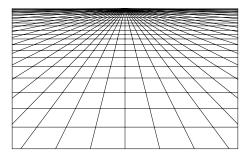


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CULTIVATING ENTREPRENEURIAL SPIRIT

On How Institutional Environments Influence Individual Decision-Making

-Implications for Developing Effective Innovation Strategies-

KARINA BIRKELAND KJELLSEN

University of Oslo / Roskilde University Centre ESST / Innovation Studies 2003

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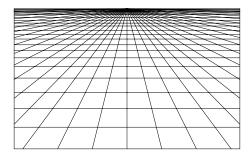


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The ESST MA

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:Summary:

Karina Birkeland Kjellsen (2003)

Cultivating Entrepreneurial Spirit: On how institutional environments influence individual decision-making - Implications for developing effective innovation strategies -

This thesis is a presentation of research on how entrepreneurship happens. The connection between individuals and surroundings is under close scrutiny. It is argued that institutional systems exert important influence on individuals' willingness to engage in entrepreneurial activity. Consequently, effective innovation strategies should include emphasis on creating milieus conducive of entrepreneurship. The choice structure people relate to has to be constructed favorable of innovative initiative, and efforts in directing people's attention to the issue are essential for the freeing of innovative potential.

An empirical study of prospective entrepreneurs (students participating in the Norwegian School of Entrepreneurship, *Gründerskolen*) and an assessment of the Norwegian climate for entrepreneurship compliments review of literature from a range of social sciences. The thesis is interdisciplinary, explorative, and rooted in the *Science*, *Technology and Society* tradition. The findings are compiled in an innovative conceptualization of how individuals and systems recursively interact, and are illustrated in a set of models, where the Spatial Model of Entrepreneurship is my contribution to contemporary research on entrepreneurship.

Key words: Innovation, entrepreneurship, culture, institutions, decision-making, entrepreneurial education, aspirations, Norwegian climate for entrepreneurship.

:Dedication:

I dedicate this thesis to the

Norwegian School of Entrepreneurship

With the hope that it can provide some contributions to the improvement and expansion of a program that empowers young and enthusiastic students to embrace their ambitions

Likewise to my Family

In particular to Mamma and Pappa

For creating an environment for us conducive of intellectual, athletic, artistic, idealistic and compassionate pursuits **Guro**, **Gaute** and **Asle** -

All the activity, support, and expectations have cultivated in me personality and aspirations!

To Friends at home and abroad

- For letting me come and go -

In memory of

Endre Gustavsen

He was an extraordinary motivator, who reminded us to develop and use our potential

And he was too sadly and abruptly taken away from us on April 18th 2003

:Credits:

Thanks foremost to **The Norwegian School of Entrepreneurship**. The program has been inspiring to study.

My gratitude goes to Lars Monrad Krohn, my mentor in the early stage of the process, who got me started and who laid the ground for my belief in the need and the timeliness for this work on entrepreneurship, and to Dr. Nils Damm Christophersen for reassuring that I could use NSE as a case study in this research project, and for helpful comments.

My credits go in particular to the **interviewees** and the **NSE class of 2003** who created for an enthusiastic and inspiring environment when I met with you both in Asker, in Boston, and in Silicon Valley. Also the **NSE summer seminar in Boston**, with input to the field of entrepreneurship from lectures at MIT, Harvard, Boston University, and in personal encounter with the other participants, have provided invaluable stimulation towards the completion of this thesis. Thanks to the **Norwegian Trade Council** in San Francisco for being so supportive of me when I visited in August 2003.

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Introduction

This thesis aims at exploring how we can **Cultivate Entrepreneurial Spirit**. It is an academic paper seeking to understand how individuals and surroundings recursively interact. The findings indicate that institutional systems affect individuals in their decision-making. As such creating institutional systems conducive of entrepreneurship will make more people willing to engage in entrepreneurial activity. The insights provided should be taken into consideration in developing effective innovation strategies.

Thesis scope

Entrepreneurial activities are considered an important source of technological innovation and economic growth (Schumpeter, 1934; Birley, 1987)¹. When I am concentrating on the issue of entrepreneurship in this thesis, it is with the assumption that entrepreneurship is an essential element in scientific and technological innovative processes. My point of departure is the STS tradition², and I seek to explore the issue of entrepreneurship from a variety of social scientific perspectives.

Entrepreneurship has primarily been studied from two different angles:

- 1) Economic theory in a form traditionally termed entrepreneurship-theory, and
- 2) Innovation theory, which is a sociological systems approach.

In the present literature on entrepreneurship, the economic theories are dominating, yet several authors have stressed the need for a broader analysis of the issue. Kjeldsen (1991), Blenker (1992), and Verheul et al. (2001), have all provided contributions towards a more eclectic theory of entrepreneurship. Social sciences such as anthropology and sociology, together with cognitive psychology and political science are argued to broaden the understanding we have of how entrepreneurship happens. Jon Sundbo argued in 1994 that we are in the middle of a paradigmatic revolution in the academic quest to understand how innovation happens. Economic analyses are mostly concerned about the potential importance of entrepreneurship; that is if and how entrepreneurship contributes to the economy. But as there is now broad agreement across the economic and business field that entrepreneurship is an essential contributor to both vital firm and societal economies, it is time to focus on how entrepreneurship happens. Increased understanding of both the incentives and the barriers for entrepreneurship could possibly provide some insights as to

¹ See also Soleng, 2000 (Norwegian secretary of state)

² An abbreviation commonly used for inter-disciplinary Science, Technology and Society Studies

how people relate to the issue of entrepreneurship; insight essential in being able to prescribe strategies to increase the level of entrepreneurial activity. The research presented in this thesis provides insights that can serve as an important foundation for more effective innovation policies.

Traditional micro level entrepreneurship theory is much devoted to understand the role of the individual. Individual traits, personal motivation and drive, and individual skills are focused on. However, evidence from reports such as The Global Entrepreneurship Monitor (GEM 1997-2002) has concluded that the level of entrepreneurship seems to vary from one region or country to another, and that the start – up rate changes over time. Hence it appears that entrepreneurship has something to do with the environment in addition to the individual.

Studies in the field of National and Regional Innovation Systems on the other hand, have concentrated only on the environment; the milieu for innovation, and are void of an account of the role of the individual, or analyses of how the innovation system impacts the individual. It is my assumption that all innovative activities inherently are initiated by individuals who are embedded in and relate to a system, therefore the foundation for understanding innovation better is to take a dual perspective in which the systems and the individual perspectives are integrated. This thesis provides a contribution to how these diverging fields can be merged.

Entrepreneurship and innovation has much in common. New establishments are typified by their innovative character, either with regards to product or process. I conceive of innovation as the emergence of new products or processes, and entrepreneurship as being about introducing these new products and processes. So innovation is something that people do. As such, it is essential to have a focus on entrepreneurship when one is concerned about innovation on a societal level.

I am presenting empirical research on how attitudes are a determinant of entrepreneurship in this thesis. I do so through an analysis of how individuals are affected by the institutional environment that surrounds them. The Norwegian School of Entrepreneurship provided the context for the empirical review of this matter. Further, I develop and present a model on how attention and attitudes affect human decision-making about engaging in entrepreneurial activities. In particular I am focusing on Entrepreneurship in Norway, and prescribing some solutions as to how we can increase the level of entrepreneurship and innovation in our country.

The work presented in this paper is inspired by the work done by Verheul et al. The eclectic theory of entrepreneurship offered in their 2001 research report has been a major contributor to the theoretical point of departure of this paper. The eclectic theory of entrepreneurship is built on the rich traditions and findings spanning a broad spectrum of academic disciplines to develop an integrated

theory which can enlighten the issue of entrepreneurship. I am keeping up their tradition and incorporating multi-level units of analysis; I integrate a focus on the micro and macro levels. The units of analysis are the potential entrepreneur, and the institutional and cultural environment of these individuals – it is in particular the interaction between these two levels of analysis that is the focal point of this thesis.

An important clarification to make is that in focusing on entrepreneurship and the climate, or lack hereof, in Norway, it is with the postulation that whether people are employed or self-employed, entrepreneurial spirit is important in that innovation is a direct result of the behavior of inspired individuals. As such I am not posing a political argument in the line of more privatization. Rather, I am investigating why and how we can change the environment so that more individuals feel inspired and competent to pursue innovation enhanced career paths – Whether that is as entrepreneurs, intrapreneurs, or as drivers of change and innovation in the public sector.

Thesis Objective

The core objective of this thesis is to contribute to a broadened understanding of the concept of entrepreneurship within the STS field of study. The *Science, Technology and Society* perspective within social science studies has an interdisciplinary approach, and makes use of theories and explanations from several subject areas. The STS perspective is in a continuous development towards the establishment of explanations and theories which can best reveal the complex relations between *science* and *technology* on one hand, and humans and various forms of human organization, which we label *the society* on the other.

"A common character of the studies in the STS tradition has been to open "black boxes" in order to understand the relations between science, technology and culture, policy and society in general" (Asdal&Myklebust, 1999).

As can be inferred from the citation above, the STS tradition is concerned about understanding connections earlier treated as irrelevant, as black boxes. There are few conventional theories at which to depart from; hence the STS field of study primarily offers explorative studies of complex relationships. I join this journey of exploration, and my aim is to discover some new connections and possibly generate some new fruitful conceptualizations of how entrepreneurship happens.

The intention of this research paper is to explore the association between the diverging academic fields which treat the issue of entrepreneurship, and I seek to contribute to the body of STS theory with a conceptualization of how to merge the gap between entrepreneurship theory and

innovation systems theory. The research question guiding the study has been: How does the environment influence the freeing of entrepreneurial potential in people? I have undertaken a qualitative study among the students of the Norwegian School of Entrepreneurship³ in order to investigate the relationship between the individual potential entrepreneur and the environment and entrepreneurial climate in Norway.

Organization of the thesis

Section **One** of this paper is an explorative theoretical clarification of the notion of entrepreneurship. I introduce several theories used as analytical tools throughout the thesis.

Section **Two** of the paper is an explorative empirical study investigating the attitudes towards entrepreneurship among a group of young people in Norway; namely the participants in the Norwegian School of Entrepreneurship⁴. Through interviews and a survey I have investigated attitudes at two levels of analysis; the *individual level* which is constituted in the student's self-motivation, personal abilities and self-understanding as a potential entrepreneur, and the *environmental/systemic level* by examining the students' perceptions of the entrepreneurial climate in Norway and their view of cultural parameters which act as motivators and barriers to entrepreneurship.

Partly conclusions from section One and Two are that the climate/environment for entrepreneurship in Norway is not particularly good. This affects the individuals in their decision-making. The opportunity of engaging in entrepreneurial activity is not an evident career alternative, and if entrepreneurship is considered as an option there are plenty of barriers which make people reluctant to choose it. The research comprised in part One and Two is the foundation of this thesis, and the following analysis and theory proposition are derived from these results.

Section **Three** is an analytical-theoretical approach to the issue of how entrepreneurship is determined by institutional environments built on the insights from part One and Two. Through this Section it becomes clear that we lack a complete/integrated entrepreneurial theory which recognizes the connection between the individual and society/system. And it is confirmed that the individual as well as the environment/system are significant in the choice of being an entrepreneur. *How are individuals' decisions influenced by the environment/system?* This research question is asked neither in entrepreneurial research nor in general system theory. So it is proposed that new-institutional system theory merged with decision-making theory can form a theory-complex which fruitfully

³ Abbreviated NSE throughout the rest of this thesis

⁴ In Norwegian NSE is known as *Gründerskolen*

enables the integration of these two levels of analysis. A theory-complex of this kind can portray the individual *in* the system. I argue that such an approach is necessary in the quest to understand entrepreneurial decisions and also entrepreneurship as it is manifested in the society. This theory-complex serves as an explanation to the tendencies I have observed. It is a proposition I put forth as a contribution to the contemporary research on entrepreneurship.

Section **Four** is a projection and clarification of the theory-complex. The Spatial Model of Entrepreneurship which depicts individual preferences and choices relative to a choice dimension in an institutional system is introduced. It is supported by theory as well as by the empiric data.

In section **Five** I am analyzing the results of the empirical studies undertaken on the background of the theory-complex presented, and I stipulate some implications the results have for the development of effective innovation strategies.

Methods

This thesis is based in a qualitative research process. As Thagaard (1998) deliberates upon, qualitative research processes are cyclical; in Wadel's words (1991, sited in Thagaard, 1998) they are characterized as *a dance between theory, method and data*.

Furthermore, there is little existing theory on entrepreneurship in general, and on the effect of the broader institutional environment in individual pursuits towards innovation and business start-up specifically; this study is therefore explorative in nature. I have chosen to be as flexible as possible in the process, so the analysis, problem definition and collection of data has iteratively adjusted each other and created for thorough theoretical reflection. This is a vital feature of qualitative research (Thagaard, 1998: 26).

A combination of methodologies called triangulation is used to investigate the issue of entrepreneurship in this study. Mostly qualitative methods are used, but quantitative (survey) as well as primary and secondary data are used in order to get the most complete picture of how the institutional environment affect a group of potential entrepreneurs. The study can be termed *abductive*⁵, in that I seek to contribute to the accumulation of theory (inductive) but depart from hypotheses acquired through examination of existing theories in diverse academic fields (deductive).

Literature study

As always in academic endeavor, literature study has been the corrective and the standard to which I relate the work presented in this thesis. It is trough a careful analysis of existing literature I have identified the need to accumulate insights we as a society can use in creating a more dynamic and entrepreneurial era. There are very little research and theory available on how entrepreneurship emerge. My purpose with this research project has been to offer an analysis of how individuals relate to systems, and hence explore how systems influence individuals in their decisions of engaging in entrepreneurial activity.

I have reviewed literature in the field of entrepreneurship, innovation, systems theory and institutional theory in addition to relevant work in political science, social and cognitive psychology and business theory. I am studying entrepreneurship through an interdisciplinary lens in this thesis, but where appropriate I am referring to the particular fields of study.

⁵ Described in Thagaard (1998: 174) as a position between inductive and deductive approaches as it emphasizes the dialectical relationship between theory and data.

Empirical research

There are several layers to the empirical investigations I have undertaken.

A survey was developed and distributed to all the students of the Norwegian School of Entrepreneurship at two points during the program: First early in the pre-course period, in February/march 2003, then again after coming home from the foreign destinations in September 2003. The second round of the survey was also distributed to a control group.

Interviews with a representative selection of the students were conducted in March 2003, at the joint seminar in Asker, Norway for all the regional pre-courses of the Norwegian School of Entrepreneurship, and during visits to two of the destinations; Boston, MA, USA and Silicon Valley, CA, USA in August 2003. In addition to the selected students that took part in the two rounds of formalized interviews, I had several informal interviews with other participants of the NSE exploring their personal entrepreneurship stories in addition to undertaking participatory observation. I also conducted interviews with a number of actors in San Francisco and Seattle. These general interviews have focused on climates for entrepreneurship and to some extent centered on the differences between Scandinavia and the USA observed by these individuals, in order to explore whether and how the environment influence individuals.

The empirical part of the study has had two major intentions:

- 1) To generate input so as to develop an analytical framework for understanding entrepreneurship
- 2) To provide a forum in which to test, validate and extend the analytical tool I provide in this thesis

The information obtained through the survey part of the study was analyzed using the statistical software in the computerized survey program *QuestBack*. Univariable analyses (ratings and percentages) were used as statistical techniques. As for the qualitative part of the study, the information from the interviews was recorded and transcribed to Word processing software, and then categorized by the recurring themes in the information, which has served as the basis for the issues elaborated on in this paper.

1: Literature study

"It is clear that the definition of entrepreneurship is multidimensional, and that different research questions draw attention to different dimensions of the construct" (Busenitz et al., 2000: 994)

This section gives theoretical clarifications of the issue of entrepreneurship. I outline how entrepreneurship is talked about first through the traditional field called Entrepreneurship Theory and then I contrast it to that of the Innovations Systems Theory. Further on I sketch out some of the more recent theoretical approaches to the issue of entrepreneurship, which leads me to the introduction of the theoretical fields of Institutionalism and Cognitive Psychology. Finally I give an account of how the climate for entrepreneurship is in Norway through the presentation of the Country Institutional Profile of Norway as it is described by Busenitz et al., and the Global Entrepreneurship Monitor (GEM 2002). The section concludes that we lack a consistent and complete theory of entrepreneurship. There is clearly a disintegration of the different levels of analysis in the existing literature.

Entrepreneurship Theory

Both Schumpeter (1911, 1934, 1947), Kanter (1983), and Kirzner (1973) has identified entrepreneurship as the driving force behind innovation. Entrepreneurs have in this entrepreneurial tradition been identified as "creative persons," rulers of "small kingdoms," and in the analysis of Kondratiev waves⁶ it is held that it is entrepreneurs that are responsible for the upswings. Schumpeter and Kirzner argue that entrepreneurship is an essential contributor to economic vitality, and propose that it is individuals' ability to take advantage of possibilities in ones surroundings that is the characterization of an entrepreneurial action. It is solely a focus on the individual in these accounts of the issue of entrepreneurship. Kirzner on one hand has the prospects of profit as a central element in his comprehension of entrepreneurial processes. Throughout his theory it is an assumption that the lack of equilibrium in the market forms the basis for carrying out entrepreneurial actions. He has as such a description of how the surroundings determine whether entrepreneurial actions take place (Kjeldsen, 1991: 13), but the surroundings are very narrowly defined as the *market*.

-

⁶ Analysis of upswings and downswings in the economy

Schumpeter identifies the notion of *creative destruction* as an essential feature of innovation. He assumes that it is individual entrepreneurs that possess the capacity to engage in creative destruction and hence create something new. In the later works of Schumpeter he is pondering on the question of whether entrepreneurship is something you can organize. Research and Development (R&D) departments internalize the processes of creative destruction in big firms, and hence we see a slight shift away from attributing innovative processes solely to individual entrepreneurs. Common though, in the literature termed entrepreneurship theory, is that there is a narrow focus on the individual entrepreneur. Individual characteristics and traits of entrepreneurs are emphasized in these approaches. This suggests that low levels of entrepreneurship in a country unfortunately are just a matter of the population being of a 'specific kind.' I find such a position to be unhelpful in trying to create effective innovation policies, as it can basically blow the legacy of trying to improve the situation. One assumption of this thesis is therefore that Norway, regardless of the individual traits Norwegians in general possess (if one can generalize across such an issue), have as much potential as other regions of the world to witness an increase in the number of entrepreneurial actions and hence more innovation.

Innovation Systems Theory

"Innovation today is seen as a non-linear development process occurring by interactive relationships and feedback mechanisms between institutional and organizational elements of science, technology, learning, production, policy, firms and potential or actual market demand, which together may be called 'systems of innovation'."

(Edquist 1997, and Sundbo 1998)

Dodgson uses a definition of innovation as the technological, organizational, financial, and business activities leading to the commercial introduction of a new (or improved) product or new (or improved) production process or equipment (2000: 2). There is a tradition of looking at the broader institutional system in order to understand the imperatives and barriers to innovation in approaches of Innovation System Theory. It is for example argued that unique institutional structures guide firm's strategic activities and help determine the nature and amount of innovation that take place within a country's borders (Nelson 1993).

There are in the literature generally focus on so called National Innovations Systems, though some scholars are preoccupied with the evident regional differences and focus on regional systems of innovation. I find the national distinction most easy to comprehend, and therefore keep this level as a

unit of analysis throughout the rest of this thesis.

Innovation Systems Theories have captured the evident role institutional systems have in creating innovation. They do not however, clarify how the innovations emerge, they just emphasize that innovations are a result of social relationships and interaction. These theories stress that innovations "occur" inside a complex system, but have no considerations for the individuals who make this happen. The theory is void of a precise account of the entrepreneur.

Outline of recent research on entrepreneurship

Why don't we consider in the talk about entrepreneurship that there is a vast span in the characteristics people possess? We don't get any further in the innovation strategies if we just keep claiming that "the entrepreneur needs to have a distinct set of traits."

(NSE Interviewee, 2003)

There are a set of *why* questions associated with the issue of entrepreneurship: [Why are only some people seeing and pursuing entrepreneurial opportunities? Why are some entrepreneurs successful and others not? Why do some people seek to convert their ideas and dreams into business ventures?] Efforts to answer these *why* questions of entrepreneurship through the means of personality characteristics of entrepreneurs generally yielded disappointing results; contrary to what informal observation suggests, entrepreneurs do not appear to differ greatly from non-entrepreneurs with respect to various aspects of personality (Baron, 1998). Cognitive processes in connection with the entrepreneurial action have therefore been more emphasized in recent studies of entrepreneurship. (These studies tend to be called *Behavioral Approaches*, e.g. Zahra and George 2003, which is somewhat a confusion of terms, in that these approaches are based in Cognitive Psychology – which is a field contrary to what in psychology is termed Behaviorism).⁷

In the early and mid twentieth century - in fact until the 1980s - a focus on entrepreneurship was absent from the European economic policy agenda. The exploitation of economies of scale and scope was thought to be at the heart of modern economies. According to Krasner (in Kent et. al., 1982: 277-81), the main tendency, however, is that big corporations to a less extent than small enterprises are motivated to develop more radical product innovations. It is concluded that entrepreneurs often create "leapfrog" innovation, which includes the development of totally new

⁷ Behaviorism: A theory and method of psychological investigation based on the study and analysis of behavior: It was a leading psychological theory up to 1950, and assumes that behavior is solely an effect of stimuli in the environment; there is no room in the theory for the human ability to cognitively process these stimuli (Oxford English Dictionary). The Cognitive view, however, has emerged as the leading psychological lens since the 1950's and is today the most used approach. It assumes that individuals possess the attribute of cognizing; the action or process of knowing, so there is room for human agency/our ability to process the stimuli from the environment in this school of thought.

products and processes. The explanation is that entrepreneurial businesses to a less extent than the big corporations are bound in great investments in real capital and human resources (ibid), they are therefore more flexible than big corporations. Kieldsen is arguing in accordance with Kent that a more general change in attitudes is evolving in the industrialized part of the world. While in the 19th century one saw the industrial revolution as a means to achieve economic growth, it is today assumed that entrepreneurs and entrepreneurship will be the important factors in the economic development of the 20th century (Kjeldsen, 1991: 1). With this change in emphasis on the role of entrepreneurship, the literature on the issue has also grown tremendously. It is however no coherent way the issue has been treated in academia, and we see that there are inconsistencies both with regards to terms being used, and also in regards to design of the research on the issue. Kanter, Drucker, Buzenits, Kirchoff, Baron, Kjeldsen, Blenker, Moen, Oftedal, Reynolds, the GEM report, and the trend of International Entrepreneurship Research all provide contributions to the more recent strands of entrepreneurship theory, where the questions of how entrepreneurship contribute to the economy, and how entrepreneurship is initiated are interlinked. There are tendencies to look at the role of culture and the institutional environment in addition to paying attention to the type of business system and market conditions in the quest to understand how entrepreneurship happens in these contributions.

Institutional theory

In some of the more recent writing on the issue of entrepreneurship, the role of the institutional environment gets more attention. Whitley, a strategic management scholar, proposes that firm's important differentiating features of approaches to innovation reflect the different institutional contexts and types of market economy these firms relate to. Such variations in innovation strategies suggest that the extent to which innovative competences and capabilities are developed should be seen as contingent upon societal environments; institutional frameworks affect the competencies emergent in different societies. This also implies that distinct patterns of innovation and technological specialization come to characterize countries with different kinds of institutional arrangements (Whitley 2002: 498).

An institutional approach can help explain the kind of innovation policy and the level of entrepreneurship a country experiences. It is my thesis that an institutional approach also offers invaluable insights in terms of making us able to improve the innovation strategies we have.

Only by knowing why we have a distinct innovation pattern or entrepreneurship rate, we have the

ability to improve it. The innovating firm has been conceptualized as a learning organization embedded within a broader institutional context (Lundvall, 1988). I think we similarly ought to conceptualize individual entrepreneurs as adaptive decision-makers within the social institutional system in order to reach a more comprehensive understanding of entrepreneurship.

In the research field Whitley outlines, 8 national economies are viewed as integrated systems. A system is here understood as spheres of mutual dependence between societal organization, policy, financial system, business, industrial relations and basic social institutions as e.g. trust. Al together these make a specific national configuration. To compare such configurations, Whitley has developed a model which makes this possible –"national business system" (Whitley 1999). A core point in this field is that social institutions are determining how the economy in a country is controlled and coordinated. This implies that it exist a causal connection between actors and characteristics of the system. In other words this means that what happens in one sphere of the society has to be explained with cross references to relations with as many other spheres or dimensions as possible (Sorge 1995).

Scott is a central name when talking about institutionalism. His contribution *Institutions and Organizations*, provide a clear outline of different institutional accounts through times. I in particular find the more recent forms of institutionalism, termed new-institutionalism, where there is an apparent shift from social realist to social constructivist perspective interesting in regards to analyze the issue of entrepreneurship. From being very concerned with the normative, a cognitive view is more emphasized in the newer forms of institutionalism. New-institutionalism draws attention to the importance of how situations are framed and social identities defined. A social constructivist view connotes that reality is constructed by the human mind interacting in social situations (Scott 1995: intro xv). This insight provided by the field of new-institutionalism is used as a foundation for the theoretical contribution developed throughout this thesis.

At the most abstract level the concept of an "institution" refers to the recurrent patterns of behavior – habits, conventions and routines. According to North institutions constrain and limit human action. They do this in two ways, either by formal or informal constraints. Examples of formal constraints are laws and regulations and in effect constraints that are written down. The informal constraints are linked to the norms in a society (in Oftedal, 2002). Scott (1995) also mentions a cognitive element.

⁸ Sometimes referred to as "Varieties of capitalism"

That people act in a certain way because of a specific shared knowledge. The cognitive elements include widely held beliefs and taken for granted assumptions that provide a framework for everyday routines, as well as the more specialized and explicit and codified knowledge which forms our cultural knowledge base (Scott, 1995). Hence societal institutions can be organized in three typologies; they can be identified either with the Regulative, the Normative or the Cognitive dimensions.

Cognitive psychology

"The most elementary and fundamental 'orientational' category [of social systems] seems to be the 'cognitive' which may be treated as the 'definition' of the relevant aspects of the situation in their relevance to the actor's 'interests'.

(Parsons, 1952:7)

The field of cognitive psychology acknowledges human ability to process the stimuli we get from our surroundings. We are able to think, calculate, seek and reach for our aims (utilize), but human actors are far from totally rational. Basic research in psychology has showed that our cognitive processes are influenced by a number of sources of potential bias and error (Kahneman & Tversky, 1974). These internal mechanisms are called "schemas" and are argued to be necessary components of all perception and cognition. Perceivers pick up only what they have schemas for and ignore the rest. Busenitz and Lau define cognitive schemas as cognitive structures that represent the organized knowledge about a given concept and contain both the attributes of the concept and the relationship among the attributes. Thus the schema provides a framework for a person to enact his or her environment. Basically, the tradition of cognitive psychology recognizes human ability to cognize, but also shows that social knowledge, a social "cognitive dimension," organizes our cognition.

Bounded Rationality Scholars have with backing in research in the field of cognitive science (Simon, 1985, Kahneman and Tversky, 1974) manifested that human decision-makers possess cognitive abilities, and that we try to be rational, but that we are unable to be so (Jones 2001). Our ability to be rational in our decision-making processes is constrained by our attention-span and our cognitive and emotional architecture. It is rooted in H. Simon's (1957) insight that individuals adopt organizational value premises as a guide for their decisions. Simon and March (1958) touch upon the consequence of value assumptions, cognitive frames, rules and routines in the process of decision-making. Jones illustrates our constraints to rational decision-making in a spatial model.

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⁹ See Section Four for more details on this.

Identity-theory postulates that identities are socially produced "self-meanings" acquired in specific situations. This is a corrective to the over-socialized view of some cognitive theorist. By constructing and maintaining social identities, individuals construct personae that provide them an independent basis for action in social situations. I assume in this thesis that humans have an active and reflexive self \rightarrow see also Giddens (1979, 1984) on agency. Individuals are acting in pursuit of their own interests, yet the social milieu is affecting them.

In Social Learning Theory it is postulated that most human behavior is learned observationally through modeling: "from observing others an idea of how new behaviors are performed emerge, and on later occasions this coded information serves as a guide for action" (A. Bandura, 1977: 22). Social learning theory explains human behavior in terms of continuous reciprocal interaction between cognitive, behavioral, an environmental influences. It encompasses attention, memory and motivation; social learning theory spans both cognitive and behavioral frameworks. Bandura formulated his findings in a four-step pattern which combines a cognitive view and an operant view of learning:

- 1. Attention -- the individual notices something in the environment
- 2. Retention -- the individual remembers what was noticed
- 3. Reproduction -- the individual produces an action that is a copy of what was noticed
- 4. Motivation -- the environment delivers a consequence that changes the probability the behavior will be emitted again (reinforcement and punishment)

Social Cognition Theory (SCT) attempts "to understand and explain how the thoughts, feelings, and behavior of individuals are influenced by the actual, imagined, or implied presence of others" (Allport, 1985: 3). It studies the individual within a social or cultural context and focuses on how people perceive and interpret information they generate themselves (intrapersonal) and from others (interpersonal). A central concept in the SCT is *reciprocal determinism*¹⁰, inherent in which is the notion that people have the ability to influence their destiny, while at the same time recognizing that people are not free agents of their own will. Humans are neither driven by inner forces only nor automatically shaped and controlled by the environment. Thus, humans function as contributors to their own motivation, behavior, and development within a network of reciprocally interacting influences.

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¹⁰ Term introduced by A. Bandura

These insights from the field of psychology are important to take into account when assessing why entrepreneurship happens or not, and in prescribing strategies for how we can increase the level of entrepreneurship. I note in particular that attention to an issue is essential, further that retention is important in order to "keep our attention", and that reinforcement from the environment is a central factor decisive of what behavior we chose to take part in. My research has accumulated insight that I convey into a new conceptualization of entrepreneurship. The model provided in section Four has the theoretical foundation of Bounded Rationality as an assumption, and it portrays individuals' decisions relative to choice structures in a system.

Country Institutional Profile - Norway

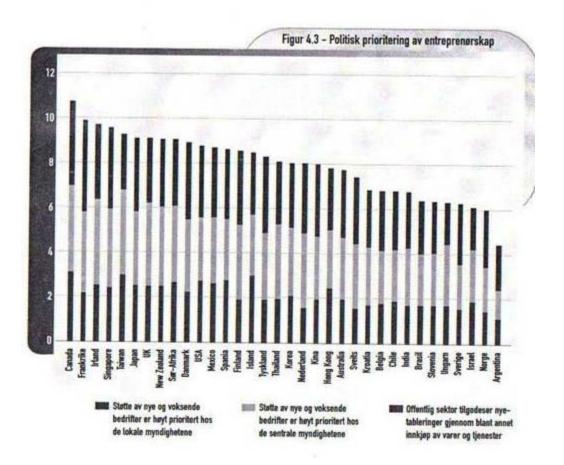
"While the access to business ideas in Norway seems to be relatively good, the lack of competence in entrepreneurship is a greater problem. The biggest problem is however the lack of motivation to start new ventures."

(GEM 2002:8)

Entrepreneurship is not prioritized in Norway. On the table of the political priority regarding entrepreneurship in the Global Entrepreneurship Monitor, Norway is next to the last.

Figure 1.1 Political prioritization of entrepreneurship





There are two different indexes of public policy in the report, the first show how highly politicians prioritize entrepreneurship in different countries, this is the index were we are at the bottom. The other index is a measure of the taxes, public regulations and bureaucracy, here we do better; we are just slightly under the average of all the GEM countries on this index. This coincides well with Busenitz et al.'s analysis which suggests that we are not so bad off on the regulative dimension of entrepreneurship, but that the normative dimension is our weakest point. Political prioritization can in my opinion be associated with the normative dimension of evaluation, as it is an expression for how much an issue is emphasized in the society. We are also at a dismal place on the indexes of educational system and entrepreneurship (Kolveried & Oftedal, 2002: 30). But the lack of financial support accounts for the most important weakness in Norway according to the experts on whom the

GEM report bases its assessment (ibid: 24).

The tight work market and good welfare programs makes the conditions you get as an employee usually much better than what you can count on getting as an entrepreneur in Norway (ibid: 8). This is an obvious impediment to choosing to be self-employed. Francis Sejersted has extensively elaborated on the particular kind of democratic capitalism that has emerged in Norway and why we have organized the society the way we have. A detailed philosophical discussion of the particularities of the Norwegian societal system might possibly offer some answers as to why our willingness to engage in entrepreneurial activity is poorer than in other countries. Such an approach is however out of the scope of this thesis. I am much more intrigued by the interaction between the individual and the society, and the question of how we, regardless of personality characteristics or society characteristics, can change to the better, and increase the level of entrepreneurship in our country.

Busenitz et al. argues that Hofstede's (1980) account of culture is not enough to explain entrepreneurship across countries. I agree with them, as I find the approaches¹¹ that build on this narrow definition of how culture determines entrepreneurship to be unfruitful in terms of innovation strategy prescriptions. Cross-national differences in entrepreneurship are best explained by a set of institutions that guide and constrain private business behavior in every national economy. Scott (1995) identified that institutions in a country can be organized in three categories. Kostova (1997) emphasized the need for institutional profiles in specific domains, as generalizing on societal determinants across a broad set of issues makes these constructs meaningless. These are the two assumptions that guided Busenitz, Gomez and Spencer (2000) in developing a tool to measure country's institutional profiles on entrepreneurship. The tool measures the climate for entrepreneurship in different societies along three institutional dimensions. The **regulatory** dimension of the institutional profile consists of laws, regulations and government policies that provide support for new businesses, refuse the risks of individuals starting a new company, and facilitate entrepreneurs' efforts to acquire resources. The cognitive dimension consists of the knowledge and skills possessed by the people in a country pertaining to establishing and operating a new business. Within countries, particular issues and knowledge sets become institutionalized and certain information becomes a part of a shared social knowledge (Busenitz and Barney, 1997; Lau and Woodmann, 1995). The **normative dimension** measures the degree to which a country's residents admire creative and entrepreneurial thinking. International entrepreneurship researchers

¹¹ For an overview of these approaches, see Hayton, George and Zahra; National Culture and Entrepreneurship – an overview of behavioral approaches, in *Entrepreneurship Theory and Practice*, Summer edition 2002

have argued that a country's culture, values, beliefs and norms affect the entrepreneurial orientation of its residents (Busenitz & Lau, 1996)

In the GEM 2002 report it is argued that the biggest problem in Norway is the lack of motivation to start firms. Norway gets the lowest score among all the countries in the survey when it comes to entrepreneurial motivation (Kolvereid & Oftedal, 2002: 23). The experts mention that this can be due to the fact that we in Norway are having a very fortunate time as employees, and they refer to the paid sick-leave, the work environment regulations etc. According to the GEM report we are over average when it comes to opportunity based entrepreneurship, but at the very bottom when it comes to entrepreneurship originated from need. This fact, which both implies that we get a bad place in entrepreneurship rankings, but on the other hand also verify the fact that we are on the top of the ranking of life-quality in the world¹² can very well be explained with reference to the particular *Norwegian Democratic Capitalism* that Sejersted talks about. His analysis can contribute to the understanding of our low score on the normative dimension in the Country Institutional Profile of Entrepreneurship, but it does not provide any solutions to how we can spur off the innovative activity in our country, so we can continue to enjoy this high level of life-quality.

An examination of the political culture in Norway in the mid-60's concluded that intellectual courage, talent, competence and inventiveness to a large extent is undermined because such qualities challenge and threat the egality-norm (Eckstein, 1966: 200, cited in Moen, 2002). According to Eli Moen Norway has a strongly disintegrated system, with lack of cooperation and coordination. She claims that Norway does not have institutions that conduct policy across group interests. Research and development are not central elements in the modernization of industries; she states that in Norway macro-economists are concerned about securing economic balance, and not economic transformation and development. There is a strong emphasis on equality and informality in the Nordic culture as claimed by Byrkjeflot et al. (2001). This makes business managers behave more democratically according to management scholars (Hofstede, 1982; Lindkvist, 1988; Lindell, 1994; Jönsson, 1996; Schramm-Nielsen & Lawrence, 1998, cited in Byrkjeflot et al., 2001: 32). Their further description of how civil servants and managers think is symptomatic of how people in general think in the Nordic region:

¹² i.e. on the HDI, Human Development Index

"civil servants and politicians in the Nordic region have not "believed" in markets as such, but rather in the need to use them deliberately to foster the development of wealth and welfare" (ibid: 27).

Reve (1994) argues that this Scandinavian stake-holder management model has to come to an end, as firms are not able to compete in a globalized business environment unless a more ownership-driven, market-oriented model of management is used. He further states that the way this can be done is to send managers abroad to see how others do things. This idea has a clear analogy to the Norwegian School of Entrepreneurship, of which a period abroad to work in start-up companies is a core element. Learning from others in terms of intentions for developing social structure is however a tricky thing in Scandinavia. According to Hagtvedt and Rudeng (1986) a self-confident view has somewhat been revealed in Scandinavia, as a result of the fact that we have experienced an exceptional 'high stage' of development. "When Scandinavians travel abroad they find few societies more advanced than their own." Therefore they further state that "the Nordic countries are at an unpredented juncture: they have stopped looking elsewhere for models" (Hagtvedt and Rudeng, 1986: 304). Experts and the public agree that there lack entrepreneurial competence in Norway (Kolvereid & Oftedal, 2002: 22), this might at least be possible to learn from sending people out.

Figure 1.2 Overview of the Country Institutional Profile

Regulative dimension Cognitive dimension Normative dimension A country's laws, regulations, Widely shared social Value systems: and governmental policies: knowledge: The degree to which a Knowledge and skills Schemes that provide support country's residents admire for new businesses, reduce possessed by the people in a entrepreneurial activity and the risk for individuals country who pertain to value creative and innovative establish and operate a new starting a new company, and thinking. facilitate entrepreneurs' business. efforts to acquire resources.

(Derived from Busenitz et al., 2000: 995).

It appears that in countries where entrepreneurs are admired, people are more likely to attempt to start or manage entrepreneurial businesses. In contrast, the rankings of countries on the cognitive and regulative dimensions relate to their rankings on the percentage of publicly traded companies that were newly listed. It appears that it is the cognitive and regulative environments that provide the

skills and support necessary for firms to become successful enough to make initial public offerings (Busenitz et al., 2000: 1000). We apparently have a weak entrepreneurial climate in Norway, mostly due to the poor score we get on the normative dimension of the Country Institutional Profile. Norms represent "standards of behavior defined in terms of rights and obligations" (Krasner 1982: 186). This prescriptive element is inescapable since norms involve "appropriateness" and concerns about proper behavior; actors are forced to conform to certain "norms of appropriateness" (March and Olsen 1998: 943-969, cited in Björkdahl, 2002). But what is appropriate is known only by reference to a social community.

In addition to our poor normative climate of entrepreneurship, the *Effect*-project has also confirmed an impression of absent parts in the support mechanisms (regulative dimension) for commercialization of research ideas. It exist first and foremost a lack of support mechanisms in the early phase of business establishment according to this report. Also, it is a great problem that Norwegian institutions engaged in basic research do not have real incentives for cultivating ideas suitable for commercialization. Contrary to our counterparts abroad, Norway lacks support mechanisms for research institutions to engage in systematic innovation (Simula, 2003).

One very interesting observation in Busenitz et al.'s article is that **Norway gets respectable scores** both in regards to the **regulatory and the cognitive dimensions** relating to entrepreneurship. It is suggested in the article that the **normative dimension** of the institutional profile is important when it comes to the encouragement of and thus the potential emergence of entrepreneurship. Here Norway has the lowest score in the sample. However, when it comes to small firms' ability to attract investors and initiate initial public offerings, the cognitive and regulatory dimensions are extremely important determinants. Comparing Italy and Norway, we see from this article that there is a normative environment conducive of entrepreneurial activity in Italy, but that they are weak when it comes to skills and a regulatory environment in which the start-up companies can grow. In Norway, on the contrary, we seem to have skillful labor and a regulatory environment that in a global standard is not too bad for entrepreneurial activity. However, our low score on the normative dimension shows our weak point; people do not feel encouraged to engage in entrepreneurial activity. This can infer that a relatively low number of firms are established in Norway, but a relative high number of these firms are likely to be successful. If we are to take the knowledge provided by Busenitz et al. into accordance, we ought to focus on the improvement of the normative environment for entrepreneurship if we want to increase the level of entrepreneurial start-up in our country.

The normative environment is more than the vague notion of culture. The normative environment is about the way people talk about entrepreneurship, it is about who is admired in our social sphere, and it is about having positive ideas about the need for innovative and creative responses to the world rather than institutionalizing a contentment with status quo.

Busenitz et al.'s analysis of the Norwegian Institutional Profile coincides well with the analysis presented in the GEM 2002 report, but it is more systematized as it aims at being an analytical tool. I use Busenitz et al.'s analysis as an important input to the model provided in Section Four of this thesis.

Partial Conclusions

Entrepreneurship is a field not coherently studied. Several disciplines have tried to understand the phenomena, and different authors have different intentions as to what their study should indicate. We lack a cohesive framework or theory which makes it hard both for students of entrepreneurship to add to the knowledge base on the issue, and it poses a problem for policy makers and others who are concerned about making effective innovation strategies.

The outline of theories in this chapter suggests that in developing a fruitful theory it is essential to take into consideration the connections between cognitive psychology and the social environment. Baron (1999) argue that in terms of personality characteristics there are hard to find clear distinctions between entrepreneurs and non-entrepreneurs, but Busenitz and Lau (1996) argue that the entrepreneurial schemas of those who are entrepreneurs differ from non-entrepreneurs and that this is due to the entrepreneur's unique background such as family, his own experience and the surrounding culture. I intend to elaborate on these connections in the subsequent chapters. Hypotheses generated from this theoretical exploration which guide my empirical study are:

- The environment influence whether individuals chose to become entrepreneurs.
- Our decisions are influenced by how issues are talked about in our surroundings, and
- Individuals take part in and relate to systems.

Hence the traditions of looking at the individual level of analysis (Entrepreneurship Theory) and the systems level of analysis (Innovation Systems Theory) has to be coupled in order to reach a better theoretical framework for how to analyze the issue of entrepreneurship and to be able to prescribe effective innovation strategies. Taking an institutional approach gives meaning in order to systematize how "surroundings" are conceptualized and in order to have a tool in which the difficult notion of culture can be operationally approached as a determinant for entrepreneurship.

2: Empirical Case Study

This section of the paper is an outline of the explorative empirical study I have undertaken on attitudes towards entrepreneurship among a group of young people in Norway; namely the participants in the Norwegian School of Entrepreneurship¹³. I have combined the methods of interviews and survey, and I have studied attitudes at two levels of analysis; the *individual level* which is constituted in the student's self-motivation, personal abilities and self-understanding as a potential entrepreneur, and the *environmental/systemic level* by studying the students' perceptions of the entrepreneurial climate in Norway and their view of cultural parameters which act as motivators and barriers to entrepreneurship.

Partly conclusion from this section is that the climate/environment for entrepreneurship in Norway is not particularly good. This situation affects the individuals in their decision-making. The opportunity of engaging in entrepreneurial activity is not projected as an evident career alternative in our society, and when these students consider it as an option, it is with the perception that there are plenty of barriers to do so. I find this poor entrepreneurial climate to be an important reason why people are reluctant to choose to engage in innovative activity.

Facts on the Norwegian School of Entrepreneurship

"Good ideas often come from practitioners in particular fields of study, the Norwegian School of Entrepreneurship is designed to help them put these ideas into life – Empowerment is the core aspect" (Nils Damm Christophersen, NSE Founder).

NSE is an accredited study program¹⁴ on entrepreneurship/business start-up. The main part of the program is a period abroad, either to Boston, Silicon Valley or Singapore, where the students' intern in a technology based Start-up Company in addition to getting an education in entrepreneurship from a local university at the destination. The program runs from February to October, and is organized so it can be taken in conjunction with ordinary studies. The main target group is students/researchers in the fields of ICT, biotechnology, medicine, product design, fishery and economy. The uniqueness of the program is constituted in the fact that it is not aimed primarily at students from business schools. However, the core idea is to facilitate "entrepreneurs in their own fields."

¹³ In Norwegian NSE is known as Gründerskolen

¹⁴ 10 credits/"vekttall", equivalent to one semester of full time study

History

NSE was first arranged in 1999. The institute of Information Technology at the University of Oslo sent out 6 students of informatics to Silicon Valley after an initiative from Professor Nils Damm Christophersen. NSE is now established as a national initiative represented in all regions of Norway, with the administration being under the University of Oslo. In 2003 NSE had 73 participants who represented all the Universities in Norway and five different University Colleges₁₅, witnessing a steady focus on continued expansion.

Figure 2.1 The quick expansion of NSE

1999	2000	2001	2002	2003
6 students	21 students	49 students	57 students	73 students
1 institution:	3 institutions:	7 institutions:	9 institutions:	9 institutions:
UiO	UiO, BI, NTNU	UiO, BI, NTNU,	UiO, BI, NTNU,	UiO, BI, NTNU,
		NHH,UiB, HiB,	NHH, UiB, HiB,	NHH, UiB, HiB,
		NLH	NLH, AiO, UiT	NLH, AiO, UiT
1 destination:	1 destination:	1 destination:	3 destinations:	3 destinations:
Silicon Valley	Silicon Valley	Silicon Valley	Silicon Valley,	Silicon Valley,
			Boston, Singapore	Boston, Singapore

Aim

The aim of the initiative is to increase the value creation emerging from research based business establishments at Universities and Colleges in Norway. The Aim is fulfilled by educating and motivating students and researchers to be aware of the opportunities to commercialize research ideas, and to empower them to realize this. NSE is in the long-term perspective aiming at launching and sustaining an entrepreneurial milieu at the participating institutions (University of Oslo: NSE Evaluation Report, 2002).

¹⁵ The University of Oslo (UiO), The University of Bergen (UiB), The Norwegian Scientific and Technological University (NTNU), University of Tromsø (UiT), The Norwegian School of Management (BI), The Norwegian Business School (NHH), Agricultural University College of Norway (NLH), The Architecture College in Oslo (AHO) and the University College of Bergen (HiB).

Structure

The NSE program is divided in three sections:

- First the students go through a decentralized pre-course in business start-up with classes in accounting, project management, market- and product analysis, which provide the students with a basic knowledge base.
- Then the students travel to one of the three destinations abroad, where they work in a technology based Start-up Company during the days and conduct studies in entrepreneurship in the evenings.

 The institutions abroad NSE currently co-operates with are Cornell University (USA), Boston University (USA) and the National University of Singapore (Singapore).
- When the students are back in Norway a fall seminar is organized where Norwegian entrepreneurs lecture on Entrepreneurship in the Norwegian Context and "how to engage in ethical conduct as an entrepreneur." The students also hand in their project paper and present it for a panel of supervisors and adjudicators.

The activities of the NSE are aimed at being practical. The program prerequires that the participants possess enough knowledge in the field (the substance field) they want to be entrepreneurial in (the participants main field of study). Entrepreneurship and commercialization are not studied through an independent academic basis in the program, but rather it intends to give the students a toolbox and the experiences necessary to get them going on their own. The practical focus of the entrepreneurial education in the NSE has made it possible to include external lecturers from the entrepreneurial field, which increases the contact surface the students get with the business environment (NSE evaluation report, 2002).

Research Design

- I conducted semi-structured interviews with approximately 10 % of the NSE student

population of 2003 (N=7) at two points in the program course: in March and August 2003 respectively.

- The interviewees were selected through a process of finding a representative distribution of men and women, and with the concern to have all the institutions that send students to the program represented. The NSE also suggested I interviewed equal amounts of students going to San Francisco and Boston for the practical reason of being able to interview them at their destinations on a study trip during the summer of 2003.
- The interviews lasted 45 minutes (first round) and 1 hour (second round). The rounds of interviews were complimented with participatory observation, as I spent a weekend with the students in March, and 5 days with the group both in Boston and in Silicon Valley in August.
- A survey with qualitative characteristics was designed and distributed by way of the computerized tool *QuestBack* in the start and end of the program to compliment the information from the interviews.

I have undertaken critical methodological reflections, in particular on my role as a researcher in the NSE group. I have reviewed my connection to the program – have I been an outsider/insider and how has my position possibly affected the research and the results? It has been a priority for me throughout this research process to maintain a strong integrity and secure my professionalism as a researcher. I have been committed to completing a broad analysis of the effect the program has on the students, and particularly I have put emphasis on the importance of being trusted by the interviewees. In the interview situation I was well prepared and recorded the conversations on minidisks. I also made an effort in openly listening to the interviewees, and therefore the interviews were semi-structured, so as to give room for the respondents reflections and particular area of concern. The sincerity with which this study is completed secure that the results are of great value. The study is sought to be as little biased as possible, but I acknowledge that any researcher has a potential impact on the group, both through the very presence, and through the words chosen in the interview situation. I have no political agenda, other than an honest approach to contribute with academic insight that can add to the development and vitality of our society. I did maintain a strong integrity as a researcher in the group, yet benefited from being openly received and socially accepted. The atmosphere of both participatory observation and interviewing was characterized by mutual respect. It is my verdict that we shared a common interest in refining the concept of entrepreneurship, and in increasing the level of innovation in Norway.

Interviews - round one

The first round of interviews were conducted with the aim of assessing the students' motivation for participation, so as to get an understanding for 'where the students of NSE were at' before taking part in the course. Moreover I inquired on the students' perceptions of the Norwegian Innovation System, and sought to get an idea of how they perceived policy, norms and culture to enhance and/or hinder entrepreneurship and innovation. I asked what they looked at as the greatest challenges for engaging in venture creation, and what they would like to see change in Norway. The results derived from this part of the research project indicate that:

- 1) The participants of the Norwegian School of Entrepreneurship are a diverse group of people both in terms of academic background, but also with respect to personality characteristics.
- 2) That young talented people and potential entrepreneurs find it hard to engage in entrepreneurship in Norway. In particular the normative environment for venturing was highlighted as a barrier. Recurrent themes the interviewees mentioned was that: it is a void of talking about the possibility to start their own company at their educational institutions, there is little inspiration from the surroundings, there is a misconception of entrepreneurs and their contribution to society, and there is a lack of acknowledgement of competence in Norway which negatively influences the level of ambition. Most critical in their opinion is that there is no acceptance of failure; the interviewees mentioned this as a hindrance to dare to try to start their own business, and mostly all of them wanted to see a change towards more acceptance and approval in the Norwegian culture.
- The participants of NSE are a motivated group of students, most of them indicate that starting up a business would be exciting but that they as of now [before completion of the program] have too little knowledge of how to do it [the women emphasized this more than the men]. Learning more about business start up and getting inspiration both form being in a group of like-minded and from a period abroad, were the main reasons for joining the NSE.

Interviews - round two

The research carried out in the second round of interviews was initiated on the background of a set of research questions that had evolved throughout the research project: How has the program influenced and/or changed the students' perceptions of themselves as entrepreneurs? Attitudes; are they changed or developed? Do the students feel that the program has clarified a choice, given an opportunity, or accentuated a role they can take on? I also inquired on the strengths an weaknesses of NSE and asked the students if they think the program exerts an influence on the aggregate level of innovation (in

Norway).

Through the last round of interviews I tried to reach an understanding of whether the students have been influenced throughout the course of NSE. The results contribute to show

- 1) That the institutional environment influences the decision-making of potential entrepreneurs. All the interviewees said that participation in the program had increased their attention to and awareness of the importance of entrepreneurship, and that they are more likely to engage in entrepreneurial activities because of NSE. Both choice structure and attention seem to determine the choices they make, and hence the theory complex provided in this thesis is worthwhile to consider as a conceptualization of how entrepreneurial choices are influenced by the environment.
- 2) That the Norwegian School of entrepreneurship is useful: It increases entrepreneurship competence among its participants, it exerts an influence on individual decision-making, and it can exert an effect on a greater level [Norwegian entrepreneurial climate] through the establishment of both attention-direction and retention structures with regard to entrepreneurship in the Norwegian society.

Survey

After reading Haraldsen's chapter on the measurement of attitudes, values and opinions in the book "survey methodology the cook book way," I chose to ask as concrete questions as possible in the survey¹⁶. The aim was to withdraw general value assumptions from a set of several concrete questions (Haraldsen, 1999: 178). Attitudes are constituted in certain knowledge, feelings, and ideas of how we want to act in actual situations (ibid). Haraldsen also emphasize that in addition to questions about feelings, one have to pose knowledge-questions in order to map the foundation for information, filter questions which separate those who haven't made up their mind on the actual question, questions specifically related to action to get an idea of what the attitudes mean in praxis, and questions about the behavior to test the relationship between ideals and reality.

It is hard in a mapping of the caliber my survey had, to measure all these components. I designed the survey so as to get a comprehension of the cognitive component of entrepreneurship (where they find information about business start-up), and the emotional component (by inquiring about how positive or negative the attitudes of others are, the reception of entrepreneurship in Norway, and their feelings about Norwegian firms' degree of focus on innovation). The behavioral components are best measured by a quantitative analysis of how many participants of the NSE that actually have engaged

¹⁶ The survey is included in Appendix 1, in Norwegian.

in business start-up after going through the program. Such measurements are out of the reach of this study, due to time constraints, and also because the aim of the case study has been to qualitatively investigate attitudes towards innovation and entrepreneurship, and observe whether these change through participation in an entrepreneurship program. Instead of direct behavioral measurements I asked about what career they are most likely to have in 5 years, as this can be a measure on what behavior they are aiming at undertaking.

An indirect method of measuring attitudes is to inquire about the respondents ideas of the reality (ibid: 183), a requirement for this is that the respondents do not know the true answer, or that there is no "true" answer. This is how I designed the survey.

The aim has been to try to observe a change in attitudes through the course of the program, but the questions were designed with a qualitative character so as to generate input to the thesis regardless of an observable change in the answers or not. The survey has thus served to be a source of communication with the entire group of NSE students, so that I could compare the findings from the interviews with the responses from the entire population of interest.

Main Findings

I have analyzed the survey in terms of a set of variables. First and foremost I have been interested in finding out if there is a change in the answers from the first to the second round of survey. In particular I have paid attention to the answers related to the respondents' opinion of what the most probable careers they will choose are. I also have probed the student's change through participation in the program on the answer of how much they think Norway are concerned about innovation, and on the question to their view on where Norwegian firms are positioned internationally in terms of innovation.

The second set of data is additionally analyzed in terms of women vs. men, those who have grown up in the countryside/small town, vs. those who grew up in a city, and finally I checked to see if there are differences in the material between those who have a parent that have engaged in business start-up and those who do not.

The rate of respondents to the survey has been above any expectations! On the first survey in Feb/March 2003; **91.5%** of the invited respondents answered. On the second survey it dropped down a little, but I still have an answer rate of **80.9%**. The rate of respondents in the Control Group was in comparison only 44.4% – still a decent answer rate, but considering this group was smaller (n=18)

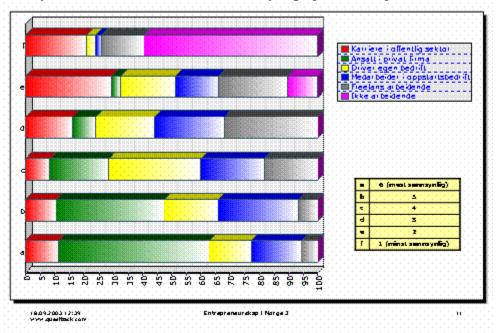
these answers have only been used as suggestions of how to understand the results of the NSE survey where there are obvious differences.

On the assessment of career choices the survey results show a slight increase in the number of respondents that are likely to have entrepreneurship as their career in 5 years (the yellow field in the graph below); it increased from 8 % of the group in March, to 11 % in September. If we additionally take a look at those who rank it as second most likely that they will start their own business we see an increase from 17 % in March to 26 % in September, this indicates that the choice alternative of being an entrepreneur has been emphasized for the students through participation in the program. In contrast we can see that neither of the respondents in the Control Group have entrepreneurship as their first nor second career choice.

The blue fields in the graphs below indicate the choice of being a co-worker in a start-up company. If we combine the two first pillars and think of them as *most likely career choice*, the two middle pillars as *less likely career choice*, and the two last pillars as *unlikely career choice*, and then look at the color codes, we can get a feel for what career alternatives that gets more salience. In March, if we combine the yellow (starting own firm) and blue (co-worker in start up company) we see that approximately 2/5 of a long pillar would indicate the likelihood of choosing an entrepreneurial career [39 %]. Doing the same for September we see that approximately 7/15 of the answers illustrated on the two pillars indicate a likelihood of choosing to engage in entrepreneurship [46 %]. This is a significant increase [7%]. The increase is significant, but not huge; I consider that this is due to the fact that a large number of the participants already before going through the program stated that they were likely to choose entrepreneurial careers. Looking at the control group in the same manner, we see that only 1/5 of the combined two first pillars indicate that these respondents are at all considering an entrepreneurial career [19.8%] (also be aware that this consideration is only as a matter of being a co-worker in a Start-Up Company).

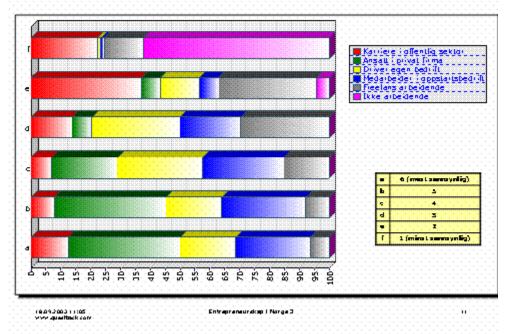
2.2 Career Choices, answers in March¹⁷

11) Hva anser du er din mest sannsynlige jobbsituasjon om 5 år?



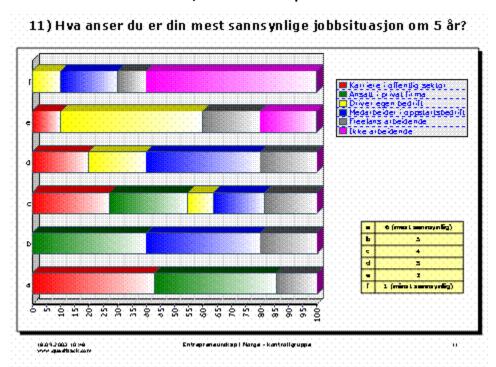
2.3 Career Choices, answers in September

11) Hva anser du er din mest sannsynlige jobbsituasjon om 5 år?



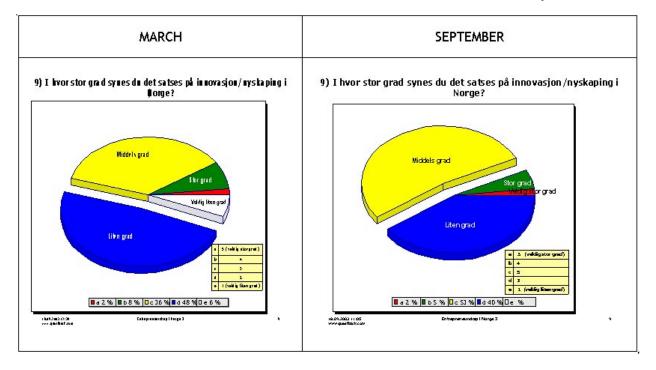
¹⁷ The color codes in the illustrations are: RED – career in public sector, GREEN – employer in private firm, YELLOW – runs own business, BLUE – Co-worker in start-up company, GREY – free lance worker, PINK – not working

2.4 Career Choices, Control Group



On the question of how much effort there are towards innovation in Norway, the respondents generally answer *mediocre* or *modest*, with a change towards a higher hit on mediocre rather than modest throughout the program. No one answered *very little* in September. These tendencies are probably due to the fact that participation in NSE gives them more knowledge of the different support mechanisms and the Norwegian policies on the issue. The slight decrease in respondents, who answer *a great amount*, can be a result of the internship abroad, which sets the perception of innovation in Norway in contrast to another country's emphasis on innovation.

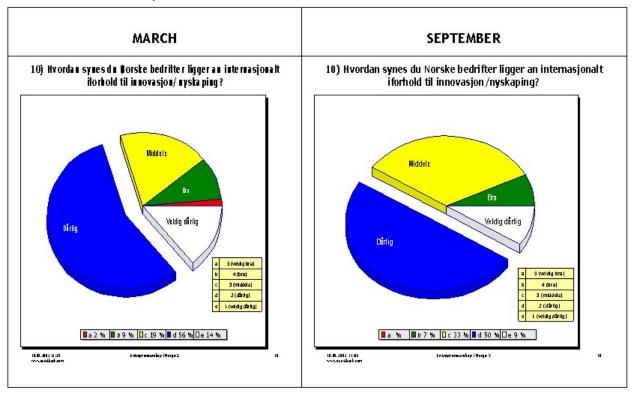
2.5 To what extent is there an effort towards innovation in Norway? 18



On the study of the NSE students' perception on how Norwegian firms are positioned in terms of innovation internationally, we can see this same tendency that the students through participation in the program go towards a 'middle ground'. The majority of the students think that Norwegian firms have a mediocre to poor position internationally when it comes to innovation.

¹⁸ Color codes are: RED – very great, GREEN – great, YELLOW – mediocre, BLUE – modest, WHITE – very little

2.6 How are Norwegian firms positioned in terms of innovation internationally?¹⁹



The analyses done in terms of cross-tabulation (women vs. men, those who have grown up in the countryside/small town vs. those who grew up in a city, and those who have a parent that have engaged in business start-up vs. those who do not) do not show significant differences relevant for the arguments put forward this thesis, and I therefore have narrowed down the emphasis of these analyses in this presentation.

Comparison with Control Group

A control group consisting of 18 persons with as adverse academic background as that prevalent in the NSE group was included in the last round of the survey. I distributed the survey to the 2002-2003 ESST²⁰ class, which I evaluated to be the most reliable control group, as these students also were complimentary to the NSE group in terms of having confirmed their interest in Innovation and Technology matters.

The most evident difference in the answers of the NSE group and the control group in the

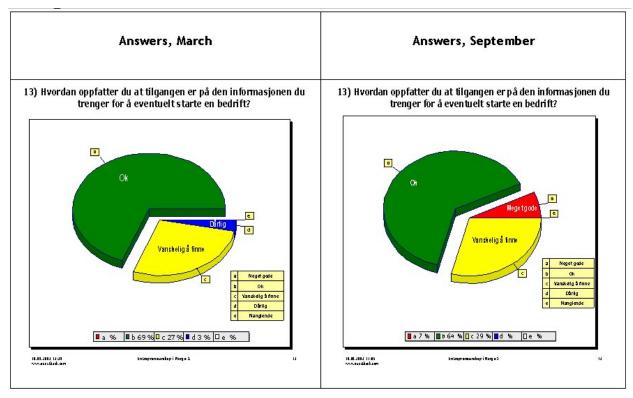
¹⁹ Color codes: RED – very good, GREEN – good, YELLOW – mediocre, BLUE – poor, WHITE – very bad

²⁰ ESST is an interdisciplinary study program at the University of Oslo in Society, Science and Technology

survey is that the control group has a much higher answer percentage on the filter questions; i.e. that the respondents do not know enough about the issue of inquiry to answer it. This demonstrates a fact touched upon by all the interviewees; entrepreneurship is not talked about to a great extent among young people in Norway. Another eye catching difference between the two groups is that a much higher percentage of the control group replies that the availability of information on business start-up is ok in Norway, as much as 86% of the respondents in the control group express this while 14% say it is hard to find. (Compared to 64 % in the NSE group who say it is ok, and 29% who say it is hard to find). However; these respondents [control group] show a very weak display of knowledge as to where they find this information. This indicates two things: One, that the control group is not overly interested in starting up a business and hence do not actively search for information on how to do this, but anyhow have an idea that it is not hard to find if they should be interested sometime. Two, that the "regular" young person in Norway lacks both a comprehensive understanding of the aspects of starting up a business (and hence does not have an understanding of the need for information and support mechanisms), and that the knowledge of where to find this information is limited even among highly educated students with an interest in Technology and Innovation matters (the answers on where the control group think they can find information is limited to the internet, newspapers and a few public agencies.)

The NSE group shows a noticeable increase in the knowledge of where they find information about business start-up through the course of the program. The second survey displays a range of places where they seek information: they emphasize their networks, mention the establishment magazine *Gründer*, various public agencies, explicit programs, and include whom at the different educational institutions to contact and so on. There is also an increase in their perception of how the availability of information on business start-up is in Norway. The response of *very good* increased from 0% to 7%, while the response of *ok* slightly decreased from 69% to 64%. The response of *poor* did not appear, but the answer of *hard to find* increased slightly with 2%.

2.7 How do you evaluate that the availability of the information you need for potentially starting a business is?²¹



The results from the survey of both the change in the NSE groups' awareness of where to find information, and the apparent less reflection on this issue among the control group indicate that the NSE program has an effect at the cognitive level. The assessment of differences in career choices and view of the Norwegian efforts towards innovation indicate that the NSE has provided the students with a setting that normatively is more conducive of entrepreneurship, something affecting the choices they are likely to make in regards to engagement in entrepreneurial activities.

²¹ Color codes: RED – very good, GREEN – ok, YELLOW – hard to find, BLUE – poor, WHITE - unavailable

3: Towards an Integrated Entrepreneurial Theory

This Section of the thesis is an analytical-theoretical approach to the issue of how entrepreneurship happens based on the insights provided through the research presented both theoretically and empirically in part One and Two. We lack an entrepreneurial theory which recognizes the connection between the individual and society/system. The research question, *how are individual entrepreneurial decisions influenced by the environment*, has neither been asked in entrepreneurship theory nor in general systems theory. I explore this question, and in so doing I apply three different analytical methodologies; a classical systems approach, an approach concerned with the notion of praxis, and an individual-contextual approach. I combine several ways of thinking, and mention many theories and names in this exploration towards an understanding of how humans relate to systems, and hence how we are affected by culture, values and institutions. The result of the exploration is a proposition that new-institutional systems theory merged with decision-making theory fruitfully enables the integration of the two levels of analysis I am concerned with in this thesis: the subjective and the social. A theory-complex of this kind can portray the individual *in* the system. I argue that such an approach is necessary in the quest to understand entrepreneurial decisions and also entrepreneurship as it appears in society.

On how entrepreneurship happens...

"The relative stability of differences in levels of entrepreneurship across countries suggests that other forces [than individual traits] such as certain institutional and/or cultural factors are at play." (Uhlaner, Thurik, Hutjes, 2002; 5)

We lack a comprehensive theory of small firm formation and development. There is no consistent theory of entrepreneurship and small business (Blenker, 1992: 6). I take this conception a further step, and seek to explain *why* we lack such a theory.

I believe the introduction of the cultural dimension in explaining entrepreneurship is essential both to understand how and why some people decide to become entrepreneurs, and also in explaining why the level of entrepreneurship is different in different countries/regions. There will not be one coherent entrepreneurship theory until such a theory is based in constructivism and integrates a range of determinants of entrepreneurship, and moreover allows for a dynamic understanding of the relevance of the determinants and the relative impact these exercise on each other. This means that if there is

one determinant of great impact to the level of entrepreneurship in one country, this indicator might be of less importance in another country. Rather, some of the other indicators might have a higher relevance there.

Theories of 'National Innovation Systems' have to some extent captured this understanding, but are still void of a comprehensive analysis of the role of culture. Social norms and shared understandings ultimately affect the attitudes, mind-sets and personal motivations of individuals, and thus should not be disregarded as an explanatory factor in the analysis of the level of entrepreneurship and innovation in a country. This thesis is exactly exploring this tension between the individual (mindsets, attitudes, personal motivations) and the environment (the social norms, shared understandings, institutions and culture). Through critical theoretical assessments and the analysis of the empirical research I am contributing to a better conceptualization of this relationship and how it relates to the issue of entrepreneurship.

Different perspectives of Entrepreneurship

Olav R. Spilling is presenting the three major ways of looking at the issue of entrepreneurship:

- → Social psychological explanations, with a focus on the individual,
- Contextual analyses of entrepreneurship. These can be specifically connected to different fields of studies, i.e. economic, social or cultural. In the cultural tradition Max Weber is the most prominent theorist who has introduced the insight that society's different spheres like law, religion and policy is linked to economy. An economic action can not be understood apart from the "meaning" the actor puts in it, or be separated from the social context or the social space which precedes the action (Spilling, 1998: 50).

The values and norms which are prevalent in the social "room" will therefore enhance or hinder the entrepreneurial action. The values prevalent in the social space affect individuals' accumulation of meaning, and hence they affect the decisions individuals make about economic action.

The third way of looking at entrepreneurship is through broader **structural analyses** of conditions for entrepreneurship. Social network theory is e.g. used to analyze entrepreneurship by Aldrich and Zimmer (built on Granovetter's theories). The network is looked upon as spaces of possibility, and the direct or indirect contact with others in the network constitutes the resources the entrepreneur has access to. The "firm formation" tradition is yet another such structural analysis; several factors are explored as to how they can help explain the phenomenon of entrepreneurship. I.e. Isaksen and Spilling (1996) has found that basic structural relations, like the business structure, has a greater impact on entrepreneurship than the cultural factors. However, they also say that where there

are beneficial structural conditions, the cultural values seem to also support the existing business structure and legitimize this. As such, in areas where entrepreneurship is common, it also seems to exist cultures which positively support this (ibid; 52).

Understanding how the individual relate to the system

"Once we understand a little bit more of how the entrepreneurs think, it is easier to find out how to facilitate entrepreneurial behavior in this country"

(Elin Oftedal, 2002; 3).

I am using the insight from several of these three traditions, and are mainly intrigued by what I see is a lack of combination of the approaches. Understanding how the individual level (as is stressed in the entrepreneurship theories) and the structural level (as in innovation system theories) can be integrated appears to me to be essential in order to analyze entrepreneurship more fruitfully. I am in this study departing from a systems-theoretical point of view. However, in my quest to understand the systems' influence on individual decision-making, I am breaking with the systems-theoretical way of seeing things, as the systems perspective is to a certain point unconcerned with an actor perspective (Fuglsang, 2003). I am in my analysis concerned with the relation between the social and the subjective.

In the analyses of the broader structural environment, I take an institutional approach in treating culture as inherent in the existing institutions in the systems. Some theoreticians talk about culture as distinct from institutions, treating the "softer features" of culture as independent variables. I rather treat these features, i.e. how people talk about and relate to certain things, as effects of more explicit elements of culture. Culture is defined as a set of shared values, beliefs, and expected behaviors (Hofstede, 1980). These shared values are embedded in the political institutions as well as in the social and technical systems —as such the institutions and systems is a reflection of what we often term culture, likewise cultural values and beliefs are reinforced by the existing institutions in society. Discussing which is more important as a parameter for entrepreneurship, or which comes first, is similar to the 'hen and the egg' discussion, and I believe it does not take us any further in terms of insight. Rather, when I talk about culture it is as a faculty of the institutions which organize our society.

Isac Ajzens theory about so called "planned behavior" has got some attention in analyses on

entrepreneurship²². It is based in psychological insight, and a key factor to understand behavior is to understand the individual's *intention* towards a certain behavior; the interest and will the individual has towards carrying out a certain action. The intention is affected by three underlying factors, the individual's attitudes, his/her subjective norms and his/her ideas about to what extent he/she is able to carry out the actual activity. The assumption of Ajzen's model is that the more positive an individual's attitudes are, and the more behavioral control it has in order to carry out the action, the stronger the intention to carry out the activity. As such it seems clear that individuals with positive attitudes towards entrepreneurship who also have the skills to start a new enterprise will be more likely to be entrepreneurs.

The survey I have designed and administrated focus first and foremost on the two first components mentioned here. The respondents' perceptions of reality are interesting to map, when these in praxis are the respondents attitudes. In this manner, attitudes are important in relation to the notion of knowledge, since the attitudes we have constitute the meaning in the knowledge we possess, and correspondingly our perceptions of reality is changed when we acquire new knowledge.

We certainly take it as a common truth that skills can be learned through training. Furthermore, it is widely believed that the social settings in which we spend time will affect our attitudes. Lewin's field-theory presumes that human behavior in groups is determined by the individual as well as factors in the surroundings. Behavior, Lewin says, is a function of personality and environment, formulated in his well-known equation B= f (P, E) (Lewin, 1951).

Hence a training program, in which entrepreneurial skills and attitudes are cultivated, as the Norwegian School of Entrepreneurship aims at, is according to the analysis derived from Ajzen's and Lewin's theories expected to increase the likelihood that the students undertake entrepreneurial action. Ajzen's model puts a focus on the performing individual and how the individual subjectively interprets opportunities and develops intentions or motivations for action (Spilling 1998; 56).

Through the study of the students at the Norwegian School of Entrepreneurship it has become evident that individuals react to their environment. Mostly all the interviewees postulate that participation in the program has been inspiring and increases their will and enthusiasm to undertake entrepreneurial action. One way of explaining this increased willingness is through Jones' spatial model of decision-making, where attention is a major determinant for the decisions we make (Jones, 1997, 2001). Through participation in the Norwegian School of Entrepreneurship, the students have been triggered to think about the possibility to start up new firms and their focus has been on *how to*

²² See i.e. Davidsson 1995; Reitan 1996; Kolvereid and Obloj, 1996

(skills) and *why* (attitudes) they should be willing to do so. This attention to the issue can influence the students in two major ways;

Short-term in that it is now as they are in the program they say that they are increasingly willing to engage in entrepreneurial activities, and they might or might not act on this succinct influence in the near future.

Long-term in that this attention has altered their underlying preferences and subjective norms, and also their feeling of personal ability to become entrepreneurs, so that they always are affected by the program, and over time are more likely to engage in entrepreneurial behavior.

Spilling is introducing and exploring the term "the entrepreneurial system". Based in the understanding that entrepreneurs don't act alone, they are dependent on the environment in which they live, he claims that entrepreneurship is 'conducted in relations' (Spilling, 1998: 58). In the little he says about cultural vs. structural relations, he sums it up by claiming that it seems more correct to say that the structural and the cultural circumstances constitute each other – there is a reciprocal relationship between them (ibid: 92). This is in line with Giddens notion of reciprocity in social behavior. This argument is followed in this thesis, as I assume that institutions in the society are both a reflection of the prevalent culture and norms, and constitutive of the phenomena in society we call culture.

Spilling is also arguing that changing the existing structures and the dominating culture is difficult and a long term processes. Therefore to "create" or build up a constructive environment for entrepreneurship is enormously demanding, because the existing structures and dominating culture lay the premises for the new enterprises' possibilities and legitimization. I counter this argument by the analysis provided in this thesis, as I argue that it is possible to change culture! Precisely because there is a reciprocal relationship between the structures and culture, new impulses or institutionalized programs can be as powerful as old traditions.

The study I have carried out amongst the students of the Norwegian School of Entrepreneurship shows exactly how immense the students are influenced in their pursuit towards entrepreneurship through a training program who fuses the development of attitudes and practical training in entrepreneurship with a social milieu conducive of realizing own ideas. Additionally, the majority of the interviewees among the NSE students believe that the program has an effect on a more aggregate level. On the question of why this is, they answered i.e. that "A wave has started...", and "As we get affected and inspired, we will share that with our friends and classmates, this is just in addition to the ever increasing number of students that participate in the program and who will do

the same. In this way we and the Norwegian School of Entrepreneurship exerts a force towards more accept for the choice of being an entrepreneur in the Norwegian society."

The role of institutional frameworks in determining entrepreneurial behavior

Richard Whitley is arguing that in developing innovative competencies particularly four aspects are important. 1) The degree of involvement in the public science system. 2) Involvement in industry collaborations. 3) Reliance on specialist skills of individuals. 4) The ability to change collective competencies radically. The national and regional variations in these aspects results from different institutional frameworks according to him.

Other authors are looking more to the cultural variables than to the institutional framework; Hofstede (1980) did for instance a world known study of cultural differences of behavior in corporations. His study shows that culture is a variable essential to take account of, yet his study does not tell us how the cultural variables affect individuals. Most research on national culture and entrepreneurship is built on Hofstede's work (Hayton et al., 2002). I do not find the conceptualization Hofstede has of cultural variables helpful in understanding entrepreneurship better. In Hofstede's research, culture is reduced to a set of characteristics that individuals do or do not value. He does a good job in presenting a concise taxonomy of cultural dimensions that can explain behavioral preferences in business organization. However, I find this taxonomy to be somewhat reductionist; it basically proposes that "oh, well, this is just how it is there or there". In my mind, regardless of the 'Hofstedian' cultural variables, i.e. the degree of masculinity, reception to risk-taking, individualism vs. collectivism, or power-distance in a country, innovation and entrepreneurship can happen, it is just a matter of cultivating a kind of entrepreneurial spirit that can subsist alongside with the distinct values of a society. It is not the idea, neither of this study, nor of the Norwegian School of Entrepreneurship, to in any way project that Norway has "a wrong culture for entrepreneurship to happen" or that "our culture has to be like it is in the US" in order for Norway to experience a higher degree of entrepreneurship. Rather, the analyses in this thesis advocate that it is the totality of the institutional system that affects decision-making regarding the engagement in entrepreneurial activities. As such a 'Hofstedian' cultural value of e.g. low reception to general risk-taking (conceivably manifested in a Norwegian trend of being concerned about stability and security, termed also uncertainty avoidance), could be an impediment to entrepreneurship, but it could also be

a characteristic that creates for ventures within particular stable industries, it could indicate greater rate of success in business start-ups, it could mean that Norwegians chose to have more education or desire more skills-training before engaging in entrepreneurship, or it could signify that Norwegians do start their own businesses because it secures they have a job.

Bourdieu provides more extensive insights as to how culture affects individuals. He put forth that a field of practice crystallizes certain symbols, ways of thinking, and forms of knowledge. Thus a field of practice is a totality of certain patterns of action (practice), terms (doxa) and values. A field of practice can as such become a tight integrated culture which encapsulates certain patterns of action; a collective tacit form of knowledge which determines the actions of individuals (Mariussen et al., 2002: 10). Such a conceptualization links the idea of cultural influence to an institutional framework, which structure the decisions individuals make and the actions they engage in. The social sciences have benefited greatly from the elaboration of a concept of "practice" that contrasts sharply with the model of rationally calculated action. "Practice" brings into view activities which are situated, corporeal, and shaped by habits without reflection. Emphasizing that things are created in a concrete context [and that decisions are made in a concrete context], gives room for a notion of human agency. However, it points equally well to agency of the most personal or intimate kind and to agency that is collective, public or institutional (Knorr-Cetina, 1999).

The *culture in the economy* can be understood along two lines, using inspiration from Parsons. From the *outside* – where national institutions shape the framework for economic behavior, and from the *inside*, in the way local socialization and the institutionalization of codified knowledge in organizations shapes the learning in the economy (Mariussen et al., 2002: 11).

The notion of culture is used in research which tries to analyze the determinants of entrepreneurship, but the concept is complex and hard to get to, and consequently often reduced to a descriptive entity. I take the position that culture is both a descriptive and proactive element. To make the concept operational I conceive of culture as an element of the institutions in the society (descriptive) and as the structuring of common behavior prevalent in the institutional system/society (proactive). I try to weave both the "outside" and "inside" perspective through the use of the *Country Institutional Profile* developed by Busenitz et al. and *the Spatial Model of Decision-Making* derived from Jones.

Building environments conducive of entrepreneurship

"It appears that in countries where entrepreneurs are admired, people are more likely to attempt to start or manage entrepreneurial businesses"
(Busenitz et al., 2001: 1000)

Per Blenker argue that the theory which we still do not have on the issue of entrepreneurship should emphasize the role of the "individual" in a small scale social system \rightarrow this is an insight I incorporate in the model developed through this thesis. The environment, the systems, affects us. Yet the individual has autonomy, will, and ultimately makes the decisions. The model outlined in the next section builds on a deliberation of both these aspects. However, it seems to be more likely that people make decisions which it is accept for in the society. As such the environment has tremendous influence on individuals will, preferences and decision-making. In the choice of career this principle is as well prevalent. Careers can be viewed as roles. We choose to take on the role as a teacher, as a doctor, as a sales-person and so on. In making the decision of starting a company on its own, one takes on a responsibility which might or might not be viewed as an established role, depending on where in the world one lives. From the study I have done on people's attitudes toward entrepreneurship in Norway, it seems as though entrepreneurship is not viewed as a recognized role in our country. There are strong indications that this can be the reason why so few people choose to be entrepreneurs in Norway.

In professionalizing entrepreneurship, the Norwegian School of Entrepreneurship seem to help establish entrepreneurship as a role, which then is viewed as a career option on equal level with other professions.

My thesis is that attitudes about entrepreneurship are important for people in the decision to become an entrepreneur. Theories in decision-making emphasize the individuals' preferences when it comes to decision-making, yet also the choice dimension which is structured by the society, politicians, or others (often policy-makers). The choice dimension can in regards to career decisions be understood as a range of roles which it is legitimate in the society to take on. The preferences we have as individuals are always relative to some choice dimension—the system, the environment, impact our preferences. It also impacts our attitudes, which can change, and when there is a shift in our attitudes our choices are likely to be affected, in some cases our preferences alter as well. In the analysis derived from Ajzens in the former paragraph I identified that attitudes as well as the perception of personal ability to carry out a specific task affect our decisions to actually do so. In order to change Norwegian individual's preferences in regards to entrepreneurship, and thus ensure

that more young people take the decision of being innovative, starting up firms, and contributing to a vital national economy, it seems evident that the inclusion of a role of entrepreneurship in the career choice dimension in addition to developing a change in attitudes/mindsets and increasing competence and skills can be forceful.

4: Contributing with a theoretical proposition

In this section I outline a suggestion for a new framework of how we can analyze the multidimensional issue of entrepreneurship. I develop a model which incorporates the two levels of analysis elaborated on in this thesis, the individual level and the systems level, and in particular I focus on to the interaction between these levels of analysis. I have taken an institutional approach and merge Busenitz et al.'s conceptualization of the regulative, the normative, and the cognitive dimension of the country institutional profile with a decision-making model derived from Bryan Jones' discussions of political decision-making. The conceptualization offered is illustrated with drawings of the model: Illustration 4.1 is a 3D model of the concept of individual decision-making in an institutional system, illustration 4.2 is a more detailed version in sketch-form, illustration 4.3 conceptualizes a potential change in choice structures, and illustration 4.4 shows how the model can be broken down and used in a specific analysis of career choices.

A better conceptualization of the issue of entrepreneurship

I have identified the need for a better conceptualization of entrepreneurship. The result of my research is therefore amassed in a model which incorporates the individual relative to the environment. The environment is assumed to be dynamic, and is based on a constructivist social understanding; the organization of reality differs from country to country²³. There is no one truth of how the reality relates to the different dimensions of evaluation, the reality is rather a common conviction of how the dimensions relate; hereby a construction. This construction of the social reality of the issue of entrepreneurship differs across nations and regions, and hence the institutional dimensions found to impact entrepreneurship impacts individuals differently. The national state is often seen as a differentiated unit, as construction of reality is done in terms of policy, media influence, the language which crystallizes matters for people, shared knowledge, educational system etc. I have the reality or the entrepreneurial climate in the nation state of Norway as a reference point in this analysis, regardless of the regional differences that is apparent when it comes to entrepreneurship in this country as several scholars have revealed (Isaksen and Spilling 1996, Mariussen et al., 2002).

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²³ i.e. A. Wendt

Blenker (1992) is proposing that the theoretical fundament for entrepreneurship research needs to examine social relationships and processes. Thus his analysis is in accordance with the STS field. He argues that it is fruitful to explain entrepreneurship from a sociological and anthropological position. I strongly agree with his assumption that the social context of the entrepreneur is of great importance; anthropology emphasizes the cultural influences of actions, and makes it possible to study entrepreneurship as a social and cultural process. Sociology focuses upon the consequences of societal characteristics, social systems and structures, and opens up the possibility of studying the social network and embeddedness of the entrepreneur as an actor, playing his role among other actors²⁴. These two propositions are conceptualized in the model I provide, by the coordinate system and the choice structure illustrating the societal characteristics, while the dynamic attention curves can illustrate the softer cultural influences deliberated upon in anthropology.

As many of the interviews I have conducted shows, there is a common perception that Norway today is not dynamic. Contentment with status quo, and the fact that things are good the way they are, are among the reasons why things are slow in Norway according to my interviewees. These perceptions hinder innovation, and it might be a problem for us as a society in the very near future. Most innovation economists honor entrepreneurship as a main contributor to innovation. Yet, there is still little theory on how entrepreneurship happens, and hitherto less that can serve as an aid in the efforts to raise the level of entrepreneurship. Enhancing people's ability to start up firms helps where this is the reason for why the entrepreneurial level is low. However, if there are other reasons for the low level of entrepreneurship, these needs to be explored before fruitful solutions can be prescribed. There seems to be national variances in the explanations to what enhances and what hinders entrepreneurship. Because of this I have found it essential to keep an international and constructivist view in building a model that can help explain how the systemic level influences the individuals in their choices towards becoming an entrepreneur. I have intended to create a dynamic model, as such there are room for conceptualizing different national configurations concerning entrepreneurship in this spatial model, different evaluative dimensions/explanatory parameters can be included, as well as the model provides room for acknowledging different individual preferences.

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²⁴ See also Reynolds, 1991

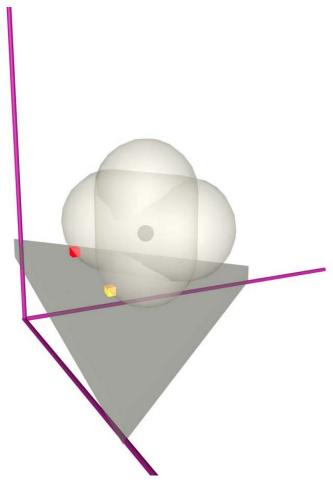
Developing an entrepreneurial decision-making model

The spatial model of decision-making, which I am familiar with through the works of Bryan D. Jones integrates all these concerns in the illustration of how individuals make political choices. Different dimensions of an issue (cultural, pragmatic, rational), together with the perceived policy-alternatives (the construction of the choice-dimension), and attention-direction have an effect on individual decision-making. The model builds on the theory of Bounded Rationality, which postulates that individual decision-makers try their best to be rational but that there are structural, cultural, cognitive, and emotional constraints on their ability to be so.

Bryan Jones has developed the spatial model of decision-making to show how policy issues are multidimensional and that the range of policy choices (the choice structure) involves trade-offs between the evaluative dimensions taken into account by the decision-maker (Jones, 1997). He further explains that our preferred policy (symbolized as a point in the multidimensional policy space) does not necessarily coincide with any actual policy alternative, and sets forth the proposition that we chose the alternative that is closest to our preferred point in the policy space. Indifference curves are used to symbolize how we are indifferent to hypothetical alternatives that are equally far from our preference point. Since we give the evaluative dimensions different salience for different reasons, the indifference curves for different decision-makers can have different shape, and they are also dynamic as the salience we give to certain dimensions of evaluation can change with shifts in our attention put forth by for example media coverage, lobbying, traditions, access to information etc.

Jones argues that the communication of structure is more important than preferences for the outcome of a decision-making process (Jones, 1994: 4). How the issue is "defined" is the formal structure of the decision making situation. I transfer this conceptualization to the issue of entrepreneurship, though this issue is not purely a political one. I think the conceptualization provided by Jones is fruitful in the discussion of understanding how entrepreneurship happens in that any decision-maker regardless of preference point has to relate its choices to how the structure of the issue is in the public sphere; in regards to entrepreneurship decision-makers [potential entrepreneurs] make the choice of whether to engage in entrepreneurial activities on the background of how entrepreneurship is viewed in the society. This "view of entrepreneurship" in the society is constituted in the regulative, the cognitive as well as the normative dimensions of the society. As such the structure Jones put so much emphasis on, which to a great extent determines our choices, is the national configuration of the issue of entrepreneurship as it relates to the institutional system.

4.1 The Spatial Decision-Making Model, 3D.



Derived from B.D. Jones, 1994: 43-46, and 1997

I find Busenitz et al.'s article about the categorization of the institutional environment into a regulative, a cognitive, and a normative dimension refreshingly clear – and merging this with the decision-making theory of Bryan Jones is therefore my solution to how we can better analyze entrepreneurship. The Country Institutional Profile is inspired by Scott, and is a form of new-institutionalism. Busenitz et al. created a measuring tool in order to determine countries' institutional profiles in regards to entrepreneurship in particular. The Norwegian Institutional Profile can be viewed as a specific configuration in a spatial model of entrepreneurship, where the three dimensions which the institutions are organized around; the regulative, the normative and the cognitive dimensions, are the axes of a coordinate system. This configuration can then be viewed as the reality on the topic of entrepreneurship that the inhabitants and potential entrepreneurs in Norway have to relate to (the plane in the 3D coordinate system above). The individual level of analysis is linked into

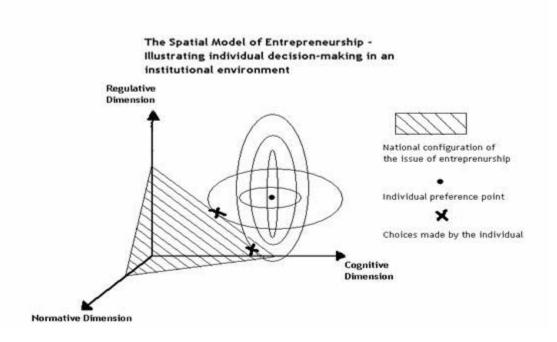
the institutional analysis through the use of insights from decision-making psychology. In the 3D model above it is illustrated by the preference point (grey dot), with globular circles around that is an attempt to show our attention, by Jones called indifference curves. The choices we make are illustrated by the red and yellow dots²⁵, where the indifference curves strike the plane. The choices we make are dependent on what shape the indifference curves have, which is determined by our attention to the evaluative dimensions; basically this means where we 'have our mind.'

Parsons systems theory is about social behavior. Yet it is also a functional theory, as the social behaviors are explained by the function they have in relation to a whole, a system. The distinct behaviors actors engage in are termed *structures* by Parson (Fuglsang, 2003). In explaining how this functionality emerges, Parsons points to the system's set of values. This is early in his research representing subjective choices, but later has more a character of being institutionalized norms. The model I am presenting in this thesis can to some extent be linked to this conceptualization. The "choice dimension", which represents the configuration of legitimate behavioral alternatives according to the system's values (relative to certain institutional elements or dimensions of evaluation); can be viewed as the structure Parsons is talking about. In addition, as I keep an integrated focus on the individual processes of making a choice, and the institutional configuration of choices in the system, I leave room to agree with both early and later writings of Parsons', in that I argue that the pertinent values has an effect both on the individual in its decision-making (voluntarianism) and on the systemic level (as institutionalized norms, or as the determinant of the choice structure).

The model does not alone explain the entire issue of entrepreneurship, but it provides a framework that better lets us understand how different institutions in our society influence the configuration and public perception regarding the issue. Individuals in their decision-making relate to this configuration, and their choices are therefore affected by how an issue is communicated and structured. In addition to how an issue is structured (illustrated through the national configuration, or the 'choice dimension'), individuals are as well affected by the subtler cultural communicative forms; i.e. in how the media treats the issue, and by the focus the issue has in conversations at school or among friends. This influence is that of attention-direction, and is conceptualized by showing that the attention/indifference curves around the individual preference point in the model can change.

²⁵ Black and white if you read a black and white print of this document.

4.2 The Spatial Model of Entrepreneurship



This model illustrates the institutional dimensions of a society which the issue of entrepreneurship is structured relative to. The national configuration of the issue of entrepreneurship (how the issue is structured) can be conceptualized as a plane in this institutional system. Individual decision-makers also exist within the system and our choice of whether to engage in entrepreneurial activities are anchored in the particular preference we have about entrepreneurship. However, the choices we make are not the exact same thing as our preference, unless our preference coincides with a choice alternative in the society (i.e. that it lies directly on the choice structure). Rather, we choose the choice alternative that is closest to our preference, but along our "attention span." The circles in the model illustrate how our attention can be directed towards different dimensions of evaluation. Our attention is not stable, it is a dynamic entity, and therefore we can make different choices even though our preference is the same. It is a matter of where we "have our mind." This is affected by who we are surrounded by, media influence, cultural variables etc. The crosses in the illustration show how we make totally different choices if our attention is directed towards different institutional dimensions.

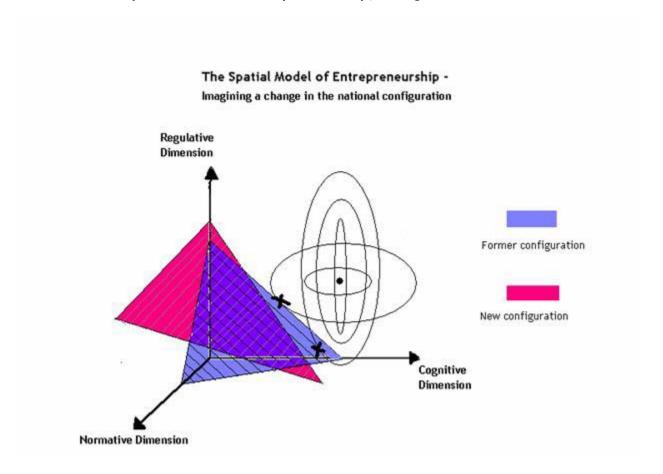
The model explicitly illustrates two important points:

- 1) How an issue is structured in the society affect the outcome of our decision-making
- 2) What we pay attention to affect the outcome of our decision-making

Using this theoretical framework, I propose that we have two opportunities of how to increase the level of entrepreneurship in our country (i.e. getting more people to choose to be innovative and start a business). Either, we can:

- 1) Increase people's attention to the issue,
- Or more effectual in the long run:
- 2) Structure the issue differently i.e. "move" the national configuration of the issue.

4.3 The Spatial Model of Entrepreneurship, changed choice structure

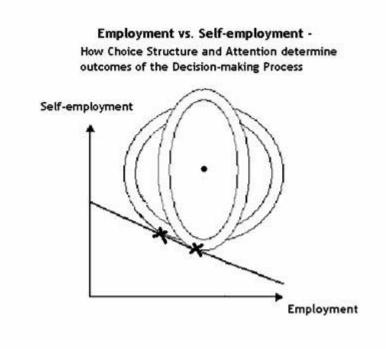


Taking Busenitz et al.'s analysis into consideration, it is in particular in regards to the normative dimension Norway should focus its efforts in this "operation move." However, it is in particular institutions along the normative dimension that is hard to change. Compared to the regulative dimension, where we basically can pass new legislation and make the bureaucratic work related to business start-up simpler, there is not so easy to know how to change for example the "degree to which a country's residents admire entrepreneurial activity" (Busenitz et al. 2000). The challenge for Norway is how we improve our institutions along the normative dimension of entrepreneurship.

Supporting sub-cultures which exist inside our national system seems to be one viable option of how to do this. Also, we should keep in mind the reciprocal effect the different institutional dimensions exerts on each other, so implementing new regulative institutions, or improving the cognitive institutions by emphasizing entrepreneurial education in our schools, are likely to improve the institutions along the normative institutional dimension as well.

The Spatial Entrepreneurship Model offered can also be simplified and utilized in regards to specific questions. In particular it seems relevant in this thesis to show how the choice of engaging in entrepreneurial activity can be conceptualized in a chart where the dimensions of evaluation are employment vs. self-employment.

4.4 Career Choices



Summing up the main points of the theoretical proposition

The analysis offered in this chapter led to the introduction of the Spatial Model of Entrepreneurship. The main concepts of this model are that individuals relate to systems, and that individual decision-making is affected by the institutional system in two major ways: 1) By the choice structure, or the national configuration of an issue relative to the institutional dimensions, 2) and by the attention-direction a system's climate or culture exerts on an issue.

Being concerned about increasing the level of entrepreneurship in Norway, it seems viable to try to get more people's attention to the need for innovative and entrepreneurial activity, to keep their attention to the issue (retention), and make an effort towards a change in the national configuration of the issue.

5: Analysis

In this section I am analyzing the results of the empirical studies undertaken on the background of the theoretical model presented, and I stipulate some implications the results have for the development of effective innovation strategies. The results from the second round of interviews serve as a verification that the model is worthwhile to consider. The main solution to improving the level of entrepreneurship in Norway is argued to be to impact the entrepreneurial culture through motivation. Incentives for entrepreneurship can be created e.g. as a result of cooperation between businesses and educational programs, creating for an atmosphere normatively more conducive of entrepreneurship. This can exert a force on the national configuration of the issue of entrepreneurship, causing it to change.

The effects of NSE

Goal setting and cultivation of character are essential aspects of start-up according to John Nesheim, the entrepreneurship-guru the NSE students in Silicon Valley had as their professor this summer (Lecture, Silicon Valley, August 7, 2003). The cultivation of character is an aspect – maybe the core aspect – of the NSE. The goal is to cultivate ambitious, skillful, motivated, and daring individuals who will engage in entrepreneurial activities. Evaluating such a program can be done along several dimensions, one being the actual start-up rate among the participants. However, engaging in entrepreneurial activities can entail being in a start-up team, rather than being the sole inventor of a product or process who introduces this to the market single-handedly. It can imply originating or supporting innovation from within established firms, as well as thinking new around how organizations and the public sector are operating. For this reason the aspect of evaluation I found intriguing and consequently have undertaken through this research project is to qualitatively comprehend to what extent the participants are affected by the program. More specifically, it is the change in attitudes that is interesting to evaluate. Have the students become more ambitious, skillful, motivating and daring? The interviews conducted clearly gives a yes to this question, the survey is not so clear, as the rate of the NSE students that were likely to engage in entrepreneurial activity was high even before taking part in the program. However, it is only the interviews that aimed at comprehending the degree of motivation and in which I posed the question of whether the respondents believed the program has influenced their willingness to be innovative; questions the interviewees united had positive responses to.

It might right away be problematic to combine this insight from the interviews with the result of 'likely career in 5 years' from the survey. But the interviews indicate as well that the role as an intrapreneur have been accentuated for the students through the duration of the programme. ²⁶ From the survey there seems to still be more likely that the greater share of NSE students will approach a job in a private firm within the next 5 years than that they will establish their own firm. However, from the interviews it became clear that all these individuals have an interest in being innovative, and will want to contribute to the development of their workplace whether this is their own firm, a private firm, or in the public sector. Taken into consideration the economic constraints the students are under, in that they have to pay back hundreds of thousands of NKR in study-debt, it is more likely that the establishment of firms is a goal in a longer term perspective. All the interviewees however, claim that they are likely to engage in entrepreneurial activity, and all of them say that the NSE program has had an effect on their answer. A few of them say that they probably were prone to starting-up even before going through the program, but that the program has provided invaluable input in terms of developing skills to do so, and in creating a deeper awareness of all the issues important to take into consideration when establishing firms. A few of the interviewees had never considered engaging in entrepreneurial activities before taking part in the program, and these show an even stronger change in attitudes, they emphasized more explicitly that the NSE program had provided a new career option.

The NSE program seems to be effective exactly because it keeps a focus on the empowerment of individuals while establishing a societal structure conducive of entrepreneurship.

Keeping the Attention - The Importance of Retention

As the analysis and model presented in the preceding chapters suggest, *attention direction* to the issue of entrepreneurship seems to be of utter importance in having individuals consider making the choice of engaging in entrepreneurial activity. However, considering that for the greater share of the NSE students the choice of starting a company will be taken sometime in the future, extending the effect of the attention-direction seems necessary. The aspect of *retention* is crucial. The term retention, as I use it, captures the idea of maintaining attention to an issue over time. In getting from a short-term change in attitudes to a long-term change in mindsets which increases the probability that individuals will engage in entrepreneurial activity sometime in their career, it is important that continued stimuli are offered which keep the individuals' attention to the issue of entrepreneurship.

²⁶ Intrapreneurship is a term used about innovative activities within established firms. It is used about persons who introduce and develop a new product or process or service which is introduced to the market through an existing firm.

"To get the seeds that are planted in us this summer to grow, we need up backing" (NSE student, August 2003).

One immediate informal retention structure for the NSE students will be the friendships that are formed through the program. It is likely that the unifying element of these friendships, the entrepreneurship education, will be a recurrent theme in the communications between the participants. However, as time goes, more institutionalized retention structures would be preferable. The NSE has per today an alumni association, and it is the aim of NSE to initiate and maintain networks at all the universities that send participants to the program. It seems, however, that this aspect should be more focused on if the NSE wants to be able to exert a lasting force towards more entrepreneurial activity in Norway. Retention factors can be institutionalized in follow-up programs, in establishing a resource base the students can use when they finally make the decision of starting their own business and more broadly by lobbying for the conditions of independent workers. It should be in the program's interest, and in the financial support institutions' interest to keep the participants in a 'habit of innovative thinking'. It requires that the program relentlessly upholds the former participants' attention to the issue of entrepreneurship.

Entrepreneurship an embedded activity - Networks are essential

"Some of the most critical resources to create and operate a new venture are obtained through network ties."

(Hitt et al. 2002: 9)

Theory and recent research demonstrates that entrepreneurship is a spatially and socially embedded²⁷ activity. In certain regions, dense support networks of institutions dedicated to assisting entrepreneurial start-ups have been established and a wide variety of authors have given credit to these networks for supporting regional entrepreneurship. The economic actors that comprise an entrepreneurial support network within a region serve, in their promotion of start-ups, as an important conduit of knowledge spill-over. The tendency of different types of economic activity to concentrate geographically is a widely observed phenomenon over time and across countries. These concentrations of activity are most frequently referred to as clusters or industrial districts, and the relationship between innovation, entrepreneurship, and geography of these clusters has attracted the attention of academics from a variety of disciplines in the last decade. Michael Porter has identified three broad ways of how clusters affect competition: one of which is that the concentration of

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²⁷ On social embeddedness, see Granovetter (1985).

specialized skills and knowledge within the cluster *reduces the barriers to entry and facilitates new firm formation*. The NSE students are through participation in the entrepreneurship program exposed to some well-known industrial clusters; i.e. San Francisco "Silicon Valley" and Boston "Gene Town." All the students I have interviewed emphasize the importance of the internship abroad and articulated that these environments were really inspiring. All together the empirical study shows that the NSE offers an extremely supportive environment for the participants. All the interviewees gave credit to the network in reply to the question of what it is that particularly have increased their willingness to engage in entrepreneurial activities; "the group" (which they found to consist of highly motivated and exciting people), "their co-students", "the contacts we get", "being here where it is 'cooking'," where all answers to this question.

The challenge is to provide the participants with such motivating networks and surroundings also when they get home, so that their attention and willingness to engage in entrepreneurial activity is sustained.

Institutionalizing NSE as the entrepreneurial program in Norway

The University of Oslo is in the middle of planning and executing a strategy towards more research-based creation and business establishment. A Technology Transfer Office is underway. According to the *EFFEKT-model*²⁸ that lies as a foundation for this strategy, important elements for the development of a 'venture culture' or a *new-creation-culture*²⁹ in the research milieus are:

- 1) Training in entrepreneurship (through the NSE), and
- 2) Provision of *networks with external competence about markets and business development* to the research milieus. ³⁰

This strategy is closely linked to the analysis I have provided on the attention-retention linkage. Training is a way to enhance the competence and skills researchers have, in addition to increase their attention towards the importance of creating something with the knowledge they accumulate. Building and providing networks of support to researchers in general, and to the NSE participants specifically, maintains their attention to entrepreneurship and thus also their willingness to engage in such activities. Since NSE is postulated as the means for entrepreneurial education and training in Norway in the EFFEKT-model, we see that the NSE program is on the way of being

²⁸ Developed by SIMULA Research Laboratory

²⁹ Nyskapingskultur

³⁰ Excerpt from *Fra Forskning til Forretning*, a report to the Board of the University of Oslo, February 16th 2003

institutionalized in Norway. The NSE program has very recently also been organized into what is called the Centre for Entrepreneurship at the University of Oslo, with the aim to include more kinds of programs and generally be more effective as a support mechanism. I therefore argue that we see the emergence of a network and support systems that work as retention factors. When NSE is included in a network of entrepreneurship initiatives, with links to the investor environments, it is likely to play a more effective role with regards to the level of entrepreneurship also on an aggregate level.

Social settings tend to maintain or accentuate individual preferences and attitudes that are congruent with dominant setting characteristics. The more intensive, committed, and socially integrated a setting is, the greater is its potential impact. Thus homogeneous settings exert the strongest pressure on incongruent individuals to change their preferences and behaviors in the direction of the majority, according to the International Encyclopedia of the Social and Behavioral Sciences. A heterogeneous setting in contrast has more diverse influences and provides participants with a wider choice of options (Holahan and Moos). Norway is a homogeneous country, and can as well be characterized as both a committed and socially integrated society. As such, this insight from social psychology can help explain why we have few start-ups, as the pressure forces individuals to change in the direction of the majority.

This can also serve to explain why programs such as the Norwegian School of Entrepreneurship are potential effective tools in increasing the level of entrepreneurship also on an aggregate level. It is more likely that individuals become entrepreneurs if they experience that it is accepted, and know about others who also engages in starting up innovative firms, something that the NSE with an extended alumni group and more activities expectantly will provide. Human-environment optimization is a concept from Psychology which describes the overall process whereby individuals and groups strive to achieve optimal environments that maximally fulfill their goals and needs. Through a long-term process of group and community participation and collaborative decision making, each individual can help to shape social values and the ensuing evolution of new settings. In this sense NSE can, if they are successful in paying attention to the retention factors, be a valuable contributor to an enhanced climate for innovation and entrepreneurship in Norway.

Supply and Demand side recursively constitute each other

Verheul et al. make a distinction between the supply side of entrepreneurship and the demand side of entrepreneurship. Key elements of the supply side of entrepreneurship are the demographic composition of the population, the resources and abilities of individuals, and their attitudes towards

entrepreneurship. The demand side represents the opportunities for entrepreneurship; these are determined by the societal and economic structures (Verheul et al., 2001).

The research I have done among the NSE group of potential entrepreneurs show that these two determinants recursively constitute each other. Both determinants might be of importance to explaining the level of entrepreneurship in a country, like the Verheul et al.'s report concludes. However, it is important to look at these determinants together. The model and analysis I have provided show how the individuals are affected by the institutional set-up of their environment – attitudes, preferences, and the resources and skills of individuals are all very much a result of these societal structures. The institutional set-up shape both how the educational system is organized, the cultural influences through the norms in society, the way individuals are conditioned and how they have learned to see the world. The demand side on the other hand, used by Verheul et al. as the opportunities for entrepreneurship, is also hard to think of objectively. Opportunities have to be discovered or *perceived* by individuals before they can be identified as opportunities. I.e. blaming an unsatisfying level of entrepreneurship in Norway only on the institutional set-up or the innovation system, as some people do, is in my opinion fruitless. This is because 'a hostile environment for entrepreneurship' are only so for those who conceive of it as hostile. Yes, maybe the fact that we have a very high level of social security, which might be less advantageous for entrepreneurs in Norway (i.e. sick-leave and paid vacations...) are likely to make Norwegians conceive of entrepreneurship as less favorable than being employed. However, for people who are not familiar with or expect to get a salary for the days when they do not actually work, which is the case in most other countries, the environment for entrepreneurship does not necessarily seem so hostile in Norway. When it comes to the market conditions as a demand side factor mentioned by Verheul et al., these are neither something that affect individuals in their decision-making unless they have their attention to it. Many of the interviewees were strangled when it came to the talk about the importance of market conditions in the NSE curriculum, for as one of them said "How the heck do you find this market everybody is talking about?!?" It shows that good demand side conditions for entrepreneurial activities do not lead to more entrepreneurship unless people perceive of this market incentive. "Finding the market" is hence a matter of both having the cognitive abilities and skills needed, and also a matter of being raised in a normative environment where the market is something actually talked about.

One conclusion of this research project is therefore that in studying and dealing with entrepreneurship, it is important to keep an integrated view of the supply and demand side.

Overcoming the strict distinction between these levels in entrepreneurship analysis will be helpful in

designing better and more effective policy prescriptions. Initiatives towards changes and improvements of the entrepreneurial climate should not solely be instrumental on the systems-level (i.e. regulatory changes), but also be designated towards the individuals that is comprised in this system (creating positive attitudes towards entrepreneurship).

On Culture

Verheul et al.'s report has identified culture to influence the supply side of entrepreneurship, that is, culture exerts a force on individuals in their decision-making regarding entrepreneurship and hence in their occupational choices. In the analysis I have put forth, I do not make a distinction between the supply and demand sides of entrepreneurship, but how I use the concept of culture bears resemblance to the Verheul et al.'s conceptualization. Culture is included as a determinant that influences the attention and preferences of individuals. The way entrepreneurship is talked, or not talked, about among people and through media is as such culturally dependent. But I also conceive of culture as it having an effect on the system-level. The cultural influence on the institutional system is ingrained in each country's organization along the different dimensions of evaluation (that is in determining what kind of regulatory or cognitive institutions that emerge in a country). In particular the normative dimension is a manifestation of what we popularly term culture.

However blurry the concept of culture is in academic writing, it is necessary to include it as a parameter when trying to understand the issue of entrepreneurship. Mariussen et al. have elaborated on how the level of innovation is different from region to region due to cultural differences. In the interviews I have conducted, the notion of culture was used by the interviewees a number of times; many explicit variables affecting entrepreneurship according to them were expressed as being a matter of "Norwegian culture." There are no doubts that culture, when culture is seen as institutions and shared values and ways of communication, has a great effect on the level of entrepreneurship. It certainly is hard to measure the extent to which a culture is conducive of entrepreneurship or not, but the lack of tools to measure culture or cultural impacts should not be an argument against the very important parameter it is in explaining behavior. I have made the concept operational in this paper by thinking of culture in terms of it being ingrained in the kinds of institutions in a society, and as a structuring element of behavior.

Norway-USA; different configurations of entrepreneurship

As the NSE students I have interviewed have been in Boston and Silicon Valley as part of the entrepreneurial education, I find it productive to give a brief account of the differences between these

two countries when it comes to the issue of entrepreneurship. The interviewees were naturally affected by the cultural differences and by what they identified as a *different reality for entrepreneurs*.

"Norwegians very often thwart themselves.³¹ – Here in the US they just go for it!" According to the interviewees we have the skill set required both to be innovative and entrepreneurial, but it is when it comes to the values and attitudes among Norwegians it stops. They express that many Norwegians would benefit from being here [USA] on a few events. One of the interviewees says that she was surprised by how playing a good show can sell so well in the US! They all communicate that presentations are much more emphasized there, and the way a good presentation can take you far in the US was contrasted to Norway where they find people to be more critical and skeptical *by nature*. They agreed that people are more credulous and positive in the US. Also they mention that they have experienced that Americans are better at rejoicing over others' success. It makes it more fun to work hard, it is more rewarding. "Here is honest feedback, one is allowed to excel, and one can freely talk about it on the top of that!" (Interviewee, August 2003).

The interviewees demonstrate a clear opinion that it is easier to start up a business in the US. The availability of people with expertise, accept in the surroundings for starting a new venture and opportunity to do well are all greater in the US compared to Norway in the respondents minds. "Here they can just start anew if it fails," and "It is a total different mentality in regards to entrepreneurship here" were common manifestations. Incremental innovation, i.e. not needing to find up something totally new is more ok in the US according to one of the interviewees. Further; it is a conception that the concept "commercialization" and being "capitalistic" is "bad" in Norway, and that "small is better." The NSE participants agreed that you shouldn't have too high ambitions in Norway, because then "you think you are something," and that is obviously negative. This repeats itself also in the financial sector; all the respondents perceive the availability of capital to be a barrier to starting a new business. The growth phase requires investments, and they find it hard to find those sources of money in Norway, while in the US there are much more "money floating around."

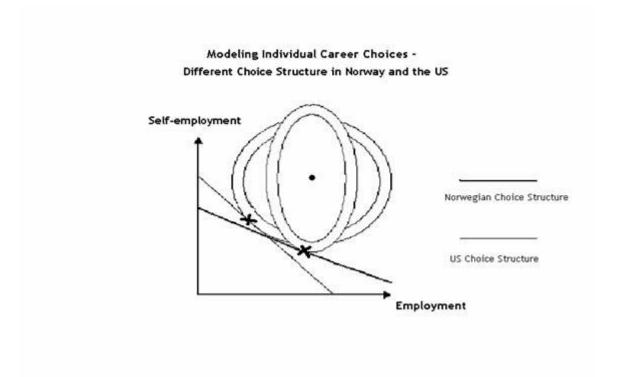
I suggest that in Norway and the US the structure of the issue of entrepreneurship is different, i.e. these countries have different configurations in the Spatial Entrepreneurship Model provided in this thesis. The differences are also prevalent in the model of career choices, where it probably is a choice dimension more favorable of being self-employed in the US, and as the interviewees mention

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³¹ Nordmenn har så mange sperrer..!

it is more attention to the issue of entrepreneurship in the US. This can be an important reason why more Americans chose to engage in entrepreneurial activity, and why the US subsequently gets a higher score in entrepreneurship statistics than Norway does.

5.1 Modeling Individual Career Choices, Norway vs. USA



Entrepreneurship on the Agenda

Society exerts a 'relevance demand' on the research funded through the national budget. It also holds certain expectations that this research has the capacity to contribute to the economic sustainability of the society. The belief that research leads to development and new ventures is an important rationale for the public funding of research. But it is important to acknowledge that research based venture do not just emerge from the research activities themselves. It has to be set on the agenda by the actors, and most of all goal oriented initiatives are necessary (Simula, 2002: 6). The argument I have proposed in this thesis, that the identification of entrepreneurship as a career option by individuals [researchers] is a necessary condition for making the choice of becoming an entrepreneur, is as well underlined in Simula's report. All the NSE interviewees mentioned that entrepreneurship is not talked openly about among students or at their educational institution. "I don't regularly have conversations which involves the issue of entrepreneurship with friends at my University... There is

basically void of talking about entrepreneurship in Norway." Some of the interviewees mentioned in the second round of interviews that they have observed an increase in the attention to the issue during the last year. This is also what I have observed through this study process; there have been considerably more newspaper articles on entrepreneurship recently³².

There are many things 'cooking' in Norway in order to increase entrepreneurship and innovation. The government has evaluated the support mechanisms³³. There is a new University Law which increases the research institutions ownership rights of patents (this in turn increases their plight to do an effort in administrating their right and in building incentives structures for their researchers to seek patents on the inventions they come up with, i.e. the establishment of Technology Transfer Offices). There are published also a network called Innovation Net amid several of the university Colleges of Norway which seeks to increase teaching competence in the field of new venture and innovation. The growth of The Norwegian School of Entrepreneurship is one of these 'hot topics' in the innovation debate in Norway, and as Simula's EFFEKT report emphasize, researchers and students in Norway are in need of greater entrepreneurship competence, making NSE very valuable. NSE sets entrepreneurship on the agenda, and develops in the students an appreciation for ambition, will and creativity that can lead to entrepreneurial establishment.

Entrepreneurship as a Role

Can entrepreneurship be viewed as a role? Parson is arguing that relations between actors are based on stable expectations to each other; we influence each other interactively (Fuglsang, 2003). He is expressing that we are likely to behave according to roles. These roles can be institutionalized in a set of normative expectations, and will be a part of the normative system if they are based in common values. Jon Sundbo (1992) has analyzed intrapreneurship in terms of it being a role, and suggested that more people will take on a role as an intrapreneur when the expectations to be innovative within established firms are clearly expressed.

This makes it relevant to look at the issue of entrepreneurship in terms of roles. From the empirical study I have undertaken it seems as though young people in Norway experience few expectations towards being innovative and entrepreneurial. Rather, as a decent number of the interviewees have said, there is a void of talking about entrepreneurship, and there is apparently a much stronger emphasis on *getting a job*, than on *creating jobs*. I find this to be an intriguing aspect

³² See appendix 1 for the result of a media search in the Norwegian Newspaper, Aftenposten, from the years 1995-2003

³³ White paper # 51 of the Norwegian Parliament was available March 28th 2003. (St.prp. nr. 51 Virkemidler for et innovativt og nyskapende næringsliv)

which necessarily affects individuals in their decisions about entrepreneurship. It is as though entrepreneurship is not established as a role in Norway. A solution to the low level of entrepreneurship can be to establish a role for the entrepreneur, that is to formulate and emphasize society's need for and expectations for creative, innovative responses from young people that can lead to the establishment of new businesses.

Occupational choices of individuals are according to Verheul et al. made on the basis of their risk-reward profile of entrepreneurship versus that of other types of employment, such as wage employment and unemployment. At the aggregate level these occupational choices emerge as entry and exit rates of entrepreneurship. The process of occupational choice is embedded in an institutional and cultural environment (Verheul et al., 2001: 68). They mention that is dependent upon:

- Private Service sector vs. Public provision of services
- The government's information and advice services, loan guarantees and other direct support schemes
- Personal attitudes towards entrepreneurship are a 'product' of the current cultural environment

The cultural patterns are however, according to this report, stable and path dependent and are reinforced by education and legislation that again are products of the cultural system. Nonetheless, once policies promoting entrepreneurial opportunities and the availability of resources and entrepreneurial ability bear some success, emerging entrepreneurial activity will provide new role models triggering cultural change (ibid).

Cultures are constantly in change. As Verheul et al.'s report underlines, creating opportunities for potential entrepreneurs will provide new role models. Conceptualizing entrepreneurship as a *role* can thus be a fruitful tool in trying to increase the level of entrepreneurship in a country. By making entrepreneurship an accepted role, more people may seek to exploit the entrepreneurial opportunities they detect in their environment. As such, constructing roles is a forceful activity which can trigger cultural change. The relative hostile Norwegian environment towards entrepreneurship can change into acceptance and maybe even appreciation when people understand that being an entrepreneur is a role, an occupation, and as people who take on this role are successful. If the role as an entrepreneur is given emphasis as being of essential contribution to the vitality of the national economy, and thus gets positive connotations, it is likely that more people chose to take on this role.

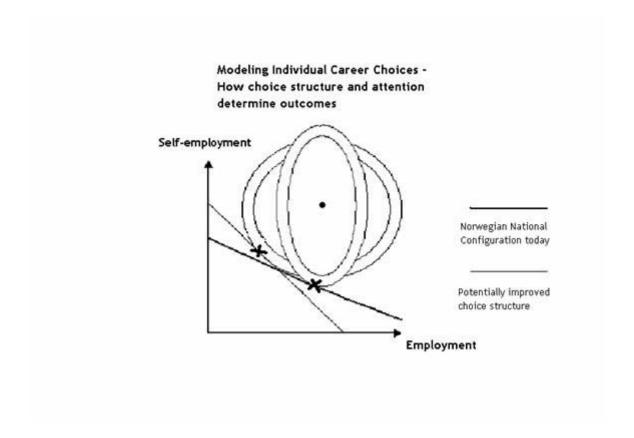
This is because the actions humans undertake according to the systems theory approach are

directed by certain principles. These principles can be values, standards, expectations or implicit codes of conduct. A change in the principles will infer a change in the actions humans undertake, because humans follow the expectations set out in the society that surrounds us; if we are expected to be innovative and entrepreneurial we are more likely to be so.

The choice dimension³⁴ in the spatial model of decision making is dynamic. The choice dimension is the range of alternatives individuals consider to make, and it is constructed in the space relative to certain dimensions of evaluation (categories of institutions) and how these are weighted in a certain system (i.e. a cultural sphere, an organization, a region or a nation). Through establishing entrepreneurship as a role, it is likely that it is perceived as more legitimate to become an entrepreneur. It can be conceptualized as a change in the configuration of the issue or the choice dimension; it becomes more positive in terms of the cognitive and normative dimensions of evaluation to be an entrepreneur, and hence individuals in making their career choices might to a greater extent fall to the choice of being self employed.

³⁴ Also termed "Structure" and "National Configuration" in the Spatial Entrepreneurship Model introduced in this thesis

5.2 Modeling Individual Career Choices, potential improvement in Norway



Verifying the model - implications from the study

In a paper which focuses on competitiveness in the UK, the very renowned Professor Michael Porter at Harvard Business School argues that the UK is in need of a new conception of competitiveness. They need an approach focused on improving skills, stimulating innovation and fostering enterprise as the basis for their innovation strategies: "It is only by building such capacity, that we will be able to move to the next stage of improving competitiveness and achieve sustained higher levels of prosperity" (Porter and Ketels, 2003).

They continually talk about the context for competition throughout the report, and they prescribe a new competitiveness agenda for the UK where they emphasize that the creation and strengthening of new types of institutions are important. Their account serve to verify that the model I have provided in this thesis which is grounded in an institutional framework is a fruitful approach to understand entrepreneurship.

The Spatial Entrepreneurship Model provided also encapsulates insights from both

Entrepreneurship Theory and Innovation Systems Theory; this should make it edible for researchers that have been fostered in either field. I find the challenge to be how to fruitfully incorporate an integrated analysis of human agency and systems' constraints and effects both in understanding how entrepreneurship happens, but also in our quests to make effective innovation strategies. It seems necessary to ponder on the questions of how we can secure humans' closeness to technological systems, how we can integrate political motives of preserving traditions (positive aspects of our existing culture) and spurring off innovations (create a culture more conducive of creation) in our society, how we can utilize human potential in technological development processes, and how we avoid a dichotomization in such analyses. I hope the conceptualization provided, which illustrates the complexities and the link between institutional systems and individual decision-makers on the issue of entrepreneurship, can contribute to fruitful debates around these questions.

Where do we go from here - an Innovation Strategy Prescription

If there are impediments to entrepreneurship in Norway, as the interviews I have conducted suggests, these can all be identified either with the normative, cognitive or regulatory dimension of our structural (business) system, deliberated upon by Busenitz et al.³⁵ If we can identify how these dimensions discourage entrepreneurship, we can provide solutions to how to increase entrepreneurship in Norway. The best solution will be to construct a new national configuration of the issue, or alter how the existing configuration relates to the different dimensions of evaluation. It infers a total change in the national business system. This can, as Spilling points out, be rather demanding and it might unfortunately be a long-term process. However, both with the results from this qualitative study among NSE participants and with Busenitz et al.'s study in mind, which basically indicates that in regards to entrepreneurship it is along the *normative dimension* Norway has trouble; I identify two strategies which can alleviate these difficulties.

1) The introduction of sub-systems more conducive to entrepreneurship, i.e. where the configuration of the issue is structured differently, and where the role of entrepreneurship is included on the career choice dimension. The Norwegian School of Entrepreneurship can be seen as such a sub-system, and as my study shows, when entrepreneurship is projected as an option it improves the chances that the students consider entrepreneurship when they make their career decisions. Further, when more of these people enter the work market as entrepreneurs, they are likely

.

³⁵ See Part One, on Country Institutional Profiles

to exert an influential force on the national business system as a whole. Entrepreneurial activity may create its own feedback cycle, slowly moving society to a more entrepreneurial culture. In regions or countries with a high density of entrepreneurial activity examples of successful new venture creation offer role models people can conform to: 'If he/she can do it, I can' (Veciana: 1999, cited in Verheul et al.: 2001, 64). As such, a sub-system which influences people to become entrepreneurs can in the long-run be an institution which alters the choice dimension in the greater system (society as a whole). An entrepreneurial culture emerges when the surroundings provide motivation for business start-up. This can for example be initiated through cooperation between businesses and educational programs, which gives students experience and belief in own capacity, networks, and potentially provides an atmosphere normatively more conducive of entrepreneurship and value-creation. This can exert a force on the national configuration of the issue of entrepreneurship, causing it to change.

2) By introducing sub-cultures which develop positive attitudes towards entrepreneurship where there are negative or lack of attitudes before. The cultural environment, which is constituted as Hofstede puts it in the collective programming of the mind which distinguishes the members of one group or category of people from another (Hofstede, 1991: 5), affects the choices people make and influence the preferences people have. Change in attitudes, or the development of positive attitudes towards entrepreneurship, are likely to affect the preference point an individual have in regards to entrepreneurship as a career option. Additionally, a sub-culture when culture is understood as the verbal and non-verbal manifestations and communications which go on between people, also acts as attention-direction. I.e. how entrepreneurship is portrayed (talked about) in the media, in documents, in speeches and among group-members, direct people's attention to the issue, and to the different dimensions of evaluation. In the model I provide, the attention-direction can be conceptualized as the change in the shape of the indifference curves around the individual's preference point. If the model I provide is used in a simpler way, as a two-dimensional chart on the decision between becoming an entrepreneur or being employed, it is obvious that in a reality where the individual feels there is a void of talking about entrepreneurship, or where it is talked about negatively, the indifference curves will be directed at the "employee" dimension of evaluation. However, if the individual is submersed in a sub-culture, where entrepreneurship is talked about and portrayed as both a legitimate and good career option, the indifference curves are likely to shift as the individual gets more attention and positive attitudes towards entrepreneurship. Hence, the individual are more prone to make a decision about a career which is closer to the "entrepreneurship dimension of evaluation" on the choice dimension.

Conclusions

"In an important sense, predicting the future is not really the task that faces us – After all, we, or at least the younger ones among us, are going to be part of that future. Our task is not to predict the future, our task is to design a future for a sustainable and acceptable world, and then to devote our efforts to bringing that future about."

Herbert A. Simon (2002: 601)

The Norwegian School of Entrepreneurship is a "potential" program; it conveys a vision and creates an opportunity for the development of skills, ambitions, and inventiveness. The students who participated this year initially thought that the climate for entrepreneurship is poor in Norway. Most of them did not feel encouraged to engage in entrepreneurial activities. Very few of them regularly had conversations with friends and student colleagues about the possibility to start something new. There was a conception among them that people in Norway are irresponsive to entrepreneurship. Through participation in the program they were surrounded by other enthusiastic students. In inspiration common aspirations grew; having ambitions were expected. In relationship with the others new ideas emerged and skills to put them into life were refined. Entrepreneurial spirit was cultivated.

This example and the theoretical analysis presented in this thesis suggest that building cultures – or environments – conducive of innovation seem to be important in having people make entrepreneurial choices.

The empirical study show that the students of the Norwegian School of Entrepreneurship have gone through a change. They have developed positive attitudes towards entrepreneurship, and claim they are more likely to engage in business start-up. The NSE program has provided skills training and attention-direction to the issue of entrepreneurship, but most of all it has been a unique chance for the students to form networks. Networks: – where people honor each others expertise and various contributions to start-up teams, – where ambitions are welcome, – where people are encouraging each other *to dare to try*³⁶, and where expectations are manifest in the supportiveness of the group. It appears to be this "sub-culture" that has grown out of the NSE program that is most important for the change the students have gone through.

³⁶ Used as a definition of entrepreneurship by one of the interviewees.

It is hard to separate these 'institutions' or 'cultural elements' away from the 'system' which the Norwegian School of Entrepreneurship is. They are outcomes originated in the opportunity set out by the structure of the programme. Without the program these potential entrepreneurs, regardless of their personal characteristics so much emphasized in entrepreneurship theory, would not have had each other. They might have had some skills necessary in order to start up a business, but would not have refined these skills. They might have had a motivation to engage in entrepreneurial activities, but they would not have had it constantly in their attention during the last nine months.

This thesis proposes that the institutional environment has a tremendous influence on the choices people make. In particular the choices of engaging in entrepreneurial activities are scrutinized. Further, the illumination of how individual choices are affected by the institutional environment advocate that the Norwegian climate for entrepreneurship can be enhanced through turning people's attention to the legacy of innovation, and in working toward a change in the national configuration of entrepreneurship as it relates to the different institutional dimensions of our society. Both the empirical and the theoretical analysis confirm that it is along the normative dimension there are barriers to entrepreneurship in Norway, and hence it is important that this is taken into consideration in creating effective innovation strategies.

:References:

- **Ackoff, R.** (1991). Ackoff's Fables: Irreverent Reflections on Business and Bureaucracy. NY: John Wiley & Sons, Inc.
- **Ajzen, I.** (1991). The theory of planned behavior, in *Organizational Behavior and Human Decision Processes*, vol 50: 179 211
- Aldrich H. & C. Zimmer (1986). Entrepreneurship through social networks. In D. L. Sexton and R. W. Smilor (Eds.), *The Art and Science of Entrepreneurship*. Cambridge, MA: Ballinger
- Allport, G.W. (1985). The Historical Background of Social Psychology, in Gardner, L. & A. Elliot, *The Handbook of Social Psychology*, Volume 1. Hillsdale: Lawrence Erlbaum Associates, Inc.
- **Archibugi, D., J. Howells and J. Michie (eds.)** (1999). *Innovation Policy in a Global Economy*. Cambridge: Cambridge University Press
- Asdal, Kristin og Sissel Myklebust (1999). Teknologi, vitenskap og makt. Eksempler på effektiv "black boxing" og noen åpningsforsøk. Makt og demokratiutredningen 1998-2003, Rapportserien Nr. 7, 1999. http://www.sv.uio.no/mutr/rapp1999/rapport7.html
- Bandura, A. (1977). Social learning theory. Englewood Cliffs: Prentice Hall
- **Baron R.A.** (1998). Cognitive mechanisms in entrepreneurship: Why and when entrepreneurs think differently than other people. *Journal of Business Venturing*, 13, pp. 275-294
- Bès, M-P. and M. Grossetti (2002). *Creative knowledge environments between individual and organisation levels*. 4th Triple Helix Conference November 6th-9th 2002, Copenhagen, Denmark Lund, Sweden
- **Birley, S.** (1987). New Ventures and employment growth. *Journal of Business Venturing*, 2, pp. 155-165.
- **Björkdahl, Annika** (2002). From Idea to Norm. PhD dissertation, Sweden: Lund University, Department of Political Science
- **Blenker, Per** (1992). Towards a sociological and anthropological understanding of entrepreneurship and small business. Arbejdspapirserie nr 3, Auning: Institutt for små og mellomstore virksomheder
- **Brynjolfsson E.** (1994). <u>Information Assets, Technology, and Organization, Management Science</u>, 40/12
- Brynjolfsson E. & L. Hitt (1996). <u>Paradox Lost? Firm-level Evidence on the Returns to Information Systems Spending</u>, *Management Science*, 40/4, pp. 541-558
- **Busenitz, L. and Lau, C.** (1996). A cross-cultural cognitive model of new venture creation, *Entrepreneurship Theory and Practice*, 20/4 pp. 25-39

- **Busenitz L. & J. B. Barney** (1997). Biases and heuristics in strategic decision making: Differences between entrepreneurs and managers in large organizations. *Journal of Business Venturing*, 12:9-30
- Busenitz, L. Gomez, C. and Spencer, J. (2000). Country institutional profiles: Unlocking the entrepreneurial phenomena, *Academy of Management Journal*, 43/5, pp. 994-1003
- Byrkjeflot, H., S. Myklebust, C. Myrvang, F. Sejersted (2001). The Democratic Challenge to Capitalism: Management and Democracy in the Nordic Countries.

 Bergen: Fagbokforlaget
- **Davidsson, P.** (1995). Culture, structure and regional levels of entrepreneurship, in Entrepreneurship and Regional Development, 1995/7, pp. 41-62
- **Dodgson, Mark** (2000). Chs. 1-2 in *The Management of Technological Innovation: An International and Strategic Approach*. Oxford: OUP
- Drucker, P. F. (1985). Innovation and Entrepreneurship. New York: Harper and Row
- **Edquist, Ch.** (ed.) (1997). Systems of Innovation: Technologies, Institutions and Organizations. London: Pinter
- Fuglsang, Lars and P.B. Olsen (Eds.) (2003). Videnskabsteori i samfundsvidenskaberne, Frederiksberg: Samfundslitteratur/Roskilde Universitetsforlag
- Giddens A. (1979). Central Problems in Social Theory, London: Macmillan Pres Ltd.
- Giddens, A. (1984). The Constitution of Society. Cambridge: Polity Press
- Giddens, A. (1991). Identity and Self in High Modernity. Stanford: Polity Press
- **Granovetter, M.** (1985). Economic Action and Social Structure: the Problem of Embeddedness, *American Journal of Sociology*, 91/3, pp. 481-510
- **Granovetter, M., Swedberg, R.** (1992). *The Sociology of Economic Life*, Boulder, San Fransisco, Oxford: Westview Press
- **Granovetter, M.** (1992). Economic Institutions as Social Constructions: A Framework for Analysis, *Acta Sociologica* 1992/35, pp. 3-11
- Hagtvedt, B. & E. Rudeng (1986). Scandinavia: Achiecements, Dilemmas, Challenges, in S.R. Grauberd (ed.) *Norden the Passion for Equality*. Oslo: Norwegian University Press
- Haraldsen, G. (1999). Spørreskjemametodikk etter kokebokmetoden. Oslo: Ad Notam
- Hatchuel, A., P. Le Masson & B. Weil (2002). From Knowledge Management to designoriented organizations, International Social Science Journal 171/2002, UNESCO

- Hayton, J.C., G. George and S.A. Zahra (2002). National Culture and Entrepreneurship: A review of Behavioral Research. *Entrepreneurship Theory & Practice*, Summer 2002
- **Hitt et al. (eds.)** (2002). *Strategic Entrepreneurship: Creating a New Mindset*. Blackwell pubishing
- **Hofstede, G.** (1980). Culture's consequences: International differences in work-related values. Beverly Hills, CA: Sage
- Holahan, C.J., and R.H. Moos, 2002. Community Environmental Psychology, International Encyclopedia of the Social and Behavioral Sciences, 4:2351-5. Elsevier Science Ltd.
- Isaksen, A. & O. Spilling (1996). Regional utvikling og små bedrifter. Kristiansand:
 Scandinavian Academic Press
- Jones, Bryan D. (1994). Reconceiving Decision-Making in Democratic Politics: Attention, Choice and Public Policy, Chicago: The University of Chicago Press
- **Jones, Bryan D.** (1997). *The rational Decision-Making Model in Politics*, University of Washington, Department of Political Science
- **Jones, Bryan D**. (2001). *Politics and the Architecture of Choice. Bounded Rationality and Governance*. Chicago: The University of Chicago Press
- Kanter, R. M. (1983). The Change Masters: Innovations for Productivity in the American Corporation. NY: Simon & Schuster
- Kent et al. (1982). The Encyclopedia of Entrepreneurship. NJ: Prentice Hall Int.
- Khaneman, D. & A. Tversky (1974). Judgement under uncertainty: Heuristics and Biases. *Science*, # 185, pp. 1124-31
- **Kirchoff B. A.** (1997). Entrepreneurship and Dynamic Capitalism. The economics of business firm formation and growth. Praeger Studies in American Industry
- **Kirzner**, I (1979). *Perception*, *opportunity*, *and profit*, University of Chicago Press, Chicago
- **Kirzner, I.** (1973). *Competition and entrepreneurship*. Chicago and London: University of Chicago Press
- **Kjeldsen, John Ibsen** (1991). *Bidrag til utviklingen af en egentlig entrepreneurteori*. Handelshøgskolen i Århus: Skriftserie Særtryk
- Knorr-Cetina, K. (1999). Pragmatic regimes governing the engagement with the world, in Knorr-Cetina et al. (1999) The practice turn in Contemporary Theory. London: Routledge
- Kolveried, L. and K. Obloj (1996). Entrepreneurs in different environments and cultures: Toward a comparative framework. In P. Joynt, and M. Warner (eds.), Managing across cultures: issues and perspectives. London: Thomson
- **Kostova, T.** (1997). Country institutional profiles: Concept and measurement. *Academy of Management Best Paper Proceedings*: 180-189.

- **Krasner, Stephen** (1982). Structural Causes and Regime Consequences: Regimes as intervening variables. *International Organization*, vol. 36, no. 2, pp. 185-206.
- **Krasner** (1982). In Kent et al. *Encyclopedia of Entrepreneurship*, Englewood Cliffs, NJ: Prentice-Hall, pp. 277-81
- Lam, A. (2002). Alternative Societal Models of Learning and Innovation in the Knowledge Economy, *International Social Science Journal* vol. 54
- Lau C. M. & R.W. Woodman (1995). Understanding organizational change: A schematic perspective. *Academy of Management Journal*, 38: 537-554
- Lewin (1951). Field theory in social science. New York: Harper
- **Luhmann, Niklas** (1986). The autopoiesis of social systems, inGeyer & Van der Zouwen (eds.), *Sociocybernetic Paradoxes*. London: Sage, pp. 172-192
- Lundvall, B-Å. (1988). Learning Organizations
- **Lundvall, Bengt-Åke** (1996). The social dimension of the learning economy. *DRUID Working Papers*, No. 96-1, Ålborg: Åalborg University
- Marcus, Neuman and Mackuen (2000). Affective intelligence and Political judgment. Chicago: The University of Chicago Press
- Mariussen, Å, A. Isaksen, A. Karlsen, B. Lindeløv, K. Onsager, O. Wicken, B.T. Asheim (2002). *Kulturelle betingelser for innovasjon. En studie av regionale næringsmiljøer*. Nordlandsforskning, NF nr. 5-2002
- McClelland, David (1985). The Achieving Society. NY: Free Press
- Moen, Eli (2002). Globalisering og industripolitiske strategier En sammenligning av Finland og Norge. Makt- og demokratiutredningens rapportserie, Rapport nr. 41
- Nelson, R. (ed.) (1993). National Innovation Systems. NY: Oxford University Press
- Nesheim, John (2003). Lecture for the NSE class, Silicon Valley, CA, August 7th 2003
- **Norwegian Trade Council** (2002). *Norwegian School of Entrepreneurship: 2002 Evaluation Report.*
- **Oftedal, Elin** (2002). A country's institutional profile: How mindsets among novice, parallel, and serial business founders shape intentions and behaviour. Paper presented at the INPG-ESISAR, Valence, France, Sept. 19th-22nd, 2002.
- Parsons, Talcott (1952). The social systems. London: Routledge & Paul
- Reitan, B. (1996). Entrepreneurial intentions: A combined models approach. 9th Nordic Small Business Research Conference. Lillehammer, Norway. May 29 - 31
- **Reve, Torger** (1994). Skandinavisk organisasjon og ledelse: Fra konkurransefordel til konkurranseulempe?, *Tidsskrift for Samfunnsforskning*, 4

- **Reynolds**, **P.D.** (1991). Sociology and entrepreneurship: Concepts and contributions. *Entrepreneurship Theory and Practice*, Winter 1991, pp.47-70.
- Reynolds, Bygrave, Autio, Cox, Hay (2002). *GEM 2002 executive report:* The Global Entrepreneurship Monitor. www.gemconsortium.org
- Sandberg, W.R. (1992). Strategic Management's potential contribution to a Theory of Entrepreneurship, in *Entrepreneurship, Theory and Practice*, Spring 1992, pp. 73-90
- **Schumpeter, J. A.** (1934). *The Theory of Economic Development*. Cambridge, MA: Harvard University Press
- Scott, W.R. (1995). Institutions and Organizations. London: Sage
- Selart, M., M. Akiyama, K. Takemura (2002). Designing Decisions in Organizations: The Social Process View. 4th Triple Helix Conference November 6th-9th 2002, Copenhagen, Denmark - Lund, Sweden
- Simon, Herbert A. (1957). Administrative Behavior (2nd edition). NY: Macmillan
- Simon, Herbert A. (1982). Models of Bounded Rationality (Vols. 1 & 2). Cambridge, MA: The MIT Press
- Simon, Herbert A. (2000). Forecasting the future or shaping it, in *Industrial and Corporate Change*, Volume 11(3), pp. 601-605
- Simula Research Laboratory (2002). EFFEKT: En model for forskningsbasert nyskaping!
- **Soleng, Olav** (2000). *Gründere en vekstfaktor for næringslivet*. Foredrag på Høgskolen i Østfold, 5.06.2000.
- Spilling, Olav R. (1998). Entreprenørskap på norsk. Bergen: Fagbokforlaget.
- Spilling, Olav R. (Red.) (2002). NyskapingsNorge. Bergen: Fagbokforlaget
- **Sundbo, Jon and Lars Fuglsang**. (2002). Innovation as Strategic Reflexivity, in Sundbo and Fuglsang (eds.) *Innovation as Strategic Reflexivity*. London: Routledge
- **Sundbo, Jon** (1998). *The Organization of Innovation in Services*. Roskilde: Roskilde University Press
- Sundbo, Jon. (1992). The Tied Entrepreneur: On the theory and Practice of Institutionalization of Creativity and Innovation in Service Firms. *Creativity and Innovation Management*, vol. 1, #3
- **Sundbo, Jon** (1994). Tre grundopfattelser i innovationsteorien. *Ledelse og Erhvervsøkonomi*, 58/3, pp. 169-83
- **Thagaard, Tove** (1998). Systematikk og Innlevelse: en innføring i kvalitativ metode. Oslo: Universitetsforlaget
- The Economist (2002). World in Figures. Profile Books, London.

- Uhlaner, L.M., R. Thurik & J. Hutjes (2002). Post-Materialism as a Cultural Factor Influencing Entrepreneurial Activity across Nations. SCALES Research Report H200202. Zoetermeer: SCALES
- University of Oslo (2002). Fra Forskning til Utvikling. Rapport om forskningsbasert nyskaping ved Universitetet I Oslo, 16.02.2003. UiO: Seksjon for avtaler og næringslivskontakt
- University of Oslo (2002). Evalueringskomiteens Rapport. 2002. Evalueringen av Gründerskolen ved Universitetet i Oslo. 14.10.2002. UiO: Seksjon for avtaler og næringslivskontakt
- Veciana J.M, M. Aponte and D. Urbano, (2002). Paper presented at the International Council for Small Business 47th World Conference, San Juan, Puerto Rico, June 16-19, 2002 (also available: http://www.kmu.unisg.ch/rencontres/band2002/B_05_Veciana.pdf)
- Verheul, I., S. Wennkers D. Audretsch, R. Thurik (2001). An eclectic Theory of Entrepreneurship: Policies, Institutions, and Culture. Zoetermer: EIM Business and Policy Research Report 0012/E
- **Wendt, A.** (1999). *Social Theory of International Politics*. Cambridge: Cambridge University Press
- Whitley, Richard (2002). Industrial and Corporate Change, Volume 11 (3), pp 497-528
- Whitley, R. (1999). Divergent Capitalisms: The Social Structuring and Change of Business Systems. Oxford: Oxford University Press
- Whitley, R. (2000). The Institutional Structuring of Innovation Strategies: Business Systems, Firm Types and Patterns of Technical Change in Different Market Economies. *Organization Studies* 21, 855-886
- White paper #51 of the Norwegian Parliament (2003). <u>St.prp. nr. 51 Virkemidler for et innovativt og nyskapende næringsliv</u>, 28. mars 2003
- **Wicken, Olav** (2000). Forskning, Næringsliv og Politikk. En historisk fremstilling av norsk næringlivsforskning og politikk. Arbeidsnotat nr 6/2000, Universitetet i Oslo: TIK
- **Zahra & George** (2003). National Culture and Entrepreneurship: A review of Behavioral Research. *Entrepreneurship Theory and Practice*, Spring 2003

Appendix 1 Media Search, Aftenposten

NUMBER OF HITS IN A SEARCH FOR ARTICLES WITH THE WORD "GRÜNDER"

(Entrepreneur in Norwegian)

Last Quarter (June 20 September 20. 2003)	25
2003 (January 1 September 20.)	57
2002	66
2001	58
2000	57
1999	34
1998	30
1997	5
1996	1
1995	NONE

Survey (Norwegian)
Entreprenørskap i Norge 2
Tusen takk for at du setter av noen minutter til å svare på denne undersøkelsen om innovasjon og nyetablering.
Denne kartleggingsundersøkelsen er et ledd i en masteroppgave om entreprenørskapskultur i Norge.
☐ Jeg vil være anonym
(QuestBack ivaretar din
anonymitet)
41 V:
1) Kjønn
C Mann
O Kvinne
3) Hvor har du vokst opp?
C På landet/i bygd
C By med færre enn 20 000 innbyggere
O By med 20 000-100 000 innbyggere
C Storby; 100 000 innbyggere eller flere
4) Har du bodd i utlandet?
4) Har du bodd i utlandet?
4) Har du bodd i utlandet? C Nei
4) Har du bodd i utlandet? C Nei C Ja, i opptil 6 mnd
4) Har du bodd i utlandet? C Nei C Ja, i opptil 6 mnd C Ja, mellom 6 mnd. og 2 år
4) Har du bodd i utlandet? C Nei C Ja, i opptil 6 mnd C Ja, mellom 6 mnd. og 2 år
4) Har du bodd i utlandet? C Nei C Ja, i opptil 6 mnd C Ja, mellom 6 mnd. og 2 år C Ja, i mere enn 2 år

6) Hvordan oppfatter du at nyetablering mottas i Norge?	
C åpent og oppmuntrende	
C God mottagelse	
C Ønsket, men med litt tvilende mottagelse	
C Skepsis	
O Motstand	
C Vet ikke	
7) Hvordan synes du statens støtteordninger for Gründere er i Norge?	
C Manglende	
C Dårlige	
O Nedprioritert	
C Ok C Gode	
O Gode O Jeg vet ikke nok om dette	
Seg ver ikke nok om dette	
8) Hvordan er i dine øyne holdningene til nyetablering blant folk i Norge i dag?	
☐ Veldig positive	
□ ok	
🗖 Folk har få holdninger til det	
□ Dårlige	
□ Veldig negative	
På en skala fra 5 for veldig stor grad, til 1 for veldig liten grad, 9) I hvor stor grad synes du det satses på innovasjon/nyskaping i Norge? C 5 C 4 C 3 C 2 C 1	
På en skal fra 5 for veldig bra, til 1 for veldig dårlig,	
10) Hvordan synes du Norske bedrifter ligger an internasjonalt iforhold til innovasjon/nyskaping?	
C5 C4 C3 C2 C1	
0, 0, 0, 0, 0,	
4	
Ranger alternativene fra 6 for mest sannsynlig, til 1 for minst sannsynlig. .a hvert alternativ ha en egen verdi .	

6
Ansatt i privat firma
Driver egen bedrift
Medarbeider i oppstartsbedrift C C C C C C C Freelans arbeidende C C C C C C C C C C C C C C C C C C C
Freelans arbeidende
Ranger alternativene fra 7 for viktigst til 1 for minst viktig. La hvert alternativ ha en egen verdi. 12) Hva kunne motivere deg til å starte egen bedrift? 7 6 5 4 3 2 1 Utsikter til gode penger C C C C C C C C C C C C C C C C C C C
Ranger alternativene fra 7 for viktigst til 1 for minst viktig. La hvert alternativ ha en egen verdi. 12) Hva kunne motivere deg til å starte egen bedrift? 7 6 5 4 3 2 1 Utsikter til gode penger C C C C C C C C Muligheten til å realisere gode ideer og drømmer Selvstendighet C C C C C C C C C C C C C C C C C C C
La hvert alternativ ha en egen verdi. 12) Hva kunne motivere deg til å starte egen bedrift? 7 6 5 4 3 2 1 Utsikter til gode penger C C C C C C C C Muligheten til å realisere gode ideer og drømmer Selvstendighet C C C C C C C C C Ønsket om å bidra til Samfunnets ve og vel Mulighet til fleksibel arbeidstid Mulighet til å oppnå C C C C C C C C Mulighet til å oppnå C C C C C C C C Hvis annet, vennligst spesifiser: 13) Hvordan oppfatter du at tilgangen er på den informasjonen du trengfor å eventuelt starte en bedrift? Meget gode Ok Vanskelig å finne Dårlig
Utsikter til gode penger
Utsikter til gode penger
Muligheten til å realisere gode ideer og drømmer Selvstendighet O O O O O O O O O O O O O O O O O O
gode ideer og drømmer Selvstendighet
ønsket om å bidra til Samfunnets ve og vel Mulighet til fleksibel arbeidstid Mulighet til å oppnå lederstilling Annet OOOOOO Hvis annet, vennligst spesifiser: 13) Hvordan oppfatter du at tilgangen er på den informasjonen du trengfor å eventuelt starte en bedrift? Meget gode Ok Vanskelig å finne Dårlig
Mulighet til fleksibel arbeidstid
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for å eventuelt starte en bedrift? Meget gode Ok Vanskelig å finne Dårlig
14) Hvor finner du den informasjonen du trenger?