet industry between 1998 and 2000. The ambition was to see how these theoretical perspectives resonate with the perceptions and actions of this group of entrepreneurs.

Based on semi-structured interviews, the entrepreneurs' experiences were captured in six categories. Different ways of *Exploiting knowledge* are common in entrepreneurship theories. This category confirms the importance of knowledge for identifying and exploiting opportunities. It also complicates the picture somewhat by describing how expertise was sometimes exploited in a rather passive sense, e.g. when external actors pulled expert entrepreneurs in different directions. *Filling the gap* comprises the notion of existing arbitrage opportunities. Opportunities were in this sense discovered as gaps in larger systems or structures, e.g. a given market, value chain, or a system of complementary products and services to be rolled out. These gaps were however always

accompanied by more or less creative ideas of how to exploit them. *Opportunity in timing* is similar to filling the gap, but here opportunities as well as risks are seen to reside in shared and private timeframes of different kinds. The existence of such temporal dissonance can be interpreted either as mistakes, i.e. under- or overestimation of development tempos, or as an inevitable consequence of the socially created nature of opportunities. *Enacting the Zeitgeist* describes how entrepreneurs in different ways sought to capitalize on the excitement and uncertainties of the mobile Internet industry hype. This was done by projecting an image of mastery to attract resources, self-reflexibly relying on one's ability to interpret the Zeitgeist, or framing the business case against the backdrop of pervasive but vague megatrends. *Stability as strategy* reflects a general approach of seeking out a place which one believes to be secure. Such stability can be found in many different dimensions of a venture such as reliable personnel, a clear business idea, or an extreme focus on customer value. Such a strategy can be interpreted both as intentional management of uncertainties and risks and as a proactive but incremental development strategy. *Sequential entry process* is similar to the preceding category but describes different ways of strategically positioning oneself to reap the benefits of what is perceived as an uncertain but very lucrative future. Such positioning can again be given both a realistic and a creative interpretation, using the lens of real-options theory or seeing the strategic positioning as the development of generative relationships.

These results suggest that entrepreneurs have a varied understanding of what opportunities are, which includes seeing them as both existing and created depending on the situations to which they are related. One way to make sense of the rich and varied ways in which opportunities are perceived is by relating them to entrepreneurial action. In this view, the wide range of opportunity perceptions may provide insight into how different opportunity perceptions act as drivers of entrepreneurial action. An opportunity may for instance be presented as open-ended and under constant creation when skilled and creative personnel are recruited. Attracting capital and long-term support may instead require that the business opportunity is presented as unambiguous and solid. A suitable way of conceiving opportunities is therefore not as either existing or non-existing *per se*, but as a bundle of more or less clear opportunity perceptions and opportunity projections that become relevant in a variety of situations and for a number of different reasons. It is in this multifaceted role that opportunities are truly relevant since acting as if opportunities are both existing and created provides important cognitive and practical drivers that more or less temporarily guide entrepreneurial actions.

Study IV: Risk Conceptions and Risk Management in Corporate Innovation: Lessons from two Swedish Cases

Risk is often defined as some combination of probability and hazard, but on closer examination the concept of risk receives much of its theoretical and practical meaning when related to specific situations, goals and overarching priorities. Based on this insight, the present study explores how risk is conceived and managed in two units that are part of the innovation process in large multinationals. The findings reveal a number of insights regarding the risk/innovation relationship.

The examined units come from radically different industries and differ widely in terms of corporate history and the work performed. They are also similar in many respects. Both are part of larger innovation processes that also include other parts of the parent organizations as well as external partners. They also share a clear need to develop innovative products and services.

Group interviews were conducted with selected individuals at each unit. These interviews yielded weighted risk/innovation categories that constitute group answers to the general interview question: “What are the major risks/threats hindering us from achieving our innovation objectives?”

The Service Development Unit (SDU)

Quality insurances (10)
 Customer relations management (8)
 Relations to partners (7)
 Dated support systems (5)
 Organizational efficiency (4)
 Customer contracts (3)
 Human capital risk (1)
 Business culture (1)
 Development (1)

The Technology Development Unit (TDU)

Overall economic conditions (10)
 General attitudes toward new ideas (9)
 Processes and method (9)
 Quality structures (9)
 Working environment and competence development (8)
 Generally expensive industry (5)
 External relations (3)
 Business model and vision (1)

As seen above, the results differ substantially. This is not surprising given that the units are quite different. Despite the many differences, three common themes could be discerned that problematize the relationship between risk and corporate innovation in a more general way.

The first concerns perceived control over the innovation process. Both units associated risks and also potential for opportunities with relations to external actors such as suppliers, partners and customers. The view of these relations also seemed to relate to the perceived control and influence over such relationships. The Service Development Unit saw mostly threats, whereas the seemingly less constrained Technology Development Unit also emphasized the potential for improvement.

The second theme concerns whether attention is focused on innovation *qua* process or output. Research on managerial risk-taking suggests that risk behavior tends to be guided by attention rather than the axioms of classical decision theory. What is perceived as risky in corporate innovation is therefore liable to indicate innovative behavior. In both units there was a tendency to discuss risks mainly in relation to innovation processes instead of innovative outputs. While processes are important it is imperative that the attention to processes is not allowed to restrict the overarching goal of developing innovative outputs.

These two themes, the view of relations to external actors and the role of processes, were brought together in a discussion of how corporate innovation may benefit from a measure of interpretive and practical flexibility vis-à-vis business models. Active support of organizational flexibility will affect the real freedom to interact with others and may also widen the range of feasible innovations.

5 Discussion

Entrepreneurship has been defined as interpreting situations differently and acting assertively to exploit such differences, often developing a venture with the goal to make a profit. This combination of thinking and doing puts the notion of action at the heart of entrepreneurship studies. The purpose of the appended studies was to examine the nature of entrepreneurial action, focusing specifically on how technology entrepreneurs experience risk, opportunity and the role of self as part of the venture creation and development process. Methodological focus was on the lived experiences of entrepreneurs. Such a focus is seen as a complement to existing research that prioritizes behaviors, cognitive mechanisms and narratives.

This section revisits the empirical results with an eye to identifying common themes that may be relevant for understanding entrepreneurial action more generally. These themes are found on a level slightly above the findings of the individual studies, which specifically explored risk, self and opportunity. Here the empirical results are instead reorganized in response to the more general research question: “How do entrepreneurs experience and conceptualize their actions in creating and developing their ventures?” Study **II** focuses mainly on the identity of the entrepreneur. Study **I** splits perceptions of risk into two broad categories: innovation risks encountered and affected. Study **III** similarly distinguishes between opportunities as perceived to be existing and created. Based on this very rough division, the empirical results (studies **I–III**) can be categorized according to the sub-questions: Who am I?, What do I see?, What do I do? (see Table 2). The discussion is thus grounded in the empirical categories from studies **I, II** and **III**. Study **IV** is set in a corporate environment and is brought in during the discussion to contrast and support the findings.

<i>Who am I?</i>	<i>What do I see?</i>	<i>What do I do?</i>
II-1 - Innovator’s reflexive self-conception	I-1 - Human capital	I-4 - Activating social networks
II-2 - Innovator ego-involvement	I-2 - Pace and priority	I-5 - Risk learning
II-3 - Commitment and control	I-3 - The world moves	I-6 - Risk incrementalism
II-4 - Personal stakes	III-1 - Exploiting knowledge	I-7 - Maintaining venture agility
II-5 - Cognitive strategies of the self	III-2 - Filling the gap	I-8 - Creating and sustaining autonomy
	III-3 - Opportunity in timing	III-4 - Enacting the Zeitgeist
		III-5 - Stability as strategy
		III-6 - Sequential entry process

Table 2. A recategorization of the empirical results from studies I–III.

Building on this empirical categorization, it is possible to connect the results in an analytical model of entrepreneurial action (Figure 3). This model also includes an outcome box that corresponds to the question: What are the effects? This is more of an analytical extension of the model. The results contain discussions of effects and outcomes. But because the outcome box is not directly based on the empirical findings, it

is shaded in the model. It is included because it rounds off the model and because specifying relevant outcomes improves analytical clarity (cf. Davidsson 2004: 129-130).

The arrows in Figure 3 indicate causal relationships. Since the methods used in the studies are not longitudinal, the suggestion of causality may be criticized. The empirical material is rich and in itself contains discussions of temporality and cause-effect relationships. Still, the causality suggested by the arrows is mainly an analytical elaboration that organizes the entrepreneurs' experiences into a logical sequence.

The structure of the model is similar to that of the causal model outlined in Chapter 1.1. The causal model describes a logical flow starting with individuals whose perceptions lead them to take certain actions (e.g. Krueger 2003). While the general structure of the model resembles this broad schematic, the specific findings, i.e. the content of the boxes and their internal relationships, are grounded in a more situated understanding of action (e.g. Brown and Duguid 1991).

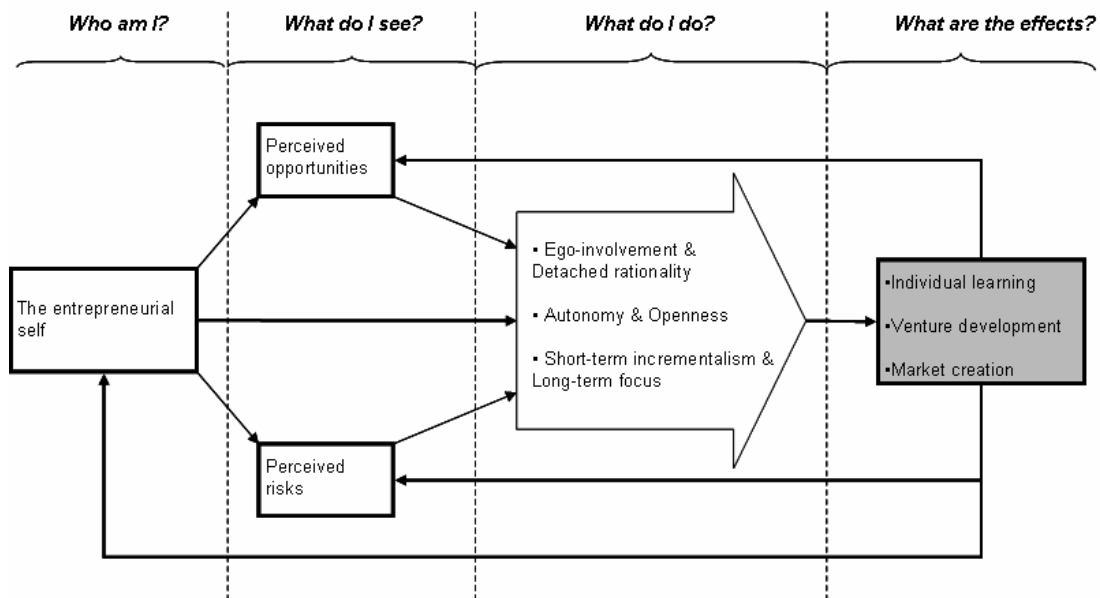


Figure 3. A tentative model of entrepreneurial action.

This model illustrates how entrepreneurial action can be analytically understood as a cycle that starts from the entrepreneur's historically and socially developed self, which influences what stand out as relevant and interesting risks and opportunities. Perceptions of risks and opportunities allow the entrepreneur to suspend the ongoing flux of experience and use them as temporary points of orientation for further action. Perceptions of risks and opportunities thus become relevant as part of different practices and enactment strategies. Here the entrepreneur draws on personal experiences and interaction with the surrounding context to elaborate and reinterpret the perceived risks and opportunities. In action the entrepreneur is able to elaborate and test ideas, explore uncertainties and develop vague and private hunches. The outcomes of these activities are brought together under the headings of individual learning, venture development and market creation. Entrepreneurial actions continuously feed back into the entrepreneurial

self, thereby forming the backdrop for future perceptions of risks and opportunities. By developing the venture and creating new markets, risks and opportunities are also influenced more directly.

In the remainder of the chapter, this model is elaborated by relating previous theory with examples from the appended studies. The discussion is structured along headings that correspond to the themes found in Figure 3. As mentioned, the components of the model are more analytically than empirically distinct. This is because action is seen as an ongoing accomplishment that cannot be divided into thinking and acting (see Chapters 1.1 and 3.1). As a result there is some empirical overlap between the different components of the model.

5.1 Who am I?

‘Who is an entrepreneur?’ has been a major question and point of debate in entrepreneurship studies. Early entrepreneurship research sought to ground explanations of entrepreneurial action in specific personal qualities or contextual pressures (Shane 2003). In recent years, heterogeneity regarding knowledge, preferences, abilities and behaviors has emerged as a fundamental assumption in entrepreneurship theorizing (Gartner et al. 1992, Venkataraman 1997, Davidsson 2004). This is reflected in economic theorizing where the relative importance of entrepreneurs seems to be linked with a far-reaching ‘subjectivism’ (see Chapter 2.1).

An important challenge is to provide a theoretical grounding for heterogeneous entrepreneurial subjects that can account both for the individual and for the social (structural) without simply pinning the two against each other. To this end the self was introduced as an alternative lens through which to regard the entrepreneur (study II). In the psychological tradition, the self is seen as the particular being or identity that distinguishes one individual from others. The present discussion rests on a more sociologically influenced view where the self is seen as a mix of subjective identity, which is spontaneous, personal and creative, and internalized roles that correspond to the organized attitudes of wider groups. The self is thus not exclusively an expression of the individual, but of a dynamic form of subjectivity that is constructed in the interface between the individual, his/her surrounding world and the activities that evolve there.

The studies showed that entrepreneurs tend to bring a whole range of ‘non-entrepreneurial’ ambitions, role identities and network ties to bear on their activities, e.g. by invoking personal experiences as well as multiple identities as researchers, owners, friends and family providers to frame situations or motivate decisions (II-1). This resonates well with Steyaert’s (2004a) plea to regard the entrepreneurial subject as depending on more or less public discourses. It also recalls O’Conner’s (2004) study which shows how entrepreneurs reconstruct their identities in accordance with different venture storylines.

The last example highlights the dynamic nature of the entrepreneurial self. With time and experience the answer to the question ‘Who am I?’ will gradually change, as some experiences are likely to take on more enduring forms in terms of habits, heuristics and specific knowledge (Shane 2000, Sarasvathy 2001, Mitchell et al. 2002) as well as social roles and identities that entail certain values and behavioral expectations (Hoang and

Gimeno 2005). The answer to the question ‘Who am I?’ therefore suggests an answer to the question ‘What do I see?’.

5.2 What do I see?

If entrepreneurs are seen as heterogeneous, this has obvious consequences for what stand out as relevant risks and opportunities in different situations. The status of such perceptions constitutes one of the main controversies in entrepreneurship studies at the moment, namely whether opportunities (and risks) have real existence independently of entrepreneurial interpretations (Shane 2003) or whether they are in fact created as part of the entrepreneurial process (Sarasvathy 2004b) (studies **I**, **III**).

The studies show that entrepreneurs often describe risks and opportunities as objectively existing. In study **I** the entrepreneurs described objectively existing risks in terms of human-relations issues such as finding competent personnel (**I**-1), issues of timing including first-mover risks (**I**-2), and the unruliness of the world, which may manifest itself in unpredictable markets (**I**-3). Opportunities were similarly described as more or less given in the existence of attractive knowledge of different kinds (**III**-1), gaps in different social and organizational structures (**II**-2) or in divergent development tempos, e.g. between promoted and existing services (**III**-3). These broad categories also contain perceptions of more concrete risks and opportunities.

As much as individual perceptions may correspond to different underlying conditions, e.g. technological discoveries or markets trends, the focus on ongoing action rather than static choice downplays the ontological distinction between what is real and what is perceived (Weick 1995). Perceptions of relevant risks and feasible opportunities drive action whether these reflect ‘objectively true’ risks and opportunities or not (Krueger 2000). The main role of risks and opportunities is consequently to impose some form of order on the venture development process – to provide cognitive and practical drivers or ‘points of orientation’ that more or less temporarily guide entrepreneurial actions under conditions of uncertainty (Gartner et al. 1992). Perceptions of risks and opportunities provide lenses through which the past is seen as coherent and which also entail visions of plausible futures (cf. Steyaert and Bouwen 1997, Lane and Maxfield 2005). Vivid perceptions of opportunities are, for instance, important reflexively to energize the individual entrepreneur, and in social situations entrepreneurial charisma and confidence inspire people both within firms (Witt 1998) and on markets (Langlois 1998a). It seems that perceptions of risks and opportunities provide drivers of actions regardless of their correspondence with reality (studies **I**, **III**). This was also evident in study **IV** where organizational structures and attitudes affected risk perceptions and perceived risk management options.

Not all actions are preceded by clear perceptions of what to do. Action is to a great extent guided by ‘situational intentionality’ (Joas 1996) or ‘skillful coping’ (Dreyfus 1991) where people more or less intuitively respond to emerging situations without much conscious deliberation. Not even having explicit intentions guarantees a consistent sequence of intention, action and outcome (Weick 1979, Brunsson 1993). Consequently, when entrepreneurs act they are guided by both explicit perceptions and more tacit intuitions.

5.3 What do I do?

As indicated above, perceptions of risks and opportunities become truly relevant when understood as part of ongoing action. This section extends the previous questions, Who am I? and What do I see?, by outlining three entrepreneurial enactment processes recurring in the empirical material. The following sub-chapters thus describe the tensions between *ego-involvement and detached rationality*, *venture autonomy and openness*, and finally the trade-off between *short-term incrementalism and long-term focus*.

5.3.1 Ego-involvement and detached rationality

This heading describes the tension between a very personal involvement and more detached modes of engagement. While passion is an important aspect of entrepreneurial action, entrepreneurs sometimes need to detach themselves from their ventures. This may be very difficult and, to attain the necessary detachment, entrepreneurs were found to recall or construct temporary identities that allowed them to suspend their own feelings, for instance when making important decisions.

In the category ‘Personal stakes’ (II-4) the reasons for being an entrepreneur were described as a mix of existential, emotional and social factors. The entrepreneurs did not see themselves as primarily risking alternative costs or some potential profit. Instead what was at stake and what influenced many actions was the entrepreneur’s complex self-identity, which had to be upheld vis-à-vis colleagues, family and reflexively to an ideal image held by the entrepreneur of himself or herself. This is similar to the findings of Hoang and Gimeno (2005) who argue that people’s beliefs about prototypical entrepreneurial characteristics and activities will influence actual behavior. The findings also extend this perspective by describing how ‘non-entrepreneurial’ factors influence entrepreneurial actions.

The category ‘Enacting the Zeitgeist’ (III-4) further illustrated how entrepreneurs sometimes use highly visceral interpretations or feelings of personal excitement to legitimate opportunities. This recalls the parenting metaphor (Cardon et al. 2005) with its emotional connotations. Sometimes decisions and actions are not grounded in cost-benefit analyses but in “emotions and deep identity connections between an entrepreneur and an idea or opportunity” (Cardon et al. 2005: 24).

This issue is explicitly addressed in the category ‘Innovator ego-involvement’ (II-2) which describes how personal engagement can be very important in terms of producing commitment and resolve. Regarding the venture part of one’s personality leads to a form of ego-based or existential stubbornness that allows the entrepreneur to focus on a given vision and prevail in the face of tremendous turbulence and negative feedback. In the literature this is sometimes seen as a fortunate consequence of cognitive biases. The typical argument is that entrepreneurs ‘suffer’ from illusion of control, high levels of optimism, or affect-infusion (Baron 1998, Simon et al. 2000) and that, while objectively irrational, such ‘unsubstantiated enthusiasm’ is in fact necessary for entrepreneurship to take place (Busenitz and Barney 1997). Others suggest that creative action cannot be thought of in terms of deviations from objective rationality (Sarasvathy 2004a) and that strongly believing and consequently acting ‘as if’ risks are negligible and opportunities

rich is often rational and functional from an action perspective (Gartner et al. 1992, Brunsson 1993).

Box 1. Illustrations of Entrepreneurial Ego-Involvement

“Perhaps I discard an economically successful alternative. I may focus on myself and thereby short-change the company as a whole.” (II-2)

“You get so into what you do ... like phone ring tunes [...] It is so cool to get the phone to sound different, cool graphics on a screen ... to get the weather report in your phone. We thought it was really freaking cool what we did” (III-4)

There are of course potential drawbacks to high levels of ego-involvement. Many entrepreneurs become blinded by the brilliance of their own ideas and, besides being a tremendous source of vitality and inspiration, love can also be blind (Cardon et al. 2005). This may be especially true for technology entrepreneurs, who often start with elegant technical solutions that are allowed to unduly constrain the perceived market, development of business models and so forth.

The importance of a more detached analytical stance is evident in the category ‘innovator ego-involvement’ (II-2). As mentioned, some entrepreneurs experienced a form of identity overlap and had trouble separating their personal identities from the venture. To retain a proper business focus, entrepreneurial ego-involvement must therefore be managed. As indicated in the first quotation above (Box 1), many entrepreneurs are aware of such risks. A recurrent way of reducing the emotional investment is to invoke roles that allow the entrepreneur to assume a more instrumental attitude. One such example is when an entrepreneur, who is also an owner, assumes a shareholder perspective and replaces himself or herself from a certain role such as CEO. Such a detached stance allows the entrepreneur to assume a managerial posture and to view entrepreneurial action as a highly systematic exercise of “analysis, system, and hard work“ (Drucker 1985:134).

The category ‘Risk learning’ (I-5) shows how entrepreneurs invoke specific experiences and learned role-identities (cf. Hoang and Gimeno 2005) from work in academia and different corporations as more ‘objective’ backdrops against which to make sense of the present entrepreneurial process. By invoking an image of the entrepreneurial process as ordered, the entrepreneurs could increase their self-confidence (Krueger 2003) but also allowed a distanced comprehension of their own role in the overall process.

The instrumental use of multiple identities or discourses was further emphasized in the category ‘Innovator’s reflexive self-conception’ (II-1). Here it is shown how entrepreneurs more or less actively trade off different real and imagined identities and roles against one another to reinterpret situations, overcome obstacles and take actions. This adds an active or reflexive dimension to the insight that entrepreneurial identities are discursively embedded (Lounsbury and Glynn 2001, Downing 2005).

Box 2. Illustrations of Entrepreneurial Detached Rationality

“I look at the company as an owner; I will be part of it as long as I contribute. In later phases others are probably more suitable.” (II-2)

“The outlook I had with me from experimental physics was important here [...] to develop something towards a long-term goal in a complex environment. It’s important to master your path, but not necessarily the totality of it all.” (I-5)

To summarize, entrepreneurial action in many ways depends on a high level of personal engagement. This engagement, which is often grounded in social and existential factors, is important not least because it allows entrepreneurs to act on personal visions, inspire others and carry novel ideas through in the face of uncertainty and negative feedback.

Ego-involvement also needs to be monitored. Entrepreneurs were found to draw on previous experience, formal theories and different role identities in a self-reflexive ‘sense and sensibility’ trade-off that allowed them to deploy their personal commitment in productive ways.

5.3.2 Autonomy and Openness

The second tension concerns autonomy and openness. Autonomy is both an existential need and more importantly a set of practical strategies for shielding the innovative integrity of the venture. The strife for autonomy is also moderated by a balanced and necessary infusion of external influences.

The category ‘Creating and sustaining autonomy’ (I-8) describes a range of strategies by which entrepreneurial actions avoid becoming too restrained by external forces. Entrepreneurs take a number of measures that shield the venture from external pressures and allow it to develop in relative autonomy. These measures can be practical, as when unspecified sources of funding are used to pursue pet projects or when external audits are used to increase the integrity of the venture. The results of such measures are often tangible, e.g. more resources or financial capital. What is perhaps even more important is that they produce a perception or ‘sense’ of autonomy and strategic freedom. Perceived autonomy and freedom over one’s work process has generally been associated with creative results, even when overall goals have been set externally (Amabile 1998). This insight also receives support from study IV, which illustrates how perceived and real control over one’s work process relates to conceptions of risks to organizational innovation.

The results thus extend the general ‘need for autonomy’ from being an existential need or a character trait (Delmar 2000) to also comprise a set of practices that protects the venture from harmful influences while at the same time sustaining a sense of innovative integrity in the venture.

Box 3. Illustrations of Entrepreneurial Autonomy

“Too little and too dedicated money is another risk. We took money budgeted by S (public utility) for machine purchases and used part of it for developing the innovation. [...] It’s easier to obtain forgiveness than permission.” (I-8)

“I tried to get my academic colleagues to shoot down the idea on several occasions, but it withstood their attempts. That way I figured the technological risk was accounted for.” (I-8)

While autonomy and integrity are certainly important, a balanced infusion of external stimuli is also needed. External contacts serve to provide novel impulses. They also provide the kind of creative balance between novelty and social appropriateness that signifies innovative entrepreneurship (Lounsbury and Glynn 2001).

The category ‘Activating social networks’ (I-4) describes how entrepreneurs open up the borders of their ventures and use the resources and legitimacy of both professional and personal networks to increase flexibility and the range of available options. Previous research recognizes this practice, as entrepreneurs have been shown to use private and professional networks both to assess risks and spot novel opportunities (Johannisson and Mönsted 1997, Jack and Anderson 2002). The results (I-4) further show that by engaging an extended network of people, including financiers, consultants and potential customers, entrepreneurs are able to act as if their ventures are larger than they really are. This is in line with behavioral findings indicating that market interaction and highly visible activities tend to increase the likelihood of venture success, but also failure depending on the venture’s original potential (Carter et al. 1996, Delmar and Shane 2004).

If instead entrepreneurship is seen as truly creative, an inviting attitude toward external actors contributes much more than tests and validations of pre-existing opportunities (study III). On such an account, openness and interaction instead fuel a creative process in which the identities of the entrepreneur and the venture (O’Connor 2004), as well as the external environment itself (Weick 1979) are jointly renegotiated as part of the venture development process (Sarasvathy 2004a, Lane and Maxfield 2005).

Box 4. Illustrations of Entrepreneurial Openness

“In this field one can have almost as many partnerships as one likes. Many partnerships, for instance with consultants, spread the risks and cover up the holes in competence and in the market.” (I-4)

“NN has activated several strategic actors by describing visions. Now we have to deliver.” (I-4)

To summarize, entrepreneurial action requires both autonomy, e.g. to focus and reflect, and openness, e.g. to ensure appropriateness and fuel the creative process. To this end,

entrepreneurs use a range of strategies that sustain a measure of autonomy while at the same time allowing the venture to be influenced by inputs from external stakeholders.

5.3.3 Short-term incrementalism and long-term focus

The final enactment process regards the trade-off between short-term incrementalism and flexibility and the need to retain a long-term focus.

Opportunistic adaptation and incremental learning strategies are often promoted as essential in the face of uncertainty (Bhidé 2000, Honig et al. 2005). These qualities were also prominent in the category ‘Risk incrementalism’ (I-6). Uncertainty forced many entrepreneurs to engage in a form of short-cycle experimentation to develop the venture. This should not be confused with playing it safe or an aimless muddling through strategy. Overall goals are often ambitious, but high levels of uncertainty force the entrepreneur to put the bulk of the effort into tactics and execution. Amar Bhidé contrasts entrepreneurship with strategic management and replaces the classical chess metaphor with poker, since entrepreneurs “play each hand as it is dealt and quickly vary tactics to suit the conditions” (Bhidé 1986: 62).

The category ‘Maintaining venture agility’ (I-7) describes how undertaking a wide range of venture activities keeps the venture ‘on its toes’. At the core of this category is the realization that the future is not given. In contrast with the previous category, the entrepreneurs here proactively experiment with parallel product tracks, different business models and alternative future scenarios to build up momentum. This allows entrepreneurs to fend off risks ‘on the fly’ and move the venture swiftly in different directions by dint of internal preference or external demands. This recalls Lane and Maxfield’s (1996) recommendation to foster ‘generative relationships’ in the face of short planning horizons.

Also the category ‘Commitment and control’ (II-3) reflects the importance of taking action in the short term, not least as a way to overcome uncertainty. This idea of ‘acting one’s way out of uncertainty’ is reflected by many authors including Gartner et al. (1992), Bhidé (2000) and especially Sarasvathy (2001) who argues that creation of control through action is often preferable to prediction under conditions of uncertainty.

Box 5. Illustrations of Entrepreneurial Short-Term Incrementalism

“The venture is our baby, not the technology. Risk management to us is therefore maintaining a clear business focus and to constantly seek out new products and services. We will not become rich from [product name].”(I-7)

“The most dangerous thing that can happen is decision anxiety. We would rather be wrong four times out of five than make the right decision too late.” (II-3)

Long-term strategies are often not available for entrepreneurial firms. This may be due to practical reasons such as poor cash flow (Bhidé 1986) or simply because the future is

inherently uncertain (Shackle 1979). Still, short-term incrementalism needs to be balanced against some form of stable core or vision for the company, whether in terms of technology, market or business model (Sjölander and Hellström 2005). This becomes apparent in the category ‘Stability as strategy’ (III-5). This category describes different strategies for achieving a sense of stability and permanence in the venture. Entrepreneurs are thus able to withstand external turbulence by focusing on areas of perceived stability, whether these consist of sticking with given customers, focusing on ‘obvious’ values or organizing venture operations around the current staff. Entrepreneurs thus impose their own sense of structure by highlighting features that they control. In this way they reduce the perceived uncertainty of the future, which in turn enables more confident actions (Sarasvathy 2001). ‘Sequential entry process’ (III-6) recalls the preceding category. Here entrepreneurs take strategic positions in either markets or technologies with the hope that these positions will pay off in the future.

Deciding on a long-term goal clearly provides the venture with a sense of focus and direction. Long-term focus can thus be seen both as a practical issue that guides specific actions and as a way to cope mentally and emotionally in the face of great uncertainty. The latter aspect was clearly evident in the category ‘Cognitive strategies of the self’ (II-5), which describes how entrepreneurs envision glorious prospects, for either present or coming ventures, as a means to deal emotionally with a stressful present. This resonates with cognitive biases like affect-infusion (Baron 1998) and overconfidence (Busenitz and Barney 1997). It also qualifies general findings by emphasizing how such cognitions are moderated by specific situations and purposes.

Box 6. Illustrations of Entrepreneurial Long-Term Focus

“Everyone believed in this, they thought it would come. We realized that if one positions oneself now, one will surely be in a good position later” (III-6)

“We are really just trying to maintain what we have and grow nice and slow. You shouldn’t create any problems, so to speak ... now if we expand these areas we will do it one per quarter or one every six months, so you build them and let them sink in” (III-5)

To summarize, entrepreneurs take short-term actions and renegotiate their strategies in response to emerging situations. This is often necessitated by the uncertainty of the future and lack of resources. It can also be part of a proactive strategy where the entrepreneurs incrementally create the future. Entrepreneurs also balance the short-term activities with some sense of long-term focus. This can be achieved by focusing on perceived areas of stability or by envisioning a glorious future as a way to justify current hardships.

5.4 What are the effects?

The previous chapters drew on the empirical findings to elaborate entrepreneurial action in terms of who entrepreneurs are, what they see, and what they do. The present chapter

extends this to also include the question of effects or outcomes. Even though the empirical material contains discussions of effects, this chapter is not based on empirical evidence to the same extent as the previous ones were. Nevertheless, a discussion of outcomes is included for reasons of analytical completeness and clarity.

The problem of identifying suitable effects or outcome measures plagues most social sciences, and may be especially pressing in entrepreneurship studies where the process is open-ended making goals quite fleeting. Entrepreneurship is also linked to many levels of analysis including the individual, the venture and the greater situation of which it is part. Next, the question 'What are the effects?' is therefore addressed in relation to the interrelated themes of individual learning, venture development and market creation.

Individual learning

What constitutes individual entrepreneurial learning is a point of some debate. The cognitive tradition focuses on the development of context independent schemas or scripts that capture the lessons learned from previous experience (Mitchell et al. 2002), whereas discursively oriented writers argue that learning is more about becoming familiar with specific local settings and communities (O'Connor 2004).

This study has sought to bridge the focus on cognitions or discourses by emphasizing that entrepreneurial action is in many ways a form of meaningful and situated reflection-in-action. While the study design precludes any verdict as to what constitutes functional practices, the results indicate that individuals take actions that merge individual ambitions and contextual conditions in a way that is perceived as meaningful to the stakeholders involved. This resembles the focus on functional and useful practices and strategies suggested by authors like Lane and Maxfield (1996) and Sarasvathy (2001). The findings in the thesis contribute to these efforts by suggesting that such practices need to balance the tensions between ego-involvement and detachment, autonomy and openness, and short-term versus long-term focus. Besides bridging cognition and discourse, the focus on individual learning as development of practices links individual learning to the more concrete issue of venture development.

Venture development

Since new ventures typically seek to create value together with external stakeholders, it has been argued that venture development is mainly about establishing an appropriate business model. A business model describes the logic by which a venture should be organized to match resources and customer needs in a way that generates appropriable value. This very general statement has been operationalized as the answers to a series of questions including: What value propositions or offers can be articulated, based on the available technological resources? What existing or new customer segments can be identified? What specific offerings can be developed? What value chain is suitable to produce the offer? In what value network should the firm be positioned? What revenue mechanism should be used to capture value from the offer? (cf. Chesborough and Rosenbloom 2002, Andrén et al. 2003, Sjölander and Hellström 2005).

These questions seldom have clear answers, and taking actions to answer one will typically change the conditions for addressing the others. As a result, business models

gradually develop as the result of experiments and interactions with different stakeholders. In this process it has been argued that all aspects of the business model cannot change at the same time (Sjölander and Hellström 2005). A similar conclusion may be drawn from study **III**.

As successful ventures mature and grow, business models often become more rigid. This shift may reduce the role of individual perceptions, as the venture becomes increasingly integrated with external actors.

Market creation

Over time the venture becomes more and more constrained by its network of related actors including customers, suppliers, financiers and strategic partners who, with time, will influence what the venture is about and constrain what it can do (O'Connor 2004). This reminds of institutional theory. What signifies entrepreneurship is that this influence is very much reciprocal and that entrepreneurial action also influences institutions. The actions undertaken by the entrepreneur in many ways modify, and in some respects create, the surrounding environment. By expanding the venture and enlisting others while doing so, entrepreneurs in a very real sense enact the world and its institutions (Gartner et al. 1992) not least by creating new markets and business models (Sarasvathy 2004b).

6 Conclusions and suggestions

Based on the individual studies and the general discussion, it is possible to draw some conclusions and suggest implications regarding theory, practice and methodology.

6.1 Theoretical implications

The field of entrepreneurship studies is quite heterogeneous and transcends many disciplines and levels of analysis. As a result there is some confusion regarding fundamental issues. By taking entrepreneurs' lived experiences as the point of departure, a number of these issues can be given novel interpretations. These insights were brought together in a tentative model of entrepreneurial action (Figure 3). This model provides an structured basis for conceptualizing entrepreneurial action from a subjective point of view. Here, the implications are mainly discussed in relation to the questions: Who am I?, What do I see?, and What do I do?

A classic dilemma in entrepreneurship studies concerns how to conceptualize the entrepreneur. Study **II** explicitly addressed the tension between the individual and the social (structural) as the basis for action. Researchers in the narrative tradition also seek to bridge this dualism but as indicated the focus on discourses and storylines sometimes downplays the role of individual initiative and agency. This thesis introduced the entrepreneurial self as an alternative lens through which to view the entrepreneur. On this view the individual is neither a bundle of traits and capabilities, nor the enactment of different discourses. Instead the entrepreneurial self, seen as a mix of subjective identity and internalized roles, constitutes a dynamic form of subjectivity that is constructed in the interface between the individual, the surrounding world and the activities that evolve

there. Such a view allows for a dynamic and more nuanced understanding of the entrepreneur than has traditionally been the case. Researchers have long argued in favor of a more full-bodied conceptualization of the entrepreneur, i.e. one that does not reduce human beings and experiences to traits, human capital or managerial skills (e.g. Johannisson 1989, Hjorth 2003). The notion of the entrepreneurial self provides a conceptual basis that allows for such a rich treatment of the individual in future research. Hoang and Gimeno (2005) argue that development of an entrepreneurial identity may explain the transition to entrepreneurship. In a similar vein one may also speculate that the importance of ego-involvement and visceral interpretations will decline with time and growth, partly as a result of a growing internal bureaucracy and constraining relationships with external stakeholders.

A more complex view of the entrepreneur links directly to the role of individual perceptions and their relation to entrepreneurial action. This in turn has a direct bearing on the continuing debate over the status of opportunities, risks and by extension the external world. Typically opportunities are seen as either created by entrepreneurial imagination and action or objectively existing and waiting to be discovered (study III). By taking action as the point of departure, this distinction becomes less significant as perceptions become important in their own right. Perceptions drive entrepreneurial action regardless of whether they reflect 'objectively true' risks and opportunities or not. This is not to suggest that there is no real world out there. It does however suggest that understanding entrepreneurial action requires a deeper comprehension of the entrepreneurial life world, including perceptions of risks and opportunities, which goes beyond the simple subjective/objective debate.

The focus on diverse perceptions also highlights the practices through which these are enacted. Given that entrepreneurs have multifaceted and conflicting ambitions, it is not surprising that entrepreneurial actions may appear paradoxical to outsiders. This thesis sought to examine how these differences play out in what entrepreneurs do. The results showed that entrepreneurs balance at least three major tensions as part of the venture creation and development process: ego-involvement and detached rationality, autonomy and openness, and long- versus short-term focus.

The findings support the trend in entrepreneurship studies to regard uncertainty and heterogeneity as key conceptual building blocks (Venkataraman 1997, Davidsson 2003). Entrepreneurs do not simply respond to profits or pursue autonomy. Instead entrepreneurs are driven by passion, personal engagement and social responsibilities. This is in line with the radical subjectivist tradition where authors have long called for an 'economics of meaning' grounded in socially embedded individuals' interpretive activities (cf. Lachmann 1990, Lavoie 1991a, Boettke et al. 2004). The field of entrepreneurship studies is often said to struggle with its identity, legitimacy and theoretical grounding (cf. Steyaert 2005). Given the important influence of economics (Chapter 2.1), radical subjectivism may provide a more appropriate foundation than either the neoclassical or Austrian traditions. Especially since these traditions find it hard to handle issues of human creativity and imagination (e.g. Littlechild 1986, Buchanan and Vanberg 1991). Entrepreneurship studies may therefore stand to gain from a closer allegiance with the radical subjectivist tradition.

6.2 Methodological implications

This thesis used phenomenological methods that investigated phenomena from the perspective of entrepreneurs' lived experiences. This focus directs attention to how entrepreneurs try to make sense of their situation and find meaning and structure in the venture development process. The findings also indicate that such a perspective indeed has potential in terms of revisiting and enriching existing, often contested, concepts such as opportunities and risk-taking. It also provides opportunities to explore novel aspects of entrepreneurship such as the nature and reflexive use of the entrepreneurial self.

A natural extension of this approach would be to move beyond individuals and also take group dynamics into account. This thesis focused on individual experiences but in order to grasp important aspects of entrepreneurial action it may be necessary to investigate how different individuals' experiences mesh together in the creation and development of new ventures. As suggested above, the entrepreneurial self and its concomitant practices may change with time, e.g. as the venture grows. A truly dynamic understanding therefore requires longitudinal methods, where the impact of entrepreneurial action may be traced over time in terms of its implications for individual learning, venture development and market creation

6.3 Practical implications

It is important not to confuse descriptions with recommendations. The present findings are mainly descriptive and instead of providing normative advice on how entrepreneurs should behave, this thesis has sought to explore how entrepreneurs conceive of and enact certain aspects of their life worlds. The findings are thus useful in the sense that these findings can produce a richer understanding of entrepreneurial action, which may in turn lead to more informed action.

One way in which this may be done is by using the findings, from either the individual studies or the general framework, as analytical tools in specific situations. A systematic discussion of risks and opportunities in terms of the categories developed may help entrepreneurs by increasing their self-reflexivity, problematizing risks and opportunities, and by suggesting ways of enacting these issues. Entrepreneurs tend to get emotionally involved in their ventures and often overestimate opportunities and underestimate risks. As argued above, this is not always a bad thing as stubbornness and overconfidence often enable action in the face of uncertainty. The findings, especially from study **II**, also suggest that these are not general characteristics of entrepreneurs. Instead such attitudes are born out of specific existential and social conditions, making them highly individual and often temporary. The present findings may therefore help entrepreneurs become more reflexive actors, by describing how and why personal involvement, social-role taking and cognitive strategies influence judgments and actions. The results can also be used to problematize and elaborate risks and opportunities. Risk is often formally managed with focus on financial projections, technical problems, recruitment etc. Systematically discussing such risks in terms of the categories developed in study **I** may give entrepreneurs' a substantially richer understanding of such hands on risks. If venture risks are appraised in terms of learning potential, the importance of networking, and the importance of maintaining venture agility and autonomy, entrepreneurs may also identify

creative ways of engaging these risks and find new ways for developing the venture as a whole.

In a similar manner, venture capitalists, incubator managers, entrepreneurship educators and others who interact with entrepreneurs may also benefit from the findings. Since the studies focused on technology entrepreneurs, many based on university research, the findings may be particularly useful to incubator managers. Incubators typically provide office space, funding opportunities and management support of different kinds. Studies also indicate that motivations and attitudes toward risk are key factors for the ability of incubator firms to raise funds and achieve high growth and profitability (e.g. Löfsten and Lindelöf 2003). To the extent that incubator managers counsel their entrepreneurs, the findings may therefore yield better advice by pointing to factors that could otherwise be neglected. If for instance, incubator managers appreciate that entrepreneurs may be afraid of bsing face with former research colleagues and often get personally attached to their innovations, they should be able to make a more balanced analysis and provide better assistance.

References

- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes*. 50: 179-211.
- Aldrich, H. (1990). Using an ecological perspective to study organizational founding rates. *Entrepreneurship: Theory & Practice*. 14(3): 7-24.
- Aldrich, H. (2001). Who wants to be an evolutionary theorist? Remarks on the occasion of the year 2000 OMT distinguished scholarly career award presentation. *Journal of Management Inquiry*. 10(2): 115-127.
- Aldrich, H. (2005). Entrepreneurship. In Smelser, N. and Swedberg, R. (eds.), *Handbook of Economic Sociology*. Second edition. Princeton, NJ: Princeton University Press, pp. 451-477
- Alsos, G. and Kolvereid, L. (1998). The business gestation process of novice, serial and parallel business founders. *Entrepreneurship: Theory & Practice*. 22(4): 101-114.
- Alvesson, M. and Deetz, S. (2002). *Kritisk Samhällsvetenskaplig Metod* [Critical Social Science Methodology]. Lund: Studentlitteratur.
- Amabile, T. (1998). How to kill creativity. *Harvard Business Review*. 76(5): 77-87.
- Andrén, L., Magnusson, M. and Sjölander, S. (2003). Opportunistic adaptation in start-up companies. *International Journal of Entrepreneurship and Innovation Management*. 3(5/6): 546-562.
- Arrow, K. (2000). Observations on social capital. In Dasgupta, P. and Serageldin, I. (eds.), *Social Capital: A Multifaceted Perspective*. Washington: The World Bank, pp. 3-5.
- Audia, R. and Rider, C. (2005). Entrepreneurs as organizational products: Revisited. In Baum, J., Frese, M. and Baron, R. (eds.), *The Psychology of Entrepreneurship*. Hillsdale, NJ: Lawrence Erlbaum Associates, (forthcoming).
- Augier, M. (1999). Some notes on Alfred Schutz and the Austrian school of economics: Review of Alfred Schutz's collected papers, Vol. IV. *Review of Austrian Economics*. 11: 145-162.
- Banonis, B. (1989). The lived experience of recovering from addiction: A phenomenological study. *Nursing Science Quarterly*, 2: 37-43.
- Baron, R. (1998). Cognitive mechanisms in entrepreneurship: Why and when entrepreneurs think differently than other people. *Journal of Business Venturing*. 13: 275-294.
- Baron, R. (2004). Potential benefits of the cognitive perspective: Expanding entrepreneurship's array of conceptual tools. *Journal of Business Venturing*, 19(2): 169-172.
- Baumol, W. (1968). Entrepreneurship in economic theory. *American Economic Review*, 58(2): 64-71.
- Becker, G. (1965). A theory of the allocation of time. *Economic Journal*, 75: 493-517.
- Benner, P. (ed.) (1994). *Interpretive Phenomenology: Embodiment, Caring and Ethics in Health and Illness*. Thousand Oaks, CA: Sage.
- Berg, B. (2001). *Qualitative Research Methods for the Social Sciences*. Boston: Allyn and Bacon.
- Berglund, H. (2005). Researching entrepreneurship as lived experience. In Ulhøi, J. and Neergaard, H. (eds.), *Handbook of Qualitative Research Methods in Entrepreneurship*. Edward Elgar, (forthcoming).
- Bhidé, A. (1986). Hustle as strategy. *Harvard Business Review*. 64(5): 59-65.
- Bhidé, A. (2000). *The Origin and Evolution of New Businesses*. Oxford: University Press.

- Bianchi, M. and Henrekson, M. (2005). Is neoclassical economics still entrepreneurless?. *Kyklos*. 58(3): 353-377.
- Biggart, N. (1989). *Charismatic Capitalism: Direct Selling Organizations in America*. Chicago: University of Chicago Press.
- Birch, D. (1987). *Job Creation in America: How Our Smallest Companies Put the Most People to Work*. New York: The Free Press.
- Bird, B. (1989). *Entrepreneurial behaviour*. Scott, Foresman: Glenview. IL.
- Block, Z. and MacMillan, I. (1985). Milestones for successful venture planning. *Harvard Business Review*. 85(5): 184-188.
- Boettke, P., Lavoie, D. and Storr, V. (2004). The subjectivist methodology of Austrian economics and Dewey's theory of inquiry. In Khalil, E. (ed.), *Dewey, Pragmatism and Economic Methodology*. London: Routledge, pp. 327-356.
- Brockhaus, R. (1980). Risk taking propensity of entrepreneurs. *Academy of Management Journal*. 23(3): 509-520.
- Brown, J. and Duguid, P. (1991). Organizational learning and communities of practice: Toward a unified view of working, learning, and innovation. *Organization Science*. 2(1): 40-57.
- Brunsson, N. (1993). Ideas and actions: Justification and hypocrisy as alternatives to control. *Accounting, Organization and Society*. 18(6): 489-506.
- Buchanan, J. and Vanberg, V. (1991). The market as a creative process. *Economics and Philosophy*. 7: 167-186.
- Burke, K. (1945). *A Grammar of Motives*. University of California Press.
- Busenitz, L. and Barney, J. (1997). Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making. *Journal of Business Venturing*. 12: 9-30.
- Busenitz, L., Gomez, C. and Spencer, J. (2000). Country institutional profiles: Unlocking entrepreneurial phenomena. *Academy of Management Journal*. 43(5): 994-1003.
- Caplan, R. (1999). The Austrian search for realistic foundations. *Southern Economic Journal*. 65(4): 823-838.
- Cardon, M., Zietsma, C., Saporito, P., Matherne, B. and Davis, C., (2005). A tale of passion: New insights into entrepreneurship from a parenthood metaphor. *Journal of Business Venturing*. 20(1): 23-45.
- Care, N. and Landesman, C. (1968). *Readings in the Theory of Action*. Indiana: University Press.
- Carter, N., Gartner, W. and Reynolds, P. (1996). Exploring start-up event sequences. *Journal of Business Venturing*. 11(3): 151-166.
- Carter, N., Reynolds, P. and Gartner, W. (2004). Perceptions of entrepreneurial climate. In Gartner, W., Shaver, K., Carter, N. and Reynolds, P. (eds.), *Handbook of Entrepreneurial Dynamics: The Process of Business Creation*. Newbury Park, CA: Sage, pp. 412-420.
- Casson, M. (2003). *The Entrepreneur: An Economic Theory*. Cheltenham: Edward Elgar.
- Chesbrough, H. and Rosenbloom, R. (2002). The role of the business model in capturing value from innovation: Evidence from Xerox corporation's technology spin-off companies. *Industrial and Corporate Change*. 11(3): 529-555.

- Chiasson, M. and Saunders, C. (2005). Reconciling diverse approaches to opportunity research using the structuration theory. *Journal of Business Venturing*. 20(6): 747-767.
- Cope, J. (2005). Researching entrepreneurship through phenomenological inquiry: Philosophical and methodological issues. *International Small Business Journal*. 23(2): 163–189.
- Czarniawska, B. (1997). *Narrating the Organization*. Chicago: University of Chicago Press.
- Davidsson, P. (1991). Continued Entrepreneurship: Ability, need and opportunity as determinants of small firm growth. *Journal of Business Venturing*. 6: 405-429.
- Davidsson, P. (2003). The domain of entrepreneurship research: Some suggestions. In Shepherd, D. and Katz, J. (eds.), *Cognitive Approaches to Entrepreneurship Research*. Amsterdam: Elsevier, pp. 315-372.
- Davidsson, P. (2004). *Researching Entrepreneurship*. New York: Springer.
- Delmar, F. (2000). The psychology of the entrepreneur. In Carter, S. and Jones Evans, D. (eds.), *Enterprise and Small Business: Principles, Practice and Policy*. Harlow UK: Pearson Education Ltd, pp. 132-154.
- Delmar, F. and Shane, S. (2003a). Does business planning facilitate the development of new ventures? *Strategic Management Journal*. 24(12): 1165-1185.
- Delmar, F. and Shane, S. (2003b). Does the order of organizing activities matter for new venture performance? *paper presented at Babson Kauffman Entrepreneurship Research Conference*, Wellesley, June. Available at: <http://www.babson.edu/entrep/fer/BABSON2003/XXV/XXV-P4/xxvP4.htm>.
- Delmar, F. and Shane, S. (2004). Legitimizing first: Organizing activities and the survival of new ventures. *Journal of Business Venturing*. 19(3): 385-410.
- Demsetz, H. (1983). The neglect of the entrepreneur. In Ronen, J. (ed.), *Entrepreneurship*. Lexington: Lexington Books, pp. 271-280.
- Dosi, G. and Lovallo, D. (1997). Rational entrepreneurs or optimistic martyrs? Some considerations on technological regimes, corporate entries, and the evolutionary role of decision biases. In Garud, R., Nayyar, P. and Shapira, Z. (eds.), *Technological Innovation: Oversights and Foresights*. Cambridge: Cambridge University Press, pp. 41–70.
- Downing, S. (2005). The social construction of entrepreneurship: Narrative and dramatic processes in the coproduction of organizations and identities. *Entrepreneurship: Theory & Practice*. 29(2): 185-204.
- Dreyfus, H. (1991). *Being-in-the-World: A Commentary on Heidegger's Being and Time, Division I*. Cambridge, MA: MIT Press.
- Drucker, P. (1985). *Innovation and Entrepreneurship*. New York: Harper and Row.
- Emirbayer, M. and Mische A. (1998). What is agency? *American Journal of Sociology*. 103 (4): 962-1023.
- Engeström, Y. (1987). *Learning by Expanding: An Activity Theoretical Approach to Developmental Research*. Helsinki: Orienta-Konsultit Oy.
- Fiet, J. (1996). The informational basis of entrepreneurial discovery. *Small Business Economics*. 8: 419-430.
- Freeman, J. (1986). Entrepreneurs as organizational products: Semiconductor firms and venture capital firms. In Libecap, G. (ed.), *Advances in the Study of Entrepreneurship, Innovation, and Economic Growth*, Vol.1, Greenwich, JAI Press Inc., pp. 33-52.
- Gartner, W. (1988). 'Who is an entrepreneur?' is the wrong question. *American Journal of Small Business*. 12(1): 11-32.

- Gartner, W. (1993). Words lead to deeds: Towards an organizational emergence vocabulary. *Journal of Business Venturing*. 8(3): 231-239.
- Gartner, W. and Carter, N. (2003). Entrepreneurship behavior: Firm organizing processes. In Acs, Z. and Audretsch, D. (eds.), *Handbook of Entrepreneurship Research*. Dordrecht: Kluwer Academic Publisher, pp. 195-222.
- Gartner, W. Bird, N. and Starr, J. (1992). Acting as if: Differentiating entrepreneurial from organizational behavior. *Entrepreneurship: Theory & Practice*. 16(3): 13-31.
- Gartner, W., Shaver, K., Carter, N. and Reynolds, P. (2004). *Handbook of Entrepreneurial Dynamics: The Process of Business Creation*. Newbury Park, CA: Sage.
- Gatewood, E., Shaver, K. and Gartner, W. (1995). A longitudinal study of cognitive factors influencing start-up behaviors and success at venture creation. *Journal of Business Venturing*. 10(5): 371-391.
- Gecas, V. (1982). The self concept. *Annual Review of Sociology*. 8: 1-33.
- Gick, W. (2002). Schumpeter's and Kirzner's entrepreneur reconsidered: Corporate entrepreneurship, subjectivism and the need for a theory of the firm. In Foss, N. and Klein, P. (eds.), *Entrepreneurship and the Firm: Austrian Perspectives on Economic Organization*. Cheltenham: Edward Elgar, pp. 87-101.
- Giddens, A. (1979). *Central Problems in Social Theory: Action, Structure and Contradiction in Social Analysis*. London: Macmillan
- Gifford, S. (2003). Risk and uncertainty. In Acs, Z. and Audretsch, D. (eds.), *The Handbook of Entrepreneurship Research*. New York: Kluwer, pp. 37-54
- Gigerenzer, G. (2004). Striking a blow for sanity in theories of rationality. In Augier, B. and March, J. (eds.), *Models of a Man: Essays in Honor of Herbert Simon*. Cambridge, MA: MIT Press, pp. 389-410.
- Giorgi, A. (ed.) (1985). *Phenomenology and Psychological Research*. Pittsburgh, PA: Duquesne University Press.
- Grant, P. and Perren, L. (2002). Small business and entrepreneurial research: Meta-theories, paradigms and prejudices. *International Small Business Journal*. 20: 185-209.
- Hayek, F. (1937). Economics and knowledge. *Economica*. 4:33-54.
- Hayek, F. (1945). The use of knowledge in society. *American Economic Review*. 35(4): 519-530.
- Hébert, R. and Link, A. (1988). *The Entrepreneur: Mainstream Views and Radical Critiques*. Praeger: New York.
- Hellström, C. (2001). Affecting the future: Chronic pain and perceived agency in a clinical setting. *Time and Society*. 10(1): 77-92.
- Hjorth, D. (2003). *Rewriting Entrepreneurship - For a New Perspective on Organisational Creativity*. Copenhagen: CBS Press.
- Hjorth, D. and Steyaert, C. (eds.) (2004). *Narrative and Discursive Approaches in Entrepreneurship*. Cheltenham: Edward Elgar.
- Hoang, H. and Gimeno, J. (2005). Becoming an entrepreneur: The role of entrepreneurial identity in the gestation process. Manuscript, under review at the *Academy of Management Review*.
- Honig, B., Davidsson, P. and Karlsson, T. (2005). Learning strategies of nascent entrepreneurs. In Sanchez, R. and Heene, A. (eds.), *Research in Competence-based Management*, vol.2, Greenwich CT: JAI Press, (forthcoming).

- Huberman, A. and Miles M. (2002). Reflections and advice. In Huberman, A. and Miles, M. (eds.), *The Qualitative Researcher's Companion*. Thousand Oaks, California: Sage, pp. 393-398.
- Jack, S. and Anderson, A. (2002). The effects of embeddedness upon the entrepreneurial process. *Journal of Business Venturing*. 17: 1-22.
- Jennings, P., Perren, L. and Carter, S. (2005). Guest editors' introduction: Alternative perspectives on entrepreneurship research. *Entrepreneurship: Theory & Practice*. 29(2): 145-152.
- Joas, H. (1996). *The Creativity of Action*. Chicago: University Press.
- Johannisson, B. (1989). An action theory of entrepreneurship - why?, how?, what?, so what? In Borch, O. (ed.), *Paradigmer og Metoder i Småforetaksforskningen*. HSN-rapport 1989:5. Bodø: Høgskolesenteret i Nordland, pp. 93-117.
- Johannisson, B. and Mönsted, M. (1997). Contextualizing entrepreneurial networking - the case of Scandinavia. *International Studies of Management and Organization*. 27(3): 109-136.
- Katz, J. and Gartner, W. (1988). Properties of emerging organizations. *Academy of Management Review*. 13: 429-441.
- Kets de Vries, M. (1977). The entrepreneurial personality: A person at the crossroads. *Journal of Management Studies*. 14(1): 34-57.
- Kihlstrom, R. and Laffont, J. (1979). A general equilibrium entrepreneurial theory of firm formation based on risk aversion. *Journal of Political Economy*. 87(4): 719-748.
- Kirchhoff, B. (1997). Entrepreneurship economics. In Bygrave, W. (ed.), *The Portable MBA in Entrepreneurship*. New York: Wiley, pp. 444-474.
- Kirova-Petrova, A. (2000). Researching young children's lived experiences of loneliness: Pedagogical implications for linguistically diverse students. *Alberta Journal of Educational Research*. 46(2): 99 - 116.
- Kirzner, I. (1973). *Competition and Entrepreneurship*. Chicago: The University of Chicago Press.
- Kirzner, I. (1979). *Perception, Opportunity and Profit*. *Studies in the Theory of Entrepreneurship*. Chicago: University of Chicago Press.
- Knight, F. (1921). *Risk, Uncertainty and Profit*. Boston and New York: Houghton Mifflin.
- Koestler, A. (1964). *The Act of Creation*. New York: Macmillan.
- Krueger, N. (2000). The cognitive infrastructure of opportunity emergence. *Entrepreneurship: Theory & Practice*. 24(3), 5-23.
- Krueger, N. (2003). The cognitive psychology of entrepreneurship. In Acs, Z. and Audretsch, D. (eds.), *Handbook of Entrepreneurship Research: An Interdisciplinary Survey and Introduction*. Dordrecht, NL: Kluwer, pp. 105-140.
- Krueger, N., Reilly, M. and Carsrud, A. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*. 15(5): 411-432.
- Kvale, S. (1996). *InterViews: An Introduction to Qualitative Research Interviewing*. London, UK: Sage Publications.
- Lachmann, L. (1976). From Mises to Shackle: An essay on Austrian economics and the kaleidic society. *Journal of Economic Literature*. 14(1): 54-62.

- Lachmann, L. (1990). Austrian economics. A hermeneutic approach. In Lavoie, D. (ed.), *Economics and Hermeneutics*. London and New York: Routledge, pp. 134-146.
- Lane, D., Malerba, F., Maxfield, R. and Orsenigo, L. (1996). Choice and Action. *Journal of Evolutionary Economics*. 6(1): 43-76.
- Lane, D. and Maxfield, R. (1996). Strategy under complexity: Fostering generative relationships. *Long Range Planning*. 29(2): 215-231.
- Lane, D. and Maxfield, R. (2005). Ontological uncertainty and innovation. *Journal of Evolutionary Economics*. 15(1): 3-50.
- Langlois, R. (1998a). Personal capitalism as charismatic authority: The organizational economics of a Weberian concept. *Industrial and Corporate Change*. 7(1): 195-213.
- Langlois, R. (1998b). Rule-following, Expertise, and Rationality: A New Behavioral Economics?' In Dennis, K. (ed.), *Rationality in Economics: Alternative Perspectives*. Dordrecht: Kluwer Academic Press, pp. 55-78.
- Lavoie, D. (1991a). The discovery and interpretation of profit opportunities: Culture and the Kirznerian entrepreneur. In Berger, B. (ed.), *The Culture of Entrepreneurship*. San Francisco: Institute for Contemporary Studies, pp. 33-51.
- Lavoie, D. (1991b). The progress of subjectivism In Blaug, M. and de Marchi, N. (eds.), *Appraising Economic Theories: Studies in the Methodology of Research Programs*. Gloucestershire, England: Edward Elgar, pp. 470-486.
- Lavoie, D. and Chamlee-Wright, E. (2001). *Culture and Enterprise: The Development, Representation, and Morality of Business*. Florence, KY: Routledge.
- Lewis, P. (2005). Structure, agency and causality in post-revival Austrian economics: Tensions and resolutions. *Review of Political Economy*. 17(2): 291-316.
- Littlechild, S. (1986). Three types of market process. In Langlois, R. (ed.), *Economics as a Process: Essays in the New Institutional Economics*. Cambridge: Cambridge University Press, pp. 27-39.
- Lounsbury, M. and Glynn, M. (2001). Cultural entrepreneurship: Stories, legitimacy and the acquisition of resources. *Strategic Management Journal*. 22(6/7): 545-564.
- Löfsten, H. and Lindelöf, P. (2003). Determinants for an entrepreneurial milieu: Science parks and business policy in growing firms. *Technovation*. 23(1): 51-64.
- Manicas, P. (1997). Social explanation. In Greenwood, J. (ed.), *The Mark of the Social*. Lanham, Maryland: Rowman and Littlefield, pp. 153-181.
- Martinelli, A. (1994). Entrepreneurship and management. In Smelser, N. and Swedberg, R. (eds.), *Handbook of Economic Sociology*. Princeton: Princeton University Press, pp. 476-503.
- McClelland, D. (1961). *The Achieving Society*. Princeton, NJ: Van Nostrand.
- Mead, G. (1934). *Mind, Self and Society*. Chicago: Chicago University Press.
- Merleau-Ponty, M. (2002). *Phenomenology of Perception*. London: Routledge.
- Mintzberg, H. (1973). *The Nature of Managerial work*. New York, NY: Harper and Row.
- Mises, L. (1996). *Human Action: A Treatise on Economics*. Fourth revised edition. San Francisco: Fox & Wilkes. Available at www.mises.org.

- Mitchell, R. (1996). Oral history and expert scripts: Demystifying the entrepreneurial experience. *Journal of Management History*. 2(3): 50-67.
- Mitchell, R. and Chesteen, S. (1995). Enhancing entrepreneurial expertise: Experiential pedagogy and the new venture expert script. *Simulation and Gaming*. 26(3): 288-306.
- Mitchell, R., Smith, J., Seawright, K. and Morse, E. (2000). Cross-cultural cognitions and venture creation. *Academy of Management Journal*. 43(5): 974-993.
- Mitchell, R., Busenitz, L., Lant, T., McDougall, P., Morse, E. and Smith, B. (2002). Toward a theory of entrepreneurial cognition: Rethinking the people side of entrepreneurship research. *Entrepreneurship: Theory & Practice*. 27(2): 93-104.
- Newbert, S. (2005). New firm formation: A dynamic capability perspective. *Journal of Small Business Management*. 43(1): 55-77.
- O'Connor, E. (2004). Storytelling to be real: Narrative, legitimacy building and venturing. In Hjorth, D. and Steyaert, C. (eds.), *Narrative and Discursive Approaches in Entrepreneurship*. Cheltenham: Edward Elgar, pp. 105-124.
- Ogbor, J. (2000). Mythicizing and reification in entrepreneurial discourse: Ideology-critique of entrepreneurial studies. *Journal of Management Studies*. 37(5): 605-635.
- Packer, M. (1985). Hermeneutic inquiry in the study of human conduct. *American Psychologist*. 40: 1081-1093.
- Packer, M. and Addison, R. (1989). Evaluating an interpretive account. In Packer, M. and Addison, R. *Entering the Circle: Hermeneutic Investigation in Psychology*. Albany, NY: State University of New York Press, pp. 275-292.
- Palich, L. and Bagby, D. (1995). Using cognitive theory to explain entrepreneurial risk taking: Challenging conventional wisdom. *Journal of Business Venturing*. 10(6): 425-438.
- Pendergast, C. (1986). Alfred Schutz and the Austrian school of economics. *American Journal of Sociology*. 92: 1-26.
- Pentland, B. (1999). Building process theory with narrative: From description to explanation. *Academy of Management Review*, 24(4): 711-724.
- Poolton, J. and Ismail, H. (2000). New developments in innovation. *Journal of Managerial Psychology*. 15(8): 795-811.
- Reynolds, P. (1991). Sociology and entrepreneurship: Concepts and contributions. *Entrepreneurship: Theory & Practice*. 16(2): 47-70.
- Reynolds, P. (2000). National panel study of U. S. business startups: Background and methodology. In Katz, J. (ed.), *Advances in Entrepreneurship, Firm Emergence, and Growth*. Stamford, CT: JAI Press, pp. 153-227.
- Ripsas, S. (1998). Towards an interdisciplinary theory of entrepreneurship. *Small Business Economics*. 10(2): 103-115.
- Romer, P. (1986). Increasing returns and long-run growth. *Journal of Political Economy*. 94(5): 1002-1037.
- Sandberg, J. (2005). How do we justify knowledge produced within interpretive approaches? *Organizational Research Methods*. 8(1): 41-68.
- Sarasvathy, S. (2001). Causation and effectuation: Towards a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*. 26(2): 243-263.

- Sarasvathy, S. (2004a). Making It happen: Beyond theories of the firm to theories of firm design. *Entrepreneurship: Theory & Practice*. 28(6): 519-531.
- Sarasvathy, S. (2004b). Constructing corridors to economic primitives: Entrepreneurial opportunities as demand-side artifacts. In Butler, J. (ed.), *Opportunity Identification and Entrepreneurial Behavior*. Greenwich CN: Information Age Publishing, pp. 291-312.
- Sarasvathy, S., Simon, H. and Lave, L. (1998). Perceiving and managing business risks: Differences between entrepreneurs and bankers. *Journal of Economic Behavior and Organization*. 33(2): 207-226
- Schultz, W. (1980). Investment in entrepreneurial ability. *Scandinavian Journal of Economics*. 82(4): 437-448.
- Schumpeter, J. (1961). *The Theory of Economic Development*. New York: Oxford University Press.
- Schumpeter, J. (1975). *Capitalism, Socialism and Democracy*. New York: Harper.
- Schütz, A. (1940). Parsons' theory of social action: a critical review by Alfred Schütz. In Grathoff (e d.), (1978). *The Theory of Social Action: The Correspondence of Alfred Schütz and Talcott Parsons*. Bloomington: Indiana University Press, pp. 8-124.
- Schütz, A. (1953). Common-sense and scientific interpretation of human action. *Philosophy and Phenomenological Research*. 14(1): 1-37.
- Shackle, G. (1979). *Imagination and the Nature of Choice*. Edinburgh: Edinburgh University Press.
- Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science*. 11(4): 448-469.
- Shane, S. (2003). *A General Theory of Entrepreneurship: The Individual-Opportunity Nexus*. Aldershot, UK: Edward Elgar.
- Shane, S. and Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*. 25(1): 217-226.
- Shapiro, A. 1984. The entrepreneurial event. In Kent, C. (ed.), *The Environment for Entrepreneurship*. Lexington, MA: D.C. Heath, pp. 21-40.
- Shaver, K. and Scott, L. (1991). Person, process, choice: The psychology of new venture creation. *Entrepreneurship: Theory & Practice*. 16(2): 23-45.
- Shaver, K., Gartner, W., Crosby, E., Bakalarova, K. and Gatewood, E. (2001). Attributions about entrepreneurship: A framework and process for analyzing reasons for starting a business. *Entrepreneurship: Theory & Practice*. 26(2): 5-32.
- Simon, H. (1996). *The Sciences of the Artificial*. Third edition. Cambridge, MA, MIT Press.
- Simon, M. Houghton, S. Aquino, K. (2000). Cognitive biases, risk perception, and venture performance: how individuals decide to start companies. *Journal of Business Venturing*. 15(2): 113-134.
- Sjölander, S. and Hellström, T. (2005). A theory of entrepreneurial learning. mimeo. *Department of Innovation Engineering and Management*. Göteborg: Chalmers University of Technology.
- Smith, J. and Osborn, M. (2003). Interpretative phenomenological analysis. In Smith, J. (ed.), *Qualitative Psychology: A Practical Guide to Methods*. London: Sage, pp. 55-80.
- Spinosa, C., Flores, F. and Dreyfus, H. (1997). *Disclosing New Worlds: Entrepreneurship, Democratic Action, and the Cultivation of Solidarity*. Cambridge, MA: The MIT Press.
- Stake, R. (1994). Case studies. In Denzin, N. and Lincoln, Y. (eds.), *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage. 236-247.

- Stevenson, H. and Harmeling, S. (1990). Entrepreneurial management's need for a more 'chaotic' theory. *Journal of Business Venturing*. 5(1): 1-14.
- Steyaert, C. (2004a). Entrepreneurship without entrepreneurs? Reclaiming a(n other) psychology of entrepreneurship studies. *Paper presented at the Rent XVIII-Conference*, Copenhagen, November 24-26, 2004.
- Steyaert, C. (2004b). The prosaics of entrepreneurship. In Hjorth, D. and Steyaert, C. (eds.), *Narrative and Discursive Approaches in Entrepreneurship*. London: Edward Elgar, pp. 8-21.
- Steyaert, C. (2005). Entrepreneurship: In between what? On the "frontier" as a discourse of entrepreneurship research. *International Journal of Entrepreneurship and Small Business*. 2(1): 2-16.
- Steyaert, C. and Bouwen, R. (1997). Telling stories of entrepreneurship: Towards a narrative-contextual epistemology for entrepreneurial studies. In Donckels, R. and Miettinen, A. (eds.), *Entrepreneurship and SME Research: On its Way to the Next Millennium*. Aldershot, Ashgate. 47-62.
- Steyaert, C. and Katz, J. (2004). Reclaiming the space of entrepreneurship in society: Geographical, discursive and social dimensions. *Entrepreneurship and Regional Development*. 16(3): 179-196.
- Swedberg, R. (ed.) (2000). *Entrepreneurship: The Social Science View*. Oxford: University Press.
- Thornton, P. (1999). The sociology of entrepreneurship. *Annual Review of Sociology*. 25: 19-46.
- Todd, P. and Gigerenzer, G. (2003). Bounding rationality to the world. *Journal of Economic Psychology*. 24: 143-165.
- Tsoukas, H. (2005). Afterword: why language matters in the analysis of organizational change. *Journal of Organizational Change Management*. 18(1): 96-104.
- Tversky, A. and Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*. 185: 1124-1131.
- Walsh, J. (1995). Managerial and organizational cognition: Notes from a trip down memory lane. *Organization Science*. 6(3): 280-321.
- Van de Ven, A. (1980). Early planning, implementation and performance of new organizations. In Kimberly, J. and Miles, R. (eds.), *The Organization Life Cycle*. San Francisco: Jossey Bass. 83-134.
- Van de Ven, A. (1986). Central problems in the management of innovation. *Management Science*. 32(5): 590-607.
- Van de Ven, A. (1992). Longitudinal methods for studying the process of entrepreneurship, In Sexton, D. and Kasarda, J. (eds.), *The State of the Art of Entrepreneurship*. Boston: PWS-Kent Publishing, pp. 214-242.
- Van de Ven, A. and Engleman, R. (2004). Event- and outcome-driven explanations of entrepreneurship. *Journal of Business Venturing*. 19(3): 343-358.
- Van de Ven, A., Polley, D., Garud, R. and Venkataraman, S. (1999). *The Innovation Journey*. Oxford University Press. New York.
- Van Manen, M. (1990). *Researching Lived Experience: Human Science for an Action Sensitive Pedagogy*. Albany, NY: State University of New York Press.
- Weick, K. (1979). *The Social Psychology of Organizing*. New York, NY: McGraw Hill.
- Weick, K. (1995). *Sensemaking in Organizations*. Thousand Oaks, CA: Sage.

Venkataraman, S. (1997). The distinctive domain of entrepreneurship research. In Katz, J. (ed.), *Advances in Entrepreneurship, Firm Emergence and Growth*. Volume III. JAI Press, pp. 119-138.

Witt, U. (1998). Imagination and leadership: The neglected dimension of an evolutionary theory of the firm *Journal of Economic Behavior and Organization*. 35(2): 161-177.

Yin, R. (1994). *Case Study Research: Design and Methods*. Second edition. Newbury Park CA: Sage Publications.

^I The self develops in the process of social interaction, especially in the interplay between the subjective and spontaneous I and the socially informed Me (Mead 1934). The notion of self provides the philosophical basis for inquiries into the self-concept, but is itself intractable for empirical investigation. The self-concept or identity, on the other hand, is the product of this process and consists of the way in which an individual views himself or herself (Gecas 1982). In this thesis the concepts of self, self-concept and identity are sometimes used interchangeably.

^{II} Borrowing from Schumpeter, an entrepreneur is seen as a person who innovates, i.e. acts to develop an invention, and who sometimes also invents the underlying technology. In some of the appended studies the term 'innovator' is used as a synonym for entrepreneur.

^{III} The notion of life world was introduced by phenomenologists such as Husserl and Schütz (van Manen 1990). The life world is the immediate and taken for granted world of everyday lived experience. This world is seen as the basis for all human knowledge, including the perceptions on which action is based. The life world is thus seen as more basic than the theoretical and conceptual worlds typically described by scientists and philosophers.

^{IV} There is some debate regarding Schumpeter's view of individuals and institutions as embodying the entrepreneurial function. Some claim that Schumpeter in his later writings revised his view of the entrepreneur whereas others claim that Schumpeter simply assigned individuals a less prominent role in late capitalism. See Langlois (1998a) for an interesting review and discussion. The present discussion is concerned with the 'early' Schumpeterian focus on the entrepreneur as a charismatic leader.

^V In many studies certain behaviors can be seen both as independent and as dependent variables. Making a sale is for instance regarded as an important activity, an outcome and a sign that an organization exists in the first place (e.g. Gartner et al. 2004). Defining outcome measures is a big problem in entrepreneurship studies (Davidsson 2004: 129-131) and, as seen below, this may also affect how results are interpreted.

^{VI} A number of researchers have developed intention-based models *de novo* from within the field of entrepreneurship (e.g. Shapiro 1982, Davidsson 1991), whereas others use general psychological frameworks (e.g. Ajzen 1991, c.f. Krueger et al. 2000). All intention-based models, however, use similar categories to explain the formation of intentions.

^{VII} This grounding of meaning in a relation between parts and whole is sometimes called the hermeneutic circle. Developed by Heidegger and Gadamer, the hermeneutic circle is an important part of the discursive logic.

^{VIII} Even if the structures of narratives are often similar, the status of narrative knowledge is somewhat disputed. Some researchers in the structuralist tradition believe that underneath every specific narrative lie more stable and general "deep structures" that act to shape and constrain the forms that directly observable "surface descriptions" can take (e.g. Pentland 1999). Post-structuralists on the other hand see deep structures as a myth and instead favor the development of vibrant local narratives. Post-structuralists typically allow themselves more free use of rhetorical devices since there is no objective baseline against which to evaluate a narrative (Steyaert and Bouwen 1997).